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FEATURE ARTICLE

General Growth Outcomes for Young Children: Developing a Foundation for Continuous Progress Measurement

Early Childhood Research Institute on Measuring Growth and Development

Public expectations of accountability in our education system have increasingly focused on young children’s development, in part because of Goal 1 of the National Education Goals (By the year 2000, all children in America will start school ready to learn). Few sensitive measurement systems have been developed, however, to monitor young children’s growth over time. Building such a system requires a parsimonious but comprehensive set of developmental outcomes expected of children between birth and age 8. In the two studies presented here, investigators formulated a set of 15 general growth outcomes for young children, and conducted a survey of parents of children with and without disabilities and professionals in early childhood and early elementary education to validate the outcomes.

In recent years, teachers and other professionals in public schools have been the targets of a ground swell of societal indignation at the lack of educational accountability (Allen, 1999; Bandler, 1999; Bennett, 1999; Benning, 1999; May, 1999; Olson, 1999). Educators have been accused of focusing too exclusively on “inputs,” such as the number of books in school libraries, the number of computers in classrooms, or, for example, the relative merits of phonetic versus whole-language approaches to reading instruction (Coles, 1998; Hempenstall, 1997; Olson, 1999), to assess effectiveness. Societal perceptions of high school graduates’ ill-preparedness for attending college or working in the job market (Johnson & Aulicino, 1998; National Commission on Excellence in Education, 1983) have forced educators to place more emphasis on “outputs,” specifically important academic outcomes, and standards required of students to achieve these outcomes (Billings, 1996; Riley, 1996; Tirozzi & Uro, 1997).

A logical corollary of the current emphasis on outcomes required for high school graduation (e.g., Bruininks et al., 1996) has been a downward extension of skills and competencies we expect students in lower grades to demonstrate to remain “on path” toward attainment of expected standards. Presumably, outcomes expected of high school graduates can be analyzed, either empirically or logically, to identify prerequisites, levels of typical performance, or “benchmarks” that precede 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 empirical or logical analyses have been extended to the prekin-
progress toward Goal 1 include indicators of children’s and pregnant mothers’ health (i.e., percentage of infants born with health risks, percentage of fully immunized 2-year-olds, percentage of infants born at low birth weight, and percentage of mothers who began receiving prenatal care during their first trimester of pregnancy) and participation in activities that promote learning (i.e., percentage of preschoolers whose family members read to them, percentage of children who participate in preschool programs, and numbers of children with disabilities enrolled in preschool programs; Federal Interagency on Child and Family Statistics, 1999; National Education Goals Panel, 1999).

These measures parallel the evaluation of “inputs” common in elementary and secondary education, but fail to assess adequately young children’s actual development over time. The U.S. Commissioner of Education Statistics has called for a review of this focus, raising concerns about the insufficient evaluation of “outputs” or children’s developmental skills (Forgione, 1998). These concerns include: (a) What are children’s competencies and skills at different ages during the first 6 years of life?; (b) What are the levels and rates of growth over time for different groups of children?; (c) How do family, educational, and health resources enhance rates of growth and development for “vulnerable” young children?; and (d) What are the rates of growth in math, reading, and science achievement in the elementary years (i.e., grades K through five)? (Forgione, 1998).

Members of the Goal 1 Resource Group of the National Education Goals Panel addressed these concerns by recommending assessment of children’s skills in five developmental areas: (a) physical well-being and motor development, (b) social and emotional development, (c) approaches to learning, (d) language usage, and (e) cognition and general knowledge (Kagan, Moore, & Bredekamp, 1995; National Education Goals Panel, 1991). According to the U.S. Commissioner of Education Statistics, however, the Resource Group has yet to specify a system for assessing these
Goal 1 include indicators of infant health (i.e., infants born with health risks, not immunized), preterm birth, infants born at low birth weight, and numbers of children or families not enrolled in preschool or Interagency Forum on Child and Family Statistics (1999); National Panel, 1999).

The parallel evaluation of development in elementary and secondary education fails to assess adequately actual development over time for children or children’s development (Prince, 1998). These concerns involve not only children’s competencies by age but the levels of resources in different contexts (i.e., grades K through 12). What are the levels and rates of growth and development for different groups of children (e.g., those with disabilities, those from low-income families, those who are English language learners, and those who are at risk or at risk for emotional or behavioral problems)?

Unfortunately, the Goal 1 Resource Group did not address this issue, recommending assessment tools for use in five developmental areas: (a) social and emotional skills, (b) communication and general knowledge, (c) academic achievement, (d) language understanding and expression, and (e) motor development (Educational Goals Panel, 1991). According to the Commissioner of Education, however, the Resource Group did not create a system for assessing these developmental domains.

We should also use it on an idiographic basis, that is, identifying individual children’s strengths and needs, linking results to a system for intervening on behalf of children who would benefit from early intervention.

Need for Idiographic Outcomes and Assessment Tools

At least two arguments support the use of a valid, early childhood assessment system on an idiographic basis. First, as educators, we have an affirmative obligation to find children who are in need of intervention, and to offer opportunities for service to their families, as early as possible (Carta, Schwartz, Atwater, & McConnell, 1991). Provisions of the Individuals with Disabilities Education Act require states to identify, locate, and evaluate children with disabilities in need of special education and related services (20 U.S.C. § 1412). Thus, any system we employ to yield a valid, normative understanding of young children’s progress toward Goal 1 should also assist us in meeting the requirements of IDEA by locating individual children who require additional services to avoid or reduce the effects of a disabling condition.

Second, assessment of a child’s skills and needs as part of a broader evaluation does not necessarily mean the child will be stigmatized. Laws such as IDEA exist to protect families and children’s interests from inappropriate assessment or labeling practices through due process procedures (20 U.S.C. § 1415). Families play a pivotal role in deciding if and when an evaluation of their children’s developmental skills will occur and how results will be used to drive instructional changes, if any, for their children. If safeguards remain in place to prevent misuse of assessment data, there should be no conflict between collecting developmental skill data for purposes of evaluating group-wide trends toward Goal 1 and using the same data to understand the strengths and needs of individual participants.

