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## **The Next 10 Years: Grass Roots Research and Standards-Based Education in Early Childhood Education**

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### **Why a Call to Action at the Grassroots Level?**

The beginning of the 21st century has been marked by rapid change and continuous innovation in the Head Start community. New advances in science, technology, teaching and the knowledge base on children's learning and development are being assimilated into Head Start classrooms at an unprecedented pace. At the same time, Head Start finds itself immersed in, and oftentimes at the center of, new policy initiatives and public discussion on standards-setting and outcome documentation in early childhood education. The participation of Head Start in this national dialogue has helped provide answers to many questions, while at the same time raise public awareness of questions that need to be asked and policies that need to be developed in order to sustain the vision of Head Start.

In building upon Head Start's visionary goals for children, families, and communities, the National Head Start Association (NHSA) implemented an ambitious and much needed initiative in 2005-06. This initiative can be viewed in detail on the NHSA Research web link. It is called State/Regional Committees. As we know, NHSA has historically and effectively served as a central resource for the dissemination of research to the Head Start community – research conducted by Universities, foundations, government, and individual organizations. This new initiative is designed to provide guidance to assist State, Regional Associations, and local Head Start programs in becoming evermore empowered as research entities in their own right, building partnerships and engaging in innovative research ventures that can guide best practices and impact policy at the local, state, and national levels. In looking toward the future, these committees will undoubtedly play a vital role and strong voice in strengthening Head Start and Early Head Start programs and improving outcomes for children and families. Research initiatives born of these grass roots committees will provide essential data, help define policy, and strengthen Head Start leadership in the next ten years as the American education system continues to transform and reinvent itself in an era of standards-based, research-driven, results-oriented education.

It is quite clear that in this new era of standards-based education, with all its implications for assessment, research, policy, and practice, we must all become active participants in the discussion, debate, and decision-making process that will determine how to best deliver high quality early education to children and how to best document our success in doing so. For this reason alone, grass roots initiatives utilizing the guidelines developed by NHSA with assistance from state association research committees are vital to the health and success of our programs and communities.

## **What Will Drive The Research?**

You may not be surprised to know that research in Head Start is not a new or recent phenomenon. It has been a part of the Head Start community for over 40 years. In fact, the findings of around 4000 research initiatives associated with Head Start have been published since 1965. That's approximately 100 studies per year and 1 study every 3-4 days. In addition to this documented research, there are literally hundreds of grassroots research efforts every year involving Head Start classrooms, programs, and state association sponsored activities. One obvious question that arises related to all this activity is "What have we learned and where are we headed?"

One of the benefits of having been involved in Head Start research for the past 26 years at the local, state, and national level is that one can begin to acquire a meaningful perspective on past events and their influence and relationship to the current state of affairs in Head Start. From this vantage point and perhaps with some imagination, one can begin the exploratory process of forecasting things to come. It is that future as it relates to research in Head Start that I would like to spend some time discussing with you at this time. Keep in mind that unlike the weather reporter who can forecast, but not influence events, we in Head Start have a greater power – we can set the goals, define the dreams, plan for the future, conduct the research, and then...make it happen.

To begin, the entire body of research in Head Start, for all its diversity can be reasonably organized into 4 areas: (1) child outcomes; (2) family outcomes; (3) community outcomes; and (4) program/staff outcomes. For now, I have chosen to discuss research related to child outcomes as this has been a centerpiece of Head Start activity over the past several years and will continue to be so in to the foreseeable future as we traverse through the era of standards-based, research-driven, results-oriented education. Within this context, there are at least three driving forces that will shape research endeavors associated with child outcomes. These are:

- Advances in Standards-Based Education Initiatives at State and Federal Levels
- Advances in the Measurement of Student Mastery of Standards
- Advances in Technology and Communication to Promote Learning of Standards

In order to be effective in leveraging these forces for the benefit of our children, each State/Regional Committee might begin the research process by asking the following:

- Is our current local program/state data accurate, useful, and does it provide the information needed to promote development, document outcomes, and conduct research?
- Are we thinking toward the future or just doing what is comfortable?
- What can we do to get started in establishing state-wide initiatives that might include Head Start, other child care providers, State Departments of Education, researchers, assessment companies, and school districts?
- What are our goals in forming a State/Regional Committee and what kinds of research questions and plans do we need to develop in order to achieve those goals?
- What kinds of technology and assessment systems are needed to achieve our goals?
- What criteria do we need to develop in order to choose a tool(s) that will help us achieve our goals?

