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ABSTRACT

This technical report presents issues related to defining and applying accountability systems for young children, including those with disabilities. It notes that reaching shared perspectives on definitions of accountability systems and their constituents remains complicated by the number of levels to which such systems can apply (e.g., child-, family-, state-, or nation-focused) and multiple meanings stakeholders place on frequently used terms (e.g., "outcomes," "indicators," and "benchmarks"). The report addresses limitations imposed by four major issues: (1) the relative novelty of applying such systems to young children; (2) the emphasis on nomothetic and consensus-based approaches; (3) the still-growing state of knowledge on links between early functioning and later competency; and (4) the exclusion of children with disabilities. The report proposes a set of standards to guide development of accountability systems for young children focusing on children's growth and development, feasibility, application to multiple levels of analysis, and generation of important information to all stakeholders. These standards are the foundation of the Early Childhood Research Institute on Measuring Growth and Development, a 5-year collaborative project to create a comprehensive assessment system, aggregate individualized data to describe group-level outcomes, and generate interventions. (Contains 43 references.) (DB)

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ON

MEASURING GROWTH & DEVELOPMENT

TECHNICAL REPORT #1

ACCOUNTABILITY SYSTEMS FOR CHILDREN BETWEEN BIRTH AND AGE EIGHT

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ACCOUNTABILITY SYSTEMS FOR CHILDREN BETWEEN BIRTH AND AGE EIGHT

APRIL 1998

A Collaborative Effort

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Table of Contents

Introduction 1

Defining Accountability Systems for Young Children 2

Current Status of Accountability Systems for Young Children 3

Proposed Standards for Accountability Systems for Young Children 8

A Model for Enhancing Accountability Systems for Young Children with Disabilities 10

Summary 11

References 12

INTRODUCTION

On January 27, 1998, in his State of the Union Address, President Clinton stated:

> We have opened wide the doors of the world's best system of higher education. Now we must make our public elementary and secondary schools the best in the world, too — by raising standards, raising expectations, and raising accountability. Thanks to the actions of this Congress last year, we will soon have, for the first time, a voluntary national test based on national standards in fourth grade reading and eighth grade math. Parents have a right to know whether their children are mastering the basics...We must also demand accountability. (*New York Times* [On-line]. Available: http://www.nytimes.com)

In the spring of 1997, officials from Chicago public schools announced students in grades three, six, eight, and nine who failed the Iowa Tests of Basic Skills would no longer be allowed to move up to the next highest grade — ending the common practice of "social promotion" — and would require these students to attend summer school and/or transition schools for remedial instruction (Berg, 1998).

In recent years, teachers, administrators, and other professionals of our public schools have witnessed a ground swell of societal indignation at the lack of accountability in our educational system. After years of focus on educational processes rather than outcomes (e.g., phonetic versus whole-language approaches to reading instruction), the pendulum of public scrutiny appears to be swinging toward greater identification and measurement of student outcomes, both just prior to graduation as well as at predetermined checkpoints along the way.

How has this recent emphasis on accountability systems affected early childhood education, i.e., programs for children between birth and age eight, especially young children with disabilities? What is an "accountability system"? Which elements of current accountability systems for elementary- and secondary-aged students should early childhood educators strive to include in their nascent attempts to craft comparable systems for young children?

In this technical report, we will address these questions. *First*, we will discuss issues connected with defining accountability and its components consistently across the various stakeholders evaluating and using such systems. *Second*, we will describe the current status and applicability of accountability systems for young children in America, especially children with disabilities. *Third*, we will present a preliminary set of standards we believe should guide federal, state, and local efforts to develop accountability systems for young children, especially those with disabilities. *Finally*, we will discuss a current, federally-funded research project, the *Early Childhood Research Institute on Measuring Growth and Development*, which incorporates all of these recommended standards to enhance accountability systems for young children.

Defining Accountability Systems for Young Children

The proliferation of debate in the public domain on accountability from our educational systems has led to a concomitant increase in the number of definitions of the term. The term *accountability* in the educational sphere has taken on multiple meanings, depending on the level of analysis emphasized by the speaker or author.