To begin crafting an idiographic assessment system of young children’s development, however, we need to be clear about the types of outcomes we expect young children to attain as they negotiate the first 8 years of their
lives (Carta & Greenwood, 1997). We conducted two studies to identify a parsimonious set of outcomes describing the growth of children between birth and age 8 that could serve as the foundation for a comprehensive, continuous measurement system of young children’s development, especially those with disabilities. In Study I, examination of published resources and expert opinion led to the selection of a set of knowledge base we believed applied to all children between birth and age 8. In Study II, we conducted a mail survey of a sample of parents of young children with and without disabilities, and professionals in early childhood and early elementary education to study the social validity of the selected set of outcomes.

STUDY I: SELECTION OF GENERAL GROWTH OUTCOMES

Purpose
The purpose of Study I was to identify a set of general growth outcomes to describe the development of children between birth and age 8. Specific research questions were: What does the existing knowledge base (including empirical research, assessment tools, intervention curricula, and theoretical analyses) suggest should be primary outcomes for toddlers, preschoolers, and early elementary students, and can a single, parsimonious set of outcomes be formulated to describe the growth of children between birth and age 8?

Method
Selection criteria. We chose four criteria to guide selection (and ultimate validation) of outcomes. First, we endeavored to maintain the functional continuity of outcomes across the age continuum of birth to 8 to the greatest extent possible, realizing the topography of outcomes would differ across this age span. For instance, an infant might point to an object in an adult’s presence to communicate her intent to obtain the object, whereas a preschooler might simply ask the adult to give him the object. Although the form of behavior demonstrated by the infant and preschooler differ, both of them communicate their desire to obtain an object from an adult. By maintaining a functional focus, we assumed these outcomes would also contribute to development of assessment tools with social and treatment validity for young children with disabilities (Neisworth & Bagnato, 1996).

Second, we wanted to strike a balance between comprehensiveness and parsimony. We recognized any set of outcomes must describe the full range of developmental skills children between birth and age 8 demonstrate. Yet, to establish a manageable number of outcomes upon which to base an assessment system, we attempted to limit, in a general way, the total number of outcome statements. Such a limitation tips the balance away from specific to more broadly stated outcomes. In turn, however, more broadly stated outcomes describe young children’s growth across the early childhood age continuum, and help educators know the endpoints to which young children’s development should aspire (Fuchs & Deno, 1991).

Third, we emphasized a partial attainment model in the acquisition and demonstration of skills, rather than a mastery, or terminal skill, model. That is, we wanted to select skill areas in which children between birth and age 8 could demonstrate proficiency, albeit in increasingly fluent levels with maturity. We were less interested in skills only a 5-year-old or an 8-year-old could demonstrate. By maintaining a partial attainment focus, we attempted to maximize measurement of a progression or trajectory of skills within a particular domain over time for children with and without disabilities, thus increasing the chances of ultimately crafting assessment tools sensitive to young children’s developmental growth.

Fourth, we wanted outcomes that could be measured repeatedly, directly, and efficiently. Relying on curriculum-based measurement (CBM; Deno, 1985; Fuchs & Deno, 1991; Shinn, 1989) as a model, we crafted general outcomes to permitted measurement of a child’s skills across time, encouraging assessment on a frequent enough basis to track the ongoing progress of an individual child’s growth.

Procedures. Review of the existing knowl-
edge base of outcomes for young children was divided across three collaborating sites by age group. One group researched outcomes for children between birth and age 3, another group conducted a comparable search for children between 3 and 5, and a final group investigated outcomes for children between 5 and 8.

Each team examined assessment instruments, early childhood curricula, developmental milestones, and textbooks on child development to generate lists of developmental skills appropriate for children in their respective age groups. Examples included: the Battelle Developmental Inventory (Newborg, Stock, Wnek, Guidubaldi, & Svinicki, 1984), AEPs Measurement for Three to Six Years (Bricker & Pretti-Frontczak, 1996), The MacArthur Communicative Development Inventories (Fenson et al., 1993), Hawaii Early Learning Profile (Furuno, O’Reilly, Inatsuka, Hosaka, & Falbey, 1993), Learning Accomplishment Profile (Sanford & Zelman, 1981), Brigance Diagnostic Inventory of Early Development (Brigance, 1991), On Track (Neilsen, van den Pol, Guidry, Keeley, & Honzel, 1994), and Child Development: Its Nature and Course (Stroufe, Cooper, & DeHart, 1992).

In addition, staff conducted searches of literature cited in the ERIC, PsycInfo, and ORBIT databases, the last of which is maintained by the National Center on Educational Outcomes (NCEO) at the University of Minnesota. Key words used to conduct literature searches consisted of combinations of outcome, norm, goal, stage, development, young children, preschool, and early childhood. Resources had to be published no earlier than 1977 and had to be in English. These searches generated reports, books, and state government documents that provided lists of developmental skills appropriate for children between birth and age 8. Examples of such resources included: texts on developmentally appropriate practice (Bredenkamp, 1987; Bredenkamp & Copple, 1997), recommendations for early childhood programs published by the Maryland State Department of Education (Maryland Commission on the Early Learning Years, 1992), early childhood outcomes from the National Center on Educational Outcomes (Seppanen, Schaeffer, & Julian, 1995; Ysseldyke, Thurlow, & Gilman, 1993a; Ysseldyke, Thurlow, & Gilman, 1993b), and an overview of child development by the Kentucky Department of Education (Kentucky State Department of Education, 1991).