## **What Changes Can We Expect In the Years Ahead?**

As a community, Head Start encompasses hundreds of thousands of people across the nation including children, parents, community partners, and businesses, local, state, and federal staff. Our community shares a common history and a set of values and standards that guide our decisions and actions. Most importantly, we share a common purpose - to help improve the lives

of the children and families. Our unity as a community is enhanced by the richness of our diversity. And our diversity is reflected in the communities, ethnicities, cultures, languages, children, and families that form the quilt and many textures of Head Start. Respect for, and responsiveness to this diversity must begin with the fundamental recognition that Head Start should not be viewed, evaluated, or researched as if it were a “one size fits all” program.

Our research challenge, given our diversity, is to embrace the future by helping to ensure that the questions asked and the answers sought are consistent with our values and our vision as a community. With the recent focus on standards-based, research-driven, results-oriented education, Head Start is once again being challenged to prepare and to lead in making a measurable difference in the lives of children. The ways in which we define and design our research today will affect the lives of children and families for years to come. Here are some examples of what we can expect as the research transformation in Head Start continues to be embraced through State/Regional Committees:

1. *Increased localization of research leading to enhance the benefits of grass-roots initiatives for local programs.*
2. *Increased use of online assessment technology leading to rapid access to information for decision-making.*
3. *Increased partnering with assessment organizations comprised of staff with highly specialized skills in education, measurement, statistics, and research.*
4. *A refocus and reframing of early childhood assessment away from one-size –fits-all static assessments toward adaptable/flexible systems.*
5. *A refocus and reframing of early childhood curriculum away from one-size –fits-all static curriculums toward multi-resource educational systems.*
6. *Increased utilization of assessment systems built from assessment banks aligned to state standards with less reliance on loose alignments of generic assessment tools.*
7. *Reduced use of nominal and ordinal scoring systems and increased use of interval level, empirically validated systems.*
8. *Increased statistical linking of data from assessment tools to child, family, staff, class, and program variables in order to provide a contextual interpretation of child progress and outcome data.*
9. *Increased interconnectedness with state and national Pre-K standards, creating new opportunities for innovate approaches to assessment.*
10. *Increased use of dynamic approaches to assessments that can be revised and recalibrated in response to changes in state Pre-K standards and their link to K-12 standards.*

### **What are Some Examples of Meaningful Research Questions?**

In a very profound and fundamental way, the ACYF-IM-HS-00-18 child outcomes initiative builds on the long held tradition that any research in Head Start must take account of the variability that exists in Head Start programs, centers, and classrooms. The founders of Head Start wisely recognized that children develop in context. Accordingly, ACYF-IM-HS-00-18 suggests that data analyses occur in context – a focus on “patterns of progress for groups of children.” The information memorandum is quite specific on this point suggesting that analyses might be designed to look at patterns of progress for groups in different domains and indicators of learning, program options, forms of service, service areas, initial levels of functioning, and length of time in the program.

In addition to conducting research on outcomes from contextual perspective, if Head Start is to be held accountable for meeting standards and achieving results for children, then the questions asked of the data must be meaningful, leading to beneficial decision-making to guide policy and practice.

It has been said, for example, that “while Head Start children are showing gains when they leave Head Start, they are still performing below the national norm, and that is not acceptable.” National norms are a moving target. The more meaningful question to ask is about the level of development and skills that Head Start children need to acquire to make a successful transition into elementary school. This approach provides concrete guidance for Head Start programs and would be consistent with the standards-based movement in education that has been sweeping the nation for the past decade. With the question addressing skills rather than comparisons, there is an effort to determine the extent to which variability in child outcomes arises from differences in program, center, and class characteristics as they interact with the variability in children enrolled in the program. For example, it is well known that the knowledge children bring to the learning environment has a major impact on the learning outcomes accomplished in that environment. Of equal importance are the variations in learning outcomes that could be associated with the class, center, and agency attended by these children.

One reasonable starting point, for understanding the possible reasons for variability is to examine the way in which learning is managed at each of these program levels. Information of this type can then be used for targeting the resources necessary to help achieve desired goals for the children. One benefit of focusing on the way learning is managed in a Head Start program is that it can provide information that will lead to an understanding of why learning is progressing as desired in one instance and not in another. A second is that a management focuses links actions directly to goals. For example, an examination of management at the class level might reveal that one class was providing a large number of learning opportunities reflecting a broad range of learning goals, while another offered a smaller number of learning opportunities associated with a narrow range of goals. If it were the case that learning goals were being attained satisfactorily in the first class, but not in the second, there would be good reason to make a change in the range of goals and the kinds of learning opportunities provided in the second class.