For example, accountability often refers to sets of outcomes educators and policymakers intend children and their families to attain as a result of participation in our educational system (Center for the Study of Social Policy, 1994; Iowa Kids Count Initiative, 1994). The National Center on Educational Outcomes (NCEO) has identified and defined a set of educational outcomes for three- and six-year-old children as part of a developmental continuum from early childhood to beyond high school (Ysseldyke, Thurlow, & Gilman, 1993a; Ysseldyke, Thurlow, & Gilman, 1993b). Their outcomes-based accountability system also includes potential indicators that states, school districts, and schools may employ to measure the frequency of children and families who attain each outcome.

Other educators use the word *accountability* to refer to statewide or local systems for implementing a wide range of new programs and tracking the success of these programs over time (Center for the Study of Social Policy, 1994; Iowa Kids Count Initiative, 1994). For example, Peter Hutchinson (1998), a former superintendent of Minneapolis Public Schools, argues a statewide educational accountability system should include the following components: (a) performance targets for students and schools; (b) a system of assessments to track performance; (c) performance contracts with teachers, administrators, and other educators; (d) performance rewards for high-performing schools and interventions for low-performing schools; (e) peer-based quality reviews of schools and staff; (f) school-choice options for families; (g) reports to communities about school performance; and (h) learning agreements between families and schools.

Still others use the term accountability to refer to a national system for tracking groups of children's progress toward one or more of the National Education Goals (Federal Interagency Forum on Child and Family Statistics, 1997; National Education Goals Panel, 1995) or other related federal efforts. For example, in a report to the National Center for Education Statistics, the Special Study Panel on Education Statistics (1991) focused heavily on the creation of an indicator system to monitor the nation's educational "health," including national values and aspirations about education, societal contexts in which educational programs occur, qualities of educational institutions, and learner outcomes.

Confusion over the meaning of terms associated with accountability systems contributes further to muddying the debate. Terms such as "goals," "benchmarks," "indicators," and "assessment" connote different concepts to different stakeholders in early childhood education (Kagan, Rosenkoetter, & Cohen, 1997). For example, one definition of the term *indicator* characterizes it as "a statistic that

measures our collective well-being" (Special Study Panel on Education Indicators, 1991, p. 12), while another portrays it as "[a] measure of position along an ordered continuum, which represents the amount, level, intensity, or prevalence of a result related to the stated goal or objective" (Dombro, O'Donnell, Galinsky, Melcher, & Farber, 1996, p. 290). While the overall thrust of these definitions converges to some degree, the differences in shading complicate discussions across stakeholders. Until the time comes when we have debated these issues enough to understand arguments without tripping over definitional differences, it is incumbent upon all who speak or write about accountability systems for young children to define their terms clearly for consumers.

Thus, for purposes of this report, we define each of the following terms, with a focus on early childhood education: (a) *accountability* refers to an effective but efficient system for evaluating and tracking the developmental status of young children, including children with disabilities, on both an individual and group-level basis, which in turn facilitates ongoing examination and improvement of programs or other services for our nation's young children; (b) *outcomes* refer to a comprehensive but parsimonious set of developmental levels of desired performance for both individual children and groups of children; and (c) *indicators* refer to easy-to-use, efficient, reliable, and valid measures of children's performance toward outcomes, applied to both individual children and groups of children. While all of these meanings represent important facets of public education accountability, we believe a definition of accountability cannot be complete without linking outcomes and indicators continuously within such a system. That is, to maintain the highest standards of accountability, indicators of children's performance must be applied continuously over time to gauge growth toward outcomes sensitively, creating a constant feedback loop for continual programmatic or service improvements when children's progress toward outcomes does not meet expectations, either on an individual or group basis.

Current Status of Accountability Systems for Young Children

In this section, we highlight limitations of current accountability systems for assessing and monitoring young children's development, especially children with disabilities. These limitations include: (a) primitive status of accountability systems for young children; (b) emphasis on nomothetic and consensus-based approaches; (c) failure to articulate links between early functioning and later competence; and (d) exclusion of children with disabilities.

Primitive Status of Accountability Systems for Young Children

As of 1995, only four states appeared to have articulated educational goals and indicators for prekindergarten-aged children (Seppanen, Schaeffer, & Julian, 1995). Thus, the preponderance of

national debate about accountability systems focuses on children in formal education programs, i.e., grades K through 12. Even for children in formal education, accountability systems can be characterized as "primitive" (Center for the Study of Social Policy, 1994). Public officials have responded to outcries for increasing levels of accountability by initially focusing assessment on students graduating from high school into higher levels of education or the job market. Presumably, these "terminal" goals for educational accountability systems can be analyzed, either empirically or logically, to identify prerequisites, levels of typical performance, or "benchmarks" that precede and/or predict performance at the end of formal secondary education. These prerequisites or benchmarks can then be used to set intermediate goals and standards, and thus extend the logic of terminal-objective accountability standards to younger ages and earlier grades. To date, however, few logical or empirical analyses have been extended to the preschool and kindergarten years.