Each site-based team used an inductive process to organize lists of developmental skills into a relatively small number of outcomes, relying on a consensus-based process known as the constant comparative method (Glaser & Strauss, 1967; Lincoln & Guba, 1985). This method called for staff to record discrete skills onto strips of paper and create paper piles of skills, labeling each pile with the name of one of five developmental domains (i.e., social, communication, cognitive, adaptive, and motor) and 18 categories (e.g., peer/adult interaction, expressive communication, reasoning skills). Staff set the domain and category labels a priori, but they allowed the constant comparative process to drive creation of additional, categorical labels if any skills were not “accounted for” by a pre-existing category. Staff worked individually at first to create paper piles of skills, and then they met as a group to compare attributes of developmental skills to categories. At these meetings, staff aggregated similar skills across categories, within each domain, to derive a parsimonious set of categories per domain. Staff discussed functional descriptions of newly generated categories, relying on group consensus to formulate a set of site-specific outcome statements. Once staff at each site had crafted outcome statements, they conducted a “member check,” (Lincoln & Guba, 1985) asking each participant to repeat the process of assigning skills to outcome statements generated by group consensus, ensuring all of the original skills could be assigned to at least one outcome.

After each team generated outcome statements for the three age groups, investigators from all three sites met to compare these statements and craft a single set to describe the growth of children from birth through age 8. Common elements of outcome statements across each of the age groups became the ba-
Table 1.
Examples of General Growth Outcomes By Age Group

<table>
<thead>
<tr>
<th></th>
<th>Birth to 3-year-olds</th>
<th>3- to 5-year-olds</th>
<th>5- to 8-year-olds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Child uses gestures, sounds,</td>
<td>• Child will engage in</td>
<td>• Child can use</td>
<td></td>
</tr>
<tr>
<td>words, and word combinations</td>
<td>communicative/</td>
<td>complex sentences</td>
<td></td>
</tr>
<tr>
<td>to express meaning to others.</td>
<td>conversational</td>
<td>to serve a variety</td>
<td></td>
</tr>
<tr>
<td></td>
<td>interactions with</td>
<td>of communicative</td>
<td></td>
</tr>
<tr>
<td></td>
<td>others, usually</td>
<td>purposes.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>involving reciprocal</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>exchange of words and</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>language; social,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>dyadic interchange;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>use of social</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>conventions; and</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>employment of language</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>to manipulate or</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>obtain resources from</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>others in the environment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Child is able to initiate,</td>
<td>• Child will interact</td>
<td>• Child demonstrates</td>
<td></td>
</tr>
<tr>
<td>respond to initiations from,</td>
<td>with peers and adults,</td>
<td>social skills</td>
<td></td>
</tr>
<tr>
<td>and maintain positive social</td>
<td>maintaining social</td>
<td>necessary to</td>
<td></td>
</tr>
<tr>
<td>interactions with peers</td>
<td>relationships and</td>
<td>develop and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>demonstrating social</td>
<td>maintain stable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>participation in play.</td>
<td>friendships.</td>
<td></td>
</tr>
<tr>
<td><strong>Cognitive</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Child understands relational</td>
<td>• Child will demonstrate</td>
<td>• Child can read</td>
<td></td>
</tr>
<tr>
<td>concepts including those that</td>
<td>a conceptual and</td>
<td>and comprehend</td>
<td></td>
</tr>
<tr>
<td>are quantitative, directional,</td>
<td>practical understanding</td>
<td>a variety of</td>
<td></td>
</tr>
<tr>
<td>and positional and can</td>
<td>of early literacy and</td>
<td>printed material.</td>
<td></td>
</tr>
<tr>
<td>discriminate items that are</td>
<td>math skills.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>functionally related.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Adaptive</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Child can complete typical</td>
<td>• Child will demonstrate</td>
<td>• Child can take</td>
<td></td>
</tr>
<tr>
<td>toileting routine with</td>
<td>a range of basic,</td>
<td>care of personal</td>
<td></td>
</tr>
<tr>
<td>minimal assistance.</td>
<td>self-help/care, survival</td>
<td>hygiene and eating</td>
<td></td>
</tr>
<tr>
<td></td>
<td>skills, including (but</td>
<td>independently.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>not limited to) skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>in dressing, eating,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>toileting/hygiene, and</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>safety/identification.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Motor</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Child is able to walk and</td>
<td>• Child will use his/her</td>
<td>• Child demonstrates</td>
<td></td>
</tr>
<tr>
<td>run with balance and</td>
<td>large muscle system in</td>
<td>gross motor</td>
<td></td>
</tr>
<tr>
<td>coordination.</td>
<td>a coordinated manner</td>
<td>control to</td>
<td></td>
</tr>
<tr>
<td></td>
<td>to negotiate the</td>
<td>accomplish greater</td>
<td></td>
</tr>
<tr>
<td></td>
<td>environment.</td>
<td>coordination in</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>space.</td>
<td></td>
</tr>
</tbody>
</table>

sis for formulating a single set of outcomes. Outcomes or skills specific to one group but not descriptive of others were eliminated from the final set. For example, the team responsible for generating outcomes describing the growth of children between 5 and 8 years of age formulated a statement that referred to the formation and maintenance of stable friendships. Because this characteristic of social development cannot yet describe the skills of infants and toddlers, it was not included in the final set of outcomes describing all young children's growth.

**Results**

Table 1 shows examples of outcomes developed for each of the three age groups (birth-3, 3–5, and 5–8). Each site-based team generated outcomes within all of the five traditional developmental domains, though the total number of children in each age group was not specified. The outcomes for each age group are listed as follows:

1 A complete list of outcomes is available from the authors.

*Priest, L., & Lee, A. (2001).*
### Table 2. General Growth Outcomes for Children Between Birth and Age 8