### **How Do We Select Quality Tools to Gather Credible Data?**

When it comes to grass roots research on child outcomes and the mastery of standards, one of the most important decisions to be made by the researcher and program, is the selection of instruments to be used to follow children’s progress and document child outcomes relative to standards. As pointed out in the joint position statement of NAEYC and NAECS/SDE (2002), early learning standards must remain relevant and research-based by using a systematic interactive process for regular review and revision. The position statement goes on to point out that assessment tools must be clearly connected to important learning represented in the standards, must be technically, developmentally, and culturally valid, and must yield comprehensive information. Moreover, NAEYC and NAECS/SDE point out that broad, significant content cannot be assessed with narrow instruments. Information gained from the assessment of children’s progress with respect to standards must be used to benefit children and should not be used to rank, sort, or penalize children. With this in mind, let us consider the data options available.

- ***Age/Norm-Referenced Data...***

- Reliance on chronological age levels to assess curriculum impact and document early learning outcomes relative to mastery of standards.
- Provides information about a child’s position in a group of children about the same age as the child. The child’s performance is typically described as above, below, or at average rather than being described as meeting or not meeting a specific performance standard.
- Age level interpretations can be problematic if there is not a clearly defined reference population upon which age levels are empirically validated. A clear delineation of statistical steps to support any interpretation is also needed.

- Real-Life Examples of Age/Norm-Referenced Data:
  - Intelligence Tests
  - Screening Instruments
  - Data indicating child is functioning “At, Below, or Above Age Level” or “Above, Below, or Average”
  - Age Equivalents such as 4.5, 3.2
  - “Acting like a typical 3-year old”
  
- **Criterion-Referenced Data...**
  - Typical examples are checklists accompanying curriculums or other forms of age, skill, ranking, or behavior checklists.
  - Used to determine if a child has mastered a set of pre-established behaviors or teaching objectives on the checklist which may be aligned with state standards.
  - Many checklists typically communicate ORDER or HOW MANY, but not “how much more.” Developmental checklists may be tied to age or contain un-validated sequences. Technical data validating developmental sequences are necessary to support assumptions about sequencing.
  - Level of alignment for any particular off-the-shelf assessment will vary depending on specific state pre-K standards.
  - Researchers and programs should use caution when attempting to make comparisons of typical skill levels across skill areas, because definitions of skill areas differ. For example, a skill level of 3 in vocabulary is not necessary equivalent to skill level 3 in letter recognition.
  - Raw Scores generated from checklists may show performance in particular standard but are not likely to have any direct meaning regarding changes in children’s overall development or ability. In order for raw scores to have value in communicating changes in development, they must undergo rescaling before they achieve any real-world meaning.
  - Attempts to use ranking must be cautiously interpreted because ranks are typically arbitrary cut-offs reflecting how many “things” a child can do. They do not typically reflect changes in ability or development. Moreover, not all the standards being measured are of equal difficulty, and as a consequence the ranks become simply category labels with no real meaning.
  - When using a criterion-referenced or ordinal level approach, one must keep in mind that getting 1 item right/or wrong could move a child into a different skill level. This could be problematic because it creates the potential for misleading families and public audiences about a child’s developmental level or progress.
  - Real-Life Examples of Criterion-Referenced Data:
    - Age-related checklists
    - Star Movie Rating System or Star Hotel Rating System
    - Skill or Ranking Levels (1, 2, 3)
    - Low, Middle, High Income
    - Rank in the Military
    - Arbitrary Cut-offs (e.g., some, most)
    - Percentages or Frequency counts

- **Path-Referenced or Item Response Theory (IRT) Data ...**

- IRT assessments are those that can determine HOW MUCH MORE on an INTERVAL SCALE rather than the ordinal or nominal scales associated with some checklists or continuums.
- Measures child outcomes as a true change in developmental level or ability and measures comparable growth regardless of initial level.
- Reflects progress on an empirically valid path of learning and can help predict readiness for new learning opportunities.
- A child's ability is assessed in terms of her/his position on a path of development reflecting the construction of knowledge related to learning standards of interest.
- In order to accommodate a variety of audiences and research questions, path-referenced systems that include norm-referenced data and criterion-referenced data are optimally recommended.
- Real-Life Examples of IRT Data:
  - State sponsored NCLB Standards-Based Assessment Initiatives
  - National Assessment of Educational Progress (NAEP)
  - The National Reporting System
  - Florida Head Start State Association Research Initiative
  - Large Scale Proprietary Early Childhood Child Outcome Initiatives
  - K-12 and Pre-K Assessment Tools such as Galileo

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#### **About ATI**

Headquartered in Tucson, Arizona Assessment Technology, Incorporated (ATI) is comprised of expertise from a variety of disciplines related to education, measurement and outcomes evaluation, research, software programming languages, and the design of web-based applications for education. And at the heart of ATI is a group of dedicated trainers and technical personnel focused on helping Galileo users prepare children today for the opportunities and challenges of tomorrow.

Assessment Technology, Inc. represents:

- 20-plus years of experience in developing, delivering and supporting curriculum, assessment and electronic management of learning products
- More than 115,000 schools and programs nationwide

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