The lack of sufficient downward extension of expectations can be traced to at least two sources. *First*, while our knowledge of child development has increased exponentially in recent years, there still exists a dearth of research linking early childhood skills to later academic performance. Yet, children do not begin kindergarten as "blank slates." They bring a variety of predispositions to learning based on genetic and environmental influences accumulated over the first five years of their lives (e.g., Adams, 1990; National Education Statistics Agenda Committee, 1994). We may have hunches about how these early experiences translate into later academic performance, but we have only begun to provide evidence for such linkages. For example, researchers have recently identified aspects of oral language that predict, and may serve as functional prerequisites for, early reading (Adams, 1990).

Second, when we discuss pre-kindergartners, we generally speak in terms of developmental skills, i.e., skills falling into one of the major developmental domains (communication, cognition, motor, adaptive, and social/emotional). Yet, predominant forms of accountability systems focus on measuring skills in academic domains for students in grades K through 12, i.e., skills in reading, math, and social studies, among others. The preponderant focus on these skills complicates efforts by educators and policymakers to develop accountability systems for children who are not yet demonstrating "academic" skills. If we rely on academic skills as the sole area upon which to judge early childhood outcomes, we will do a disservice to all young children, especially those with disabilities. By focusing on skills within developmental domains, we ensure the selection of appropriate goals for all children, including those with disabilities.

Yet, measurement of young children's development in ways that parallel accountability systems for older children has presented formidable problems for researchers and policymakers (National Education Statistics Agenda Committee, 1994). Developmental, biological, and situational factors combine to make assessment of young children's development more difficult to accomplish accurately (Neisworth & Bagnato, 1996), especially when conducted on an onetime basis. Among the many differences between young children and their older counterparts that complicate early childhood

assessment, some derive from the nature of assessment processes (i.e., requiring a child to attend to presented tasks with sufficient understanding and endurance to demonstrate a representative sample of behavior) and others from the developmental process itself (i.e., discontinuities or oscillations in developmental trajectories over time) (Neisworth & Bagnato, 1996). While we recognize these difficulties, we believe research will guide efforts to advance useful and meaningful measurement systems for young children.

Nomothetic and Consensus-Based Approaches

The preponderance of accountability systems currently in use for children at any age relies on nomothetic and consensus-based approaches. That is, these systems tend to report results in terms of groups of children, using outcomes generated from group-based consensus-building processes.

For example, ever since 1990, when President Bush and the nation's governors established the National Education Goals, we have tended to view progress in achieving these goals from a group-oriented perspective. Goal 1, the one most relevant to young children, states: *By the year 2000, all children in America will start school ready to learn.* This goal is accompanied by three objectives: (a) children will have access to high-quality and developmentally appropriate preschool programs; (b) parents will serve as their young children's first teachers; and (c) children will have access to quality health care, nutrition, and physical activity experiences. Progress toward each of these objectives is generally reported as a percentage of infants born with one or more health risks, the percentage of toddlers who have been fully immunized, the percentage of preschoolers whose parents read to them regularly, and the percentage of preschoolers who participate in preschool programs (Federal Interagency Forum on Child and Family Statistics, 1997; National Education Goals Panel, 1995). All are measures of "performance" in aggregate group terms.

However, members of subgroups charged with monitoring states' progress in implementing Goal 1 of the National Education Goals have striven to develop more idiographic tools and procedures for sampling young children's developmental status (Kagan, Moore, & Bredekamp, 1995; National Education Goals Panel, 1991; Prince, 1992). Individuals comprising these subgroups have recognized the importance of measuring comprehensive skills of individual young children on an ongoing basis to shape our nation's discussion of progress toward achieving Goal 1, rather than relying exclusively on frequencies of children who receive specific services. These advocates call for creating a comprehensive assessment system to measure the developmental status of children entering formal school classrooms, using multiple measures (i.e., parent reports, teacher reports, skills profiles, and performance portfolios) to collect information on children's skills in physical well-being and motor development, social and emotional development, approaches to learning, language usage, and cognition and general knowledge, both before school entry and during their kindergarten year.