<table>
<thead>
<tr>
<th>Domain</th>
<th>Outcome</th>
</tr>
</thead>
</table>
| The child uses language to convey and comprehend communicative and social intent. | Uses gestures, sounds, words, or sentences (including sign language and augmentative and alternative communication) to convey wants and needs or to express meaning to others.  
Responds to others’ communication with appropriate gestures, sounds, words, or word combinations (including sign language and augmentative and alternative communication).  
Uses gestures, sounds, words, or sentences (including sign language and augmentative and alternative communication) to initiate, respond to, or maintain reciprocal interactions with others. |
| The child takes responsibility for his/her behavior, health, and well-being, even in the face of challenge or adversity. | Engages in a range of basic self-help skills, including but not limited to skills in dressing, eating, toileting/hygiene and safety/identification.  
Meets behavioral expectations (such as following directions, rules, and routines) in home, school, and community settings.  
 Appropriately varies or continues behavior to achieve desired goals. |
| The child negotiates and manipulates the environment. | Moves in a fluent and coordinated manner to play and participate in home, school, and community settings.  
Manipulates toys, materials, and objects in a fluent and coordinated manner to play and participate in home, school, and community settings. |
| The child initiates, responds to, and maintains positive social relationships. | Interacts with peers and adults, maintaining social interactions and participating socially in home, school, and community settings.  
 Appropriately solves problems in his/her interactions with others.  
Shows affect appropriate to the social context.  
Demonstrates an understanding of age-appropriate information.  
Demonstrates recall of verbal and nonverbal events.  
Understands and uses concepts related to early literacy and math skills.  
Solves problems that require reasoning about objects, concepts, situations, and people. |
| The child uses cognitive skills to explore the environment, reason, and solve problems. | |

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**Notes:**
- The total number of outcomes varied by group. Twenty-two outcomes were generated for children between birth and 3-years-old, 13 outcomes for the 3- to 5-year-olds, and 17 outcomes for the 5- to 8-year-old group.  
- A complete list of site-specific outcome statements may be obtained from the first author.

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*JEI, 2001, 24:3*

*Discussions*

A set of 15 general growth outcomes was identified to describe the development of chil-
children within the early childhood years (i.e., birth to age 8). Although teams initially selected outcomes for children in each of three age groups (birth-3, 3–5, and 5–8), these separate outcomes shared numerous elements across domain areas, making the task of distilling a single set of outcomes for children across the entire age continuum relatively straightforward.

Before beginning to use the final set of general growth outcomes as the foundation for an idiographic, progress-monitoring assessment system, we sought feedback from early childhood stakeholders on the importance and applicability of these outcomes to a wide range of young children, especially those with disabilities. To elicit this feedback, we conducted a survey of parents of young children and professionals in early childhood and early elementary education.

**STUDY II: VALIDATION OF GENERAL GROWTH OUTCOMES**

**Purpose**

We posed the following research questions in Study II: (a) To what degree will parents of young children with and without disabilities, as well as professionals in early childhood and early elementary education, support the outcomes selected to describe the developmental status and growth of children between birth and age 8?; (b) Are there differences between parents and professionals in their evaluation of the general growth outcomes?; (c) Do parents and professionals have recommendations for revising these outcomes to ensure application to all children, regardless of disability status, socioeconomic status, or cultural group?; (d) How do parents and professionals view the importance and adequacy of developmental information available to them about young children, both before and after the children enroll in school?

**Method**

Prospective participants. We contacted national organizations devoted to early childhood issues to begin to identify prospective respondents for a mail survey. Staff at the following organizations randomly selected individuals from their membership lists: the Council for Exceptional Children (CEC), the National Association for the Education of Young Children (NAEYC), the National Association of School Psychologists (NASP), and ZERO-TO-THREE National Center for Infants, Toddlers and Families. To identify parents of young children without disabilities and professionals in early elementary regular education, we contacted two national marketing firms and purchased mailing lists of randomly selected individuals within these two targeted groups across the 50 states. Table 3 shows the number of surveys sent to each target group. We sent surveys to a total of 1,099 parents and 1,275 professionals in early childhood and early elementary education.

**Measures**. Working in collaboration with staff from the Minnesota Center for Survey Research (MCSR), we constructed two survey instruments, one for parents and the other for professionals. We presented the general growth outcomes to professionals in their original language, but we adapted the language of outcomes for families, simplifying the words without changing the basic meaning of each statement. For example, in its original form, one outcome states a child between birth and age 8 “appropriately varies or continues behavior to achieve desired goals, and maintains effort or tries different strategies if first efforts don’t work.” For parent respondents, we changed it to “behaves appropriately to get what he or she wants or needs, and keeps up effort or tries different strategies if first efforts don’t work.”

To maximize responses from parents of young children, we asked the following question at the beginning of the parent survey instrument: Are any children who are 12 years or younger currently living in your household? If a respondent answered “yes,” he or she was asked to continue completing the survey instrument.

Both parents and professionals were asked to complete the survey instrument. They were also asked to complete a demographic questionnaire about themselves and their children. They were also asked to indicate the importance of each outcome and whether they were most concerned about their child’s social-emotional development or their child’s academic development. They were also asked to indicate an alternate focus for their child’s educational plan if they were age 8 or younger.

Additional questions were asked about their children’s physical, social-emotional, and cognitive development. They were also asked to rate their children’s overall development in comparison to their peers.

**Results**

The results of the survey will be reported in a future publication. The current report focuses on the development of the assessment system and the validation of the general growth outcomes.

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2 Copies of the survey instruments used in this study may be obtained from the first author.

3 The Minnesota Center for Survey Research (MCSR) is a University of Minnesota-affiliated yet independent organization devoted to assisting groups and individuals conduct mail and telephone surveys.
Table 3.
Initial Sample of Respondents for a National Survey to Validate General Growth Outcomes for Children Between Birth and Age 8

<table>
<thead>
<tr>
<th>Target Group</th>
<th>Organization</th>
<th>Number of Surveys Sent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents of children with disabilities</td>
<td>Council for Exceptional Children (CEC)</td>
<td>600</td>
</tr>
<tr>
<td>Parents of children without disabilities</td>
<td>Survey Sampling, Inc.</td>
<td>499</td>
</tr>
<tr>
<td>Professionals in early childhood education</td>
<td>ZERO-TO-THREE</td>
<td>100</td>
</tr>
<tr>
<td>Professionals in early childhood education</td>
<td>National Association for the Education of Young Children (NAEYC)</td>
<td>200</td>
</tr>
<tr>
<td>Professionals in early childhood special education</td>
<td>Council for Exceptional Children (CEC)</td>
<td>300</td>
</tr>
<tr>
<td>Professionals in early childhood special education</td>
<td>Council for Exceptional Children (CEC)</td>
<td>200</td>
</tr>
<tr>
<td>Professionals in early elementary education</td>
<td>Market Data Retrieval</td>
<td>225</td>
</tr>
<tr>
<td>School Psychologists with an interest in early childhood education</td>
<td>National Association of School Psychologists (NASP)</td>
<td>250</td>
</tr>
</tbody>
</table>

The survey was piloted first by randomly selected individuals to their membership lists: the Council for Exceptional Children (CEC), the National Association for the Education of Young Children (NAEYC), the National Association of School Psychologists (NASP), and ZERO-TO-THREE National Center for Parents and Families. To identify children without disabilities and young children without disabilities in early elementary regular education, we contacted two national market-research firms to purchase mailing lists of random samples of individuals within these two groups across the 50 states. Table 3 presents the number of surveys sent to each target group, a total of 1,099 surveys to 75 professionals in early childhood education.

Working in collaboration with the University of Minnesota Center for Survey Research (CSR), we constructed two surveys, one for parents and the other for professionals. We presented the general questions to professionals in their own language, but we adapted the language for families, simplifying the questions but not changing the basic meaning of the statements. For example, in its original form, a statement reads as follows: “appropriately varies or consistent with the individual’s needs and wants or needs; and if a strategy doesn’t work,” we asked the respondents to rate the adequacy of the intervention if the child’s development before and after their children enrolled in school. Professionals were asked to rate the adequacy and importance of information they share with parents about a young child’s rate of development, their ability to evaluate the effects of intervention on an individual child’s development, and their perceptions about the usefulness of an alternative system for monitoring individual children’s development between birth and age 8.

Pretesting. To pretest survey instruments, we mailed surveys to 25 parents of typically developing children and 25 professionals in early childhood education. Because the initial response rate of the pretest seemed low, staff from the MCSR conducted a telephone follow-up, asking parents and professionals if they had received the survey, did not understand any of the questions, and were willing to complete and return the survey. Response rates improved after these telephone contacts, and initial results indicated parents and professionals understood the outcomes and questions poser on their respective surveys. Based on this feedback, slight changes were made to clarify the wording of four outcome statements on the parents’ survey instrument and no changes were made to the professionals’ survey.

Procedure. Staff at the MCSR mailed surveys to the full list of parents and professionals. One week later, they mailed reminder postcards to all prospective respondents. Approximately 3 weeks later, they mailed a second copy of the appropriate survey to parents and professionals who had not returned the
Table 4.
Final Response Status of Respondents to a National Survey to Validate General Growth Outcomes

<table>
<thead>
<tr>
<th>Status</th>
<th>Parent Survey</th>
<th>Professional Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Returned surveys:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed</td>
<td>351</td>
<td>32</td>
</tr>
<tr>
<td>No children under 12</td>
<td>267</td>
<td>24</td>
</tr>
<tr>
<td>Refusals</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Surveys not returned</td>
<td>467</td>
<td>43</td>
</tr>
<tr>
<td>Undeliverable mail</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>1,099</td>
<td>100</td>
</tr>
</tbody>
</table>

initial survey. Data collection ended slightly more than 2 months after mailing the first set of surveys.

Staff at the MCSR edited and coded returned surveys, following standard quality control procedures to eliminate dual responses when single-answer responses were appropriate, or to create new categories from dual responses. They created computer data files and cleaned data entry errors. Data files were transferred to the first author for analysis.

Results
Respondents. Table 4 shows the final response status of parents and professionals who received surveys. Thirty-two percent (n = 351) of parents who received the survey indicated they had a child 12-year-old or younger living in the household, completed the survey, and returned it. Fifteen percent (n = 54) of these parents indicated they had a child with a disability or special need under the age of 9 years old. Fifty-three percent (n = 672) of the professionals who received the survey completed and returned it.

Demographic characteristics of survey respondents are shown in Table 5. The median number of people living in parents’ households was 4, ranging from 2 to 8 people. Seventy-four percent of parent respondents indicated they had 2 children at home, 25% had 3 children, 7% had 4 children, and 1% had 5 children. The median age of all children in parents’ households was 8 years old.

Twenty-nine percent of professionals identified themselves as early childhood education professionals, 22% were elementary education professionals, 18% were school psychologists, and 31% identified themselves as Other, indicating their job responsibilities differed from the survey’s preselected categories or consisted of a combination of categories. As a group, professionals had worked a median of 13 years in their profession, with a range of less than 1 year to 40 years. Professionals had worked a median of 6 years in their current positions, with a range of less than 1 year to 40 years.

Ratings of outcomes. Table 6 shows parents’ and professionals’ ratings of general growth outcomes. With two exceptions (i.e., “Manipulates toys, materials, and objects in a fluent and coordinated manner to play and participate in home, school, and community settings” and “Demonstrates recall of verbal stories and experiences, as well as past events’”), more than 50% of parent respondents rated outcomes as critically important, especially those pertaining to children’s development of communication and adaptive skills.

At least 50% of professional respondents rated 7 of the 15 outcomes as critically important, whereas the remaining outcomes were rated as very important. Professionals rated communication, adaptive, and social outcomes as more important than cognitive or motor outcomes.

Both parents and professionals rated the first statement (i.e., “Uses gestures, sounds, words, or sentences to let others know what they want or need, or to express meaning to others”), 7 of the 15 outcomes as critically important, whereas the remaining outcomes were rated as very important. Professionals rated communication, adaptive, and social outcomes as more important than cognitive or motor outcomes.

Both parents and professionals rated the first statement (i.e., “Uses gestures, sounds, words, or sentences to let others know what they want or need, or to express meaning to others”), 7 of the 15 outcomes as critically important, whereas the remaining outcomes were rated as very important. Professionals rated communication, adaptive, and social outcomes as more important than cognitive or motor outcomes.
2% were elementary education and 8% were school psychologists, who further characterized themselves as Other, in the survey’s preselected categories or combination of categories. As professionals had worked a median of 6 years in their current role, with a range of less than 1 year to 40 years. Professionals on average had a median of 6 years in their current role, with a range of less than 1 year to 40 years.

outcomes. Table 5 shows percentage of the survey respondents’ ratings of general outcomes. With two exceptions (i.e., the total number of respondents as less than 50% of parent respondents), professional respondents as critically important, relevant to both children’s development and adaptive and social outcomes.