However, the approaches suggested to date (Kagan et al., 1995; National Education Goals Panel, 1991; Prince, 1992) fall short of truly idiographic methods. Due to their primary focus on provid-

ing a national overview of "school readiness," these advocates have recommended employing a comprehensive assessment system as a sampling tool in which only selected individuals across the country would participate at any one time, perhaps using a matrix approach in which only a limited number of system components would be administered to any one child. In fact, developers of national accountability systems have generally assumed any system created should not be used to assess, label, or categorize individual children, based on issues of reliability, validity, and potential stigmatization of such individuals (National Education Goals Panel, 1991; National Education Statistics Agenda Committee, 1994). The legacy of "readiness" testing, in which educators excluded kindergartners from formal education programs when they "failed" pre-academic skills tests (Shepard, 1994), has led to an overly cautious attitude toward using the results of individually-focused measures to drive instructional decisions for young children. On the one hand, members of Goal 1 subgroups recommend creation of a large-scale assessment system relying on data from multiple sources (i.e., parents, teachers, developmental profiles, and performance portfolios) across multiple points in time, which aligns well with recommended practices for assessing individual children's development (Neisworth & Bagnato, 1996). However, the sampling scheme proposed by subgroup members eliminates any possibility of generating convergent data on any particular child who participates in the system. Thus, data generated by the system may be too fragmentary to evaluate children's progress toward Goal 1 (Prince, 1992). Further, subgroup members have recommended collecting data only once every three years rather than on a shorter time cycle (Kagan et al., 1995; National Education Goals Panel, 1991; Prince, 1992). Again, by collecting data on such an infrequent schedule, none of the information generated will prove helpful to understanding and planning interventions for individual children who participate in the assessment effort.

The approach of the Goal 1 subgroup members focuses on generation of nationally representative, policy-relevant data. Within this focus, advocates shy away from conditions or procedures that might fully describe less-than-desired conditions or levels of performance for individual children and families. Yet, this approach also seems to ignore two fundamental aspects of contemporary special education and other compensatory programs. *First*, contemporary views hold that assessment and description does *not* necessarily lead to stigmatization. Rather, when due process protections exist, when labeling is avoided, and when parents and families are empowered to choose and control interventions, child well-being may actually be enhanced. *Second*, we believe there is an affirmative obligation to conduct child find and provide intervention when needed (Carta, Schwartz, Atwater, & McConnell, 1991). To avoid identifying children and families who might benefit from intervention represents inappropriate practice.

Yet another example of a system that relies on nomothetic, consensus-based outcomes concerns the work of the National Center on Educational Outcomes (NCEO) (Ysseldyke & Thurlow, 1993; Ysseldyke, Thurlow, & Erickson, 1994a; Ysseldyke, Thurlow, & Erickson, 1994b; Ysseldyke et al., 1993a; Ysseldyke et al., 1993b). NCEO staff have developed an elaborate system of outcomes and indicators state and local educators can use to collect data on students with disabilities at three and

six years of age. While the focus on children with disabilities distinguishes this work from most other accountability systems, their reliance on group-based frequencies to measure outcomes derived from consensus-based processes with early childhood "stakeholders" parallels work of other accountability systems for young children. Besides issues related to nomothetic approaches discussed already, reliance on consensus-based procedures raises additional questions (Wolery, 1995). While consensus by early childhood stakeholders contributes greatly to the social and consensual validity (Neisworth & Bagnato, 1996) of their system, the empirical basis for selecting outcomes and indicators – or for promoting attainment of these outcomes — remains unknown, as well as the potential benefit (or lack thereof) for individual children with whom we apply this system (Wolery, 1995).

Failure to Articulate Links Between Early Functioning and Later Competence

The Maryland Commission on the Early Learning Years (1992) held that "the outcomes to which early learning programs lead are meaningless without considering the paths that are taken to attain them" (p.124). The lack of understanding between goals and objectives of early childhood programs and later educational outcomes hampers efforts to develop accurate targets for accountability systems for young children. Early childhood programs may create authentic, data-based systems for tracking the developmental progress of young children (e.g., Day, Malarz, & Terry, 1992). However, without strong ideas on how to interpret assessment data in terms of children's later competence, it is difficult to gauge when it may be necessary to change instructional strategies for one or more children. In other instances, program designers create blueprints for intervention without clear guidelines on how to assess individual or group outcomes (e.g., Illinois State Board of Education, 1994). In such instances, educators cannot evaluate and refine current practices to optimize services for young children with disabilities.