% of professional respondents ranked the 15 outcomes as critically important. The remaining outcomes were rated as important. Professionals rated the outcomes in the following order: adaptive, social outcomes, and then cognitive outcomes.

Parents and professionals rated the same outcomes (i.e., “Uses gestures, sounds, and facial expressions to let others know what is needed, or to express meaning to others”) as the most important outcome. Thirty-two percent of parents and 57% of professionals reported this outcome first on their list of five most important outcomes. In general, regardless of subgroup affiliation, all respondents ranked the three language outcomes and the one pertaining to basic self-help skills as the most important of the 15 outcomes.

Parents also generally converged with professionals in their rankings of the two remaining adaptive outcomes (i.e., “Meets behavioral expectations in home, school, and community settings” and “Appropriately varies or continues behavior to achieve desired goals”), motor outcomes, one social interaction outcome (i.e., “Appropriately solves problems in interactions with others”), and two cognitive outcomes (i.e., “Demonstrates recall of verbal stories and experiences, as well as past events” and “Solves problems that require reasoning about objects, concepts, situations, and people”). However, by and large, professionals ranked the two remaining social interaction outcomes (i.e., “Interacts with peers and adults, maintaining social interactions and participating socially in home, school, and community settings”, and “Shows feelings appropriate to varying social situations”) higher than parents did. In contrast, parents generally ranked the two remaining cognitive outcomes (i.e., “Demonstrates an understanding of age-appropriate information” and “Understands and uses concepts related to early literacy and math skills”) higher than professionals did.

**Table 5. Number (Percentage) of Survey Respondents by Demographic Characteristics**

<table>
<thead>
<tr>
<th></th>
<th>Parents</th>
<th>Professionals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>276 (79)</td>
<td>605 (90)</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate degree</td>
<td>125 (36)</td>
<td>491 (73)</td>
</tr>
<tr>
<td>Some graduate work</td>
<td>50 (14)</td>
<td>92 (14)</td>
</tr>
<tr>
<td>Four-year college graduate</td>
<td>80 (23)</td>
<td>40 (6)</td>
</tr>
<tr>
<td>Some four-year college work</td>
<td>24 (7)</td>
<td>9 (1)</td>
</tr>
<tr>
<td>Two-year college graduate</td>
<td>24 (7)</td>
<td>10 (2)</td>
</tr>
<tr>
<td>Some two-year college work</td>
<td>26 (7)</td>
<td></td>
</tr>
<tr>
<td>High school graduate</td>
<td>20 (6)</td>
<td></td>
</tr>
<tr>
<td>Some high school</td>
<td>2 (&lt;1)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>29 (4)</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African-American</td>
<td>9 (3)</td>
<td>25 (4)</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>5 (1)</td>
<td>5 (1)</td>
</tr>
<tr>
<td>Latino/Hispanic</td>
<td>9 (3)</td>
<td>11 (2)</td>
</tr>
<tr>
<td>Native American</td>
<td>2 (&lt;1)</td>
<td>3 (&lt;1)</td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>324 (92)</td>
<td>620 (93)</td>
</tr>
<tr>
<td>Other</td>
<td>2 (&lt;1)</td>
<td>4 (1)</td>
</tr>
</tbody>
</table>

* * n = 351.
* * n = 672.

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### Table 6.
Parents' and Professionals' Ratings (Percentage of Respondents) of Growth Outcomes