Similarly, no clear relationship exists between accountability systems using terminal outcomes and those systems focusing on the dynamic, incremental process of attaining outcomes. That is, systems may employ detailed lists of expected outcomes for young children and their families (e.g., Ysseldyke et al., 1993a; Ysseldyke et al., 1993b), but provide no information on ways to monitor incremental changes in children's and families' changes across time toward achieving these outcomes (cf., Good & Kaminski, 1996). It is unlikely that programs would fail to affect developmental growth rates for individual children *and* attain desired aggregate-group outcomes. However, it may be the case, as suggested by Fuchs, Fuchs, and Hamlett (1994), that attention to dynamic measures of individual change would increase individual, and thus group, outcomes. This will only occur, however, if a close correspondence exists between outcomes measured and sought for *individuals* and those assessed for the larger group.

To gather information about dynamic changes, "[a]ssessment should be a natural and ongoing part of learning, rather than an event which interrupts it" (Maryland Commission on the Early Learning Years, 1992, p. 115). Early childhood educators need to assess frequently to make explicit the link between early functioning and later competence. Assessment cannot occur at just one or

two points in time. To ensure sensitivity of an accountability system to young children's growth and development, consumers must use the system repeatedly and frequently (Good & Kaminski, 1996).

Exclusion of Children with Disabilities

Children with disabilities are often excluded from state or local testing programs (Erickson, Thurlow, & Thor, 1995) or from states' reporting of results (Thurlow, Scott, & Ysseldyke, 1995). While states and school districts possibly avoid negative consequences (e.g., low public perceptions of students' achievement) by excluding children with disabilities in their assessment systems, costs far outweigh perceived benefits. Efforts to exclude children with disabilities from state- or district-wide assessments often result in increased referrals for determining eligibility for special education services, or grade retention (Bruininks et al., 1996). To gain a complete picture of *all* students' performance across districts and states, however, evaluators must include children with disabilities in their assessment systems.

Some professionals in early childhood education have bristled at the idea of applying accountability systems to any young children, fearing educators will employ such systems to prevent children from being considered "ready" for formal school (i.e., kindergarten) (e.g., Shepard, 1994). Others have relied on their interpretations of developmentally appropriate practice (Bredekamp, 1987; Bredekamp & Copple, 1997) to rail against the application of any type of accountability system to young children's development (e.g., Johnson & Johnson, 1992, in response to Carta, Schwartz, Atwater, & McConnell, 1991; Mahoney, Robinson, & Powell, 1992). In recent years, however, proponents of developmentally appropriate practice have asserted the importance of collecting systematic assessment data on groups of young children to evaluate early childhood programs (Bredekamp & Copple, 1997). Support for accountability systems in early childhood has also grown out of efforts to monitor progress toward Goal 1 of the National Education Goals (Kagan et al., 1995; National Education Goals Panel, 1991; Prince, 1992; Shepard, 1994), as well as gain insight into long-term trends of young children's educational outcomes for purposes of creating new policies and programs, or for modifying existing ones (Shepard, 1994).

Proposed Standards for Accountability Systems for Young Children

In response to accountability systems for young children relying on one or more of the limitations described in the previous section, we offer a set of proposed standards we believe should be integrated into appropriate systems. These standards are based on recommended practices for assessing young children (Neisworth & Bagnato, 1996; Odom, McLean, Johnson, & LaMontagne, 1995), as well as criteria used to develop curriculum-based measurement for elementary-aged students (Deno, 1985; Deno, Mirkin, & Chiang, 1982; Shinn, 1989) and kindergarten (Good &

Kaminski, 1996; Kaminski & Good, 1996).

Three major standards should drive development of accountability systems for young children, including those with disabilities. Accountability systems should:

- *Describe young children's growth and development*, including:

(a) describe growth **across all of the major developmental domains** traditionally associated with early childhood education (i.e., communication, cognitive, adaptive, social/emotional, and motor domains);

(b) be **authentic**, collect information to the greatest extent possible in children's natural settings while they are engaged in their typical daily activities;

(c) be **functional**, generate information that is meaningful in understanding children's skills and needs;

(d) be **culturally sensitive**, applicable across the diversity of children and families who receive special education services; and

(e) be **technically adequate**, produce information that is valid and reliable for its intended use.

- *Be feasible and appropriate at different levels of analysis*, including:

(a) be **efficient** to use (i.e., brief and easy to administer and score);

(b) be relatively **inexpensive**;

(c) be **understandable** to the widest possible audience, including all stakeholders in early childhood education (i.e., parents, teachers, teaching assistants, administrators, and others);

(d) collect data on individual children that is both **sensitive to individual change** over time and **sensitive to the effects of intervention**; and

(e) **aggregate** individual data to evaluate group trends, aggregate group data to evaluate programmatic trends, and aggregate programmatic data to evaluate systems (by locality, state, or nation).

- *Generate important information*, including:

(a) be **meaningful to stakeholders**, creating intrinsic incentives for users to collect accountability data;

(b) have high **consequential validity**, useful in generating ideas for crafting interventions, if necessary, to bolster a child's developmental trajectory; and

(c) **predict later competency and functioning**, provide insights into the future, developmental trajectories of individual children based on current data.

A Model for Enhancing Accountability Systems for Young Children with Disabilities

The *Early Childhood Research Institute on Measuring Growth and Development* (ECRI-MGD), a collaborative project between investigators at the Universities of Minnesota, Kansas, and Oregon, derives its foundation from these proposed standards. The major purpose of this five-year project, funded by the Office of Special Education and Rehabilitation Services (OSERS), focuses on creating a comprehensive, individualized measurement system for children with disabilities between birth and age eight, and their families. This measurement system will include two major elements: (a) growth and development indicators for monitoring the progress of individual young children on a continuous basis; and (b) solutions-oriented assessment procedures that will allow families and early childhood and elementary-grade educators to identify features of classroom and home settings they can change to optimize children's developmental outcomes.[1]

We believe the idiographic, dynamic measures of child development we will create can support program, district, and state-level accountability efforts in at least two different ways. *First*, educators and families will be able to use growth and development indicators to ensure individual children's progress toward ambitious, broadly defined accountability standards or goals. The success of any accountability system (i.e., where the intent is to improve, and document the improvement, of educational outcomes for groups of children) rests on schools and communities being able to improve the progress, and eventual outcomes, for *all* individual children, including those most difficult to serve. We know that dynamic, ongoing assessment is essential to improving outcomes for these children (Deno, 1985; Deno, 1986; Fuchs & Fuchs, 1986). Thus, programs, schools, and states that adopt dynamic, ongoing, and sensitive measures of child progress toward long-term student standards will probably be more likely to achieve positive results in large-scale accountability systems.

[1] Detailed information about the project's work to date may be found in a series of technical reports published by the Institute, including: *Technical Report on Theoretical Foundations of the Early Childhood Research Institute on Measuring Growth and Development*, *Technical Report on Selection of General Growth Outcomes for Children Between Birth and Age Eight*, *Technical Report on National Survey to Validate General Growth Outcomes for Children Between Birth and Age Eight*, *Technical Report on Research and Development of Individual Growth and Development Indicators for Children Between Birth and Age Eight*, and *Technical Report on Research and Development of Exploring Solutions Assessments for Children Between Birth and Age Eight*.

Second, educators and families will be able to use individual growth and development indicators in aggregate form to describe outcomes for groups of children. That is, by simply adding together results of individualized assessment data, we should gain insights into the progress of groups of children toward achieving desired levels of performance. In addition, by natural extension, early childhood stakeholders may wish to *define child outcomes and desired levels of performance directly in terms of performance on individualized growth and development indicators.* In this way, there would be tight agreement between what we measure and what we desire. To do this would require development of econometric models for aggregating individual indicator data across children, and/or developing sampling schemes to describe the performance of groups of children. Initial efforts to conduct these evaluations are underway, led by prominent researchers in curriculum-based measurement. Future efforts will extend this work to young children.

Summary

In this technical report, we have presented issues related to defining and applying accountability systems for young children, including those with disabilities. Reaching shared perspectives on definitions of accountability systems and their constituents remains complicated by the number of levels to which such systems can apply (e.g., child-, family-, state-, or nation-focused) and multiple meanings stakeholders place on frequently used terms (e.g., "outcomes," "indicators," and "benchmarks"). In addition, application of accountability systems for young children has been limited by at least four major issues: (a) the relative novelty of applying such systems to young children; (b) the emphasis on nomothetic and consensus-based approaches; (c) the still-growing state of knowledge on links between early functioning and later competency; and (d) the exclusion of children with disabilities.