<table>
<thead>
<tr>
<th>A Child Between Birth and Age 8:</th>
<th>Critically Important</th>
<th>Very Important</th>
<th>Somewhat Important</th>
<th>Overall Ranka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses gestures, sounds, words, or sentences to communicate (convey wants and needs or to express meaning to others)</td>
<td>85 Pts. 92 Pros.</td>
<td>15 Pts. 8 Pros.</td>
<td>0 Pts. 0 Pros.</td>
<td>1 Pts. 1 Pros.</td>
</tr>
<tr>
<td>Responds to others with appropriate gestures, sounds, words, or sentences</td>
<td>78 Pts. 83 Pros.</td>
<td>20 Pts. 16 Pros.</td>
<td>2 Pts. 1 Pros.</td>
<td>3 Pts. 2 Pros.</td>
</tr>
<tr>
<td>Uses gestures, sounds, words, or sentences to start, respond to, or maintain conversations and interactions with others</td>
<td>77 Pts. 75 Pros.</td>
<td>21 Pts. 23 Pros.</td>
<td>2 Pts. 2 Pros.</td>
<td>4 Pts. 3 Pros.</td>
</tr>
<tr>
<td>Engages in a range of self-help skills, including but not limited to dressing, eating, toileting/hygiene, and safety/identification (knowing name, address, and phone number)</td>
<td>81 Pts. 68 Pros.</td>
<td>18 Pts. 29 Pros.</td>
<td>1 Pts. 3 Pros.</td>
<td>2 Pts. 4 Pros.</td>
</tr>
<tr>
<td>Meets behavioral expectations (such as following directions, rules, and routines) in home, school, and community settings</td>
<td>69 Pts. 55 Pros.</td>
<td>28 Pts. 42 Pros.</td>
<td>2 Pts. 3 Pros.</td>
<td>5 Pts. 6 Pros.</td>
</tr>
<tr>
<td>Appropriately varies or continues behavior to achieve desired goals; maintains effort or tries different strategies if first efforts don’t work</td>
<td>64 Pts. 43 Pros.</td>
<td>34 Pts. 51 Pros.</td>
<td>1 Pts. 6 Pros.</td>
<td>8 Pts. 9 Pros.</td>
</tr>
<tr>
<td>Moves in a fluent and coordinated manner to play and participate in home, school, and community settings</td>
<td>56 Pts. 19 Pros.</td>
<td>40 Pts. 53 Pros.</td>
<td>4 Pts. 28 Pros.</td>
<td>13 Pts. 15 Pros.</td>
</tr>
<tr>
<td>Manipulates toys, materials, and objects in a fluent and coordinated manner to play and participate in home, school, and community settings</td>
<td>48 Pts. 23 Pros.</td>
<td>47 Pts. 54 Pros.</td>
<td>5 Pts. 22 Pros.</td>
<td>14 Pts. 14 Pros.</td>
</tr>
<tr>
<td>Interacts with peers and adults, maintaining social interactions and participating socially in home, school, and community settings</td>
<td>62 Pts. 62 Pros.</td>
<td>36 Pts. 36 Pros.</td>
<td>2 Pts. 2 Pros.</td>
<td>10 Pts. 5 Pros.</td>
</tr>
<tr>
<td>Appropriately solves problems in his/her interactions with others</td>
<td>64 Pts. 44 Pros.</td>
<td>32 Pts. 48 Pros.</td>
<td>4 Pts. 8 Pros.</td>
<td>9 Pts. 8 Pros.</td>
</tr>
<tr>
<td>Shows feelings (e.g., happiness, sadness, anger) appropriate to varying social situations</td>
<td>57 Pts. 50 Pros.</td>
<td>39 Pts. 45 Pros.</td>
<td>4 Pts. 5 Pros.</td>
<td>12 Pts. 7 Pros.</td>
</tr>
<tr>
<td>Demonstrates an understanding of age-appropriate information</td>
<td>67 Pts. 28 Pros.</td>
<td>30 Pts. 52 Pros.</td>
<td>3 Pts. 20 Pros.</td>
<td>6 Pts. 12 Pros.</td>
</tr>
<tr>
<td>Demonstrates recall of verbal stories and experiences, as well as past events</td>
<td>40 Pts. 26 Pros.</td>
<td>45 Pts. 52 Pros.</td>
<td>15 Pts. 22 Pros.</td>
<td>15 Pts. 13 Pros.</td>
</tr>
<tr>
<td>Understands and uses concepts related to early literacy and math skills</td>
<td>65 Pts. 31 Pros.</td>
<td>29 Pts. 52 Pros.</td>
<td>7 Pts. 17 Pros.</td>
<td>7 Pts. 11 Pros.</td>
</tr>
<tr>
<td>Solves problems that require reasoning about objects, concepts, situations, and people</td>
<td>59 Pts. 34 Pros.</td>
<td>33 Pts. 50 Pros.</td>
<td>7 Pts. 16 Pros.</td>
<td>11 Pts. 10 Pros.</td>
</tr>
</tbody>
</table>

**Note.** Pts. = Parents (n = 351). Pros. = Professionals (n = 672).

*aRank based on percentage of respondents endorsing an item as critically important.*
Applicability of outcomes to subgroups of children. Qualitative feedback from parents and professionals indicated the general growth outcomes did not require major revision to apply to specific subgroups of children (e.g., children with sensory impairments or children with severe disabilities). Two parents and 8 professionals asked if one or more of the outcomes applied equally well to children with disabilities as to typically developing children. Professionals, however, mentioned only children with physical impairments as a subgroup to consider specifically when finalizing motor outcomes.

Comments from respondents converged on three recommended revisions of outcome statements. First, one parent and 18 professionals commented that all three of the communication outcomes neglected to include the use of sign language, or alternative or augmentative systems. Second, professionals found the phrase “fluent and coordinated” confusing in describing motor outcomes (i.e., moving in various settings and manipulating toys, materials, and other objects). Two professionals asked if “fluent” was the same as “motorically smooth,” while another suggested the term refers to a child’s verbal skills rather than to his or her motor skills. Third, 7 professionals recommended we use the phrase “developmentally appropriate” in place of “age appropriate” in the following outcome: “Demonstrates an understanding of age-appropriate information.”

Adequacy and importance of developmental information. When asked on the survey, 83% of parents attached great importance to information about their children’s development before the children enrolled in school. Only 44% of parents, however, indicated the information they received qualified as very adequate. Likewise, whereas 91% of parents rated the significance of developmental information after school enrollment as very important, only 45% of them indicated the information they had actually received was very adequate.

Seventy-eight percent of professionals felt clear, easy-to-understand information about individual children’s development was very important to share with parents before children enroll in school. Only 29% of professionals, however, indicated they had very adequate information to share. Forty-five percent of them stated they had somewhat adequate information to share with parents, and 26% felt the information available to share with parents was inadequate.

Only 21% of professionals indicated they could evaluate an intervention’s effects on an individual child to a great extent, whereas 64% stated they could evaluate effects to a moderate extent. Yet, 79% of professionals indicated an assessment system that easily and directly helps them monitor individual children’s rates of development from birth to age 8, and helps them plan changes in intervention, would be very useful.

Discussion

We conducted a mail survey of early childhood constituents to gauge the acceptance of general growth outcomes we developed as goals for children between birth and age 8. Parents of young children with and without disabilities and professionals in early childhood and early elementary education generally converged in their evaluation of the overall importance of the outcomes, as well as the relative importance of specific outcomes. Parents tended to rate more outcomes as critically important than professionals did, but large proportions of both groups rated all of the outcomes as either critically or very important. Parents and professionals ascribed comparable levels of importance to outcomes within communication, adaptive, and motor domains, although professionals generally assigned greater importance to social interaction skills than parents did, and parents ranked two cognitive outcomes (i.e., understanding of age-appropriate information and understanding of early literacy and math skills) higher than professionals did.

Based on feedback from respondents, we have already revised the communication outcomes to include the use of sign language and alternative or augmentative systems. None of the qualitative feedback, however, indicated the outcomes failed to apply to subgroups of young children, although a few professionals
questioned the applicability of motor outcomes to children with physical disabilities. Future work on developing indicators to measure motor outcomes will create opportunities for changing these statements, if necessary, when applied to children with physical disabilities.