In response to these issues, we propose a set of standards that should guide development of accountability systems for young children, focusing on children's growth and development, feasibility, application to multiple levels of analysis (including the individual child), and generation of important information to all stakeholders in early childhood education. These standards have set the foundation for the *Early Childhood Research Institute on Measuring Growth and Development*, which focuses on creating a comprehensive assessment system families, educators, and policymakers can use to monitor individual children's growth and development, aggregate individualized data to describe (and perhaps set standards for) group-level outcomes, and generate ideas for bolstering the developmental trajectories of individual children making insufficient progress toward important outcomes.

References

Adams, M. J. (1990). *Beginning to read: Thinking and learning about print.* Cambridge, MA: Massachusetts Institute of Technology.

Berg, S. (1998, January 19). To flunk or not to flunk? Chicago forces kids to make the grade. *Star Tribune* [On-line]: Available: http://www.startribune.com.

Bredekamp, S. (Ed.). (1987). *Developmentally appropriate practice in early childhood programs serving children from birth through age 8.* Washington, D.C.: National Association for the Education of Young Children.

Bredekamp, S., & Copple, C. (Eds.). (1997). *Developmentally appropriate practice in early childhood programs (Rev. ed.).* Washington, D.C.: National Association for the Education of Young Children.

Bruininks, R., Bielinski, J., Danielson, H., Davison, M., Erickson, R., Lock, M., Lydell, L., Norlin-Weaver, J., Seppanen, P., Thurlow, M., & Ysseldyke, J. (1996). *Minnesota educational accountability reporting system: Feasibility and design study (Volume 1).* Minneapolis, MN: College of Education and Human Development, University of Minnesota.

Carta, J., Schwartz, I., Atwater, J., & McConnell, S. (1991). Developmentally appropriate practice: Appraising its usefulness for young children with disabilities. *Topics in Early Childhood Special Education, 11*, 1-20.

Center for the Study of Social Policy. (1994). *A framework for improving outcomes for children and families.* Washington, D.C.: Author.

Day, B., Malarz, L., & Terry, M. (1992). *The education and care of young children: Report of the ASCD Early Childhood Consortium.* Alexandria, VA: Association for Supervision and Curriculum Development.

Deno, S. L. (1985). Curriculum-based measurement: The emerging alternative. *Exceptional Children, 52*, 219-232.

Deno, S. L. (1986). Formative evaluation of individual student programs: A new role for school psychologists. *School Psychology Review, 15*, 358-374.

Deno, S. L., Mirkin, P. K., & Chiang, B. (1982). Identifying valid measures of reading. *Exceptional Children, 49*, 36-45.

Dombro, A. L., O'Donnell, N. S., Galinsky, E., Melcher, S. G., & Farber, A. (1996). *Community mobilization: Strategies to support young children and their families.* New York: Families and Work Institute.

Erickson, R., Thurlow, M., & Thor, K. (1995). *1994 state special education outcomes.* Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.

Federal Interagency Forum on Child and Family Statistics. (1997). *America's children: Key national indicators of well-being.* Washington, D.C.: Author.

Fuchs, L. S., & Fuchs, D. (1986). Linking assessment to instructional intervention: An overview. *School Psychology Review, 15*, 318-323.

Fuchs, L. S., Fuchs, D., & Hamlett, C. L. (1994). Strengthening the connection between assessment and instructional planning with expert systems. *Exceptional Children, 61*, 138-146.

Good, R. H., III, & Kaminski, R. A. (1996). Assessment for instructional decisions: Toward a proactive/prevention model of decision-making for early literacy skills. *School Psychology Quarterly, 11*, 326-336.

Hutchinson, P. (1998, March 29). In schools, name of the game is accountability. *Star Tribune*, p. A27.

Illinois State Board of Education. (1994). *Special children, special care: Early childhood education for children with disabilities.* Springfield, IL: Author.

Iowa Kids Count Initiative. (1994). *A blueprint for Iowa's young children.* Des Moines, IA: Author.

Johnson, J. E., & Johnson, K. M. (1992). Clarifying the developmental perspective in response to Carta, Schwartz, Atwater, and McConnell. *Topics in Early Childhood Special Education, 12*, 439-457.

Kagan, S. L., Moore, E., & Bredekamp, S. (Eds.). (1995). *Reconsidering children's early development and learning: Toward common views and vocabulary.* Washington, D.C.: National Education Goals Panel.

Kagan, S. L., Rosenkoetter, S., & Cohen, N. (Eds.). (1997). *Considering child-based results for young children: Definitions, desirability, feasibility, and next steps.* New Haven, CT: Yale Bush Center in Child Development and Social Policy.

Kaminski, R. A., & Good, R. H., III. (1996). Toward a technology for assessing basic early literacy skills. *School Psychology Review, 25*, 215-227.

Mahoney, G., Robinson, C., & Powell, A. (1992). Focusing on parent-child interaction: The bridge to developmentally appropriate practices. *Topics in Early Childhood Special Education, 12*, 105-120.

Maryland Commission on the Early Learning Years. (1992). *Laying the foundation for school success: Recommendations for improving early learning programs in Maryland.* Baltimore, MD: Maryland State Department of Education.

National Education Goals Panel. (1991). *Potential strategies for long-term indicator development: Reports of the technical planning subgroups* (Report No. NEGP-91-08). Washington, D.C.: Author.

National Education Goals Panel. (1995). *The national education goals report: Building a nation of learners.* Washington, D.C.: U.S. Government Printing Office.

National Education Statistics Agenda Committee. (1994). *A statistical agenda for early childhood care and educatiuon: Addendum to a guide to improving the national education data system.* Washington, D.C.: U.S. Department of Education.

Neisworth, J. T., & Bagnato, S. J. (1996). Assessment for early intervention: Emerging themes and practices. In S. L. Odom & M. E. McLean (Eds.), *Early intervention/early childhood special education: Recommended practices* (pp. 23-57). Austin, TX: PRO-ED, Inc..

Odom, S. L., McLean, M. E., Johnson, L. J., & LaMontagne, M. J. (1995). Recommended practices in early childhood special education: Validation and current use. *Journal of Early Intervention, 19*, 1-17.

Prince, C. D. (1992). *Reactions to the Goal 1 technical planning subgroup report on school readiness: Report to the National Education Goals Panel* (Report No. NEGP-92-03). Washington, D.C.: National Education Goals Panel.

Seppanen, P., Schaeffer, R., & Julian, N. R. (1995). *Matching state goals to a model of outcomes and indicators for age 3 (technical report 13).* Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.

Shepard, L. A. (1994). The challenges of assessing young children appropriately. *Phi Delta Kappan, 76*, 206-212.

Shinn, M. R. (Ed.). (1989). *Curriculum-based measurement: Assessing special children.* New York: The Guilford Press.

Special Study Panel on Education Indicators. (1991). *Education counts: An indicator system to monitor the nation's educational health.* Washington, D.C.: National Center for Education Statistics, U.S. Department of Education.

Thurlow, M. L., Scott, D. L., & Ysseldyke, J. E. (1995). *A compilation of states' guidelines for accommodations in assessments for students with disabilities (Synthesis Report 18).* Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.

Wolery, M. (1995). Some concerns about process. *Journal of Early Intervention, 19*, 21-23.

Ysseldyke, J. E., & Thurlow, M. L. (1993). *Self-study guide to the development of educational outcomes and indicators: A companion piece to the six levels of educational outcomes and indicators for use by state departments of education, school districts, and local schools.* Minneapolis: University of Minnesota, National Center on Educational Outcomes.

Ysseldyke, J. E., Thurlow, M. L., & Erickson, R. N. (1994a). *Possible sources of data for early childhood (age 3) indicators.* Minneapolis: University of Minnesota, National Center on Educational Outcomes.

Ysseldyke, J. E., Thurlow, M. L., & Erickson, R. N. (1994b). *Possible sources of data for early childhood (age 6) indicators.* Minneapolis: University of Minnesota, National Center on Educational Outcomes.

Ysseldyke, J. E., Thurlow, M. L., & Gilman, C. J. (1993a). *Educational outcomes and indicators for early childhood (age 3).* Minneapolis: University of Minnesota, National Center on Educational Outcomes.

Ysseldyke, J. E., Thurlow, M. L., & Gilman, C. J. (1993b). *Educational outcomes and indicators for early childhood (age 6).* Minneapolis: University of Minnesota, National Center on Educational Outcomes.