Although feedback from parents and professionals supports the face validity of these outcomes in describing young children's development across time, it represents simply a first step in evaluating the success with which we met the four criteria that guided the selection process (i.e., functional continuity; a balance between comprehensiveness and parsimony; a partial attainment model of skill acquisition and demonstration; and amenability to efficient, direct, and repeated measurement of children's skills across time). Ultimately, the true value of these statements will be demonstrated by whether or not they spawn measures of developmental progress that can be linked with intervention to improve young children's long-term outcomes (i.e., treatment validity; Barnett et al., 1997; Neisworth & Bagnato, 1996).

Empirical investigations of procedures for operationalizing measures of young children's progress toward these outcomes have been underway in recent years (Greenwood, Luze, & Carta, 2002; Kaminski & Good, 1998; Luze et al., 2001; McConnell, 2000; McConnell, Priest, Davis, & McEvoy, 2002). These measures will be part of an idiographic, decision-making model in which the developmental growth of young children, especially those labeled with a disability or considered at risk, is monitored continuously (Deno, 1989; Early Childhood Research Institute on Measuring Growth and Development, 1998). Local norms or benchmarks of "acceptable" progress toward these outcomes will be used to judge whether or not professionals should intervene on behalf of a child exhibiting insufficient growth (Kaminski & Good, 1998). For those children identified in need of additional services to "push and pull" their trajectories closer to the norms or benchmarks, professionals can implement a change in service and continue to use outcome measures to gauge the effectiveness of their interventions, modifying instruction as needed based on changes (or lack thereof) in children's growth. This system should lead to more timely and effective interventions for children already identified with disabilities. It might also prevent the onset of difficulties for children who are at risk or might minimize debilitating effects.

Building a valid and reliable growth and development monitoring system based upon these outcomes will also meet needs expressed by both groups of survey respondents. Professionals will be able to share accurate information about young children's development in timely ways, and parents will receive such information in ways they can understand and use. Professionals will be able to evaluate the effectiveness of their interventions more precisely. In addition, they will be able to use progress monitoring data to formulate new or revised interventions, if needed, and then continue to monitor the effects of such interventions as often as they and children's families deem appropriate.

Limitations. Although parents and professionals strongly supported these outcomes, several limitations might prevent widespread generalization of these results. First, one of 3 parents who received the survey responded to it and only 15% of these parents were raising a child with a disability under the age of 9 years. Although the total pool of parent respondents represents a substantial contribution to evaluating the importance of our general growth outcomes, we must temper generalizations to national groups of parents, especially those with young children with disabilities.

Second, we must avoid generalizations across cultural and socioeconomic groups, based on the overrepresentation of Caucasian, highly educated women among parents and professionals who returned the survey. Given the organizations we contacted to recruit respondents, we could not know in advance how diverse the sample of parents and professionals would be. Although we had hoped to recruit parents from diverse cultural, educational, and socioeconomic backgrounds, results indicated we did not receive feedback representative of a comprehensive cross section of
As needed based on changes in children’s growth. This can lead to more timely and effective decisions for children who have already identified disabilities. It might also prevent the identification and classification of children who are at risk for disabilities.

A valid and reliable growth and demonstrated intervention system based upon developmental trajectories will also meet needs expressed by communities of survey respondents. The system will be able to share accurate assessments about young children’s developmental progress, and parents will receive information in a way they can understand and use. Professionals will be able to evaluate the effectiveness of their interventions more accurately. They will be able to use the system to evaluate their own programs or projects, if needed, and to control for the effects of such interventions on children and their families.

Although parents and professionals supported these outcomes, interventions might prevent widespread implementation of these results. First, one of 3 families of children with disabilities under the age of 9 in the total pool of parent respondents represent a substantial contribution to the importance of our general findings, we must temper generalization of findings to parents, especially parents of children with disabilities. Second, we must avoid generalizations from socioeconomic groups, racial underrepresentation of Caucasian, and women among parents and professionals who returned the survey. Given this, we contacted to recruit respondents who did not know in advance how to participate in the group sample of parents and professionals. Although we had hoped to recruit a diverse cultural, educational, and socioeconomic backgrounds, results did not reflect these characteristics. We acknowledge the need for a comprehensive cross section of the nation’s parents. Future research on the social validity of these and other outcomes for young children must recruit study participants from a wide, more nationally representative sample of early childhood contexts than membership lists of major, nonprofit organizations.

Third, our survey construction techniques might have restricted respondents’ attitudes toward general growth outcomes for young children. We presented respondents with an a priori set of outcomes rather than allowing them to generate their own statements, perhaps preventing parents and professionals from identifying or deleting important outcomes to the list. The rating choices available to respondents (i.e., critically important, very important, and somewhat important) might have artificially elevated their appraisal of outcomes, because outcomes are more easily identified when these ratings are not available as an outcome statement as unimportant, unless they specifically recorded a comment. Given the wider variability in professional ratings (in contrast to parents’ ratings), a broader Likert scale might have enhanced our evaluation of professionals’ opinions about the outcomes.

Conclusion. The preponderance of researchers’ and policy makers’ efforts to develop accountability systems in early childhood education approach the task from a normative perspective (Kagan et al., 1995; National Education Goals Panel, 1991; U.S. General Accounting Office, 1998; Ysseldyke et al., 1990; Ysseldyke et al., 1993). Yet, the outcomes of children’s development identified by the Goal 1 Resource Group can be (and, we argue, should be) applied validly from an idiographic perspective. Although aggregation of individual child data remains an important goal to evaluate program effectiveness, ultimately it is the growth trajectory of each individual child who participates in educational systems that will drive “improved services” and should be the primary focus of our accountability systems.

The general outcomes selected and tested in this report represent an effort to develop a manageable yet comprehensive number of long-term objectives that lend themselves to repeated measurement of a young child’s growing functional skills. If we can craft and demonstrate the empirical validity of a set of measures to assess individual children’s developmental progress toward these outcomes, we will be better able to evaluate how groups of young children are “ready” to meet the challenges of future transitions. We will also be better able to predict which individual children might benefit from timely intervention to boost developmental trajectories and maintain growth toward optimal outcomes.

REFERENCES


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Jeff S. Priest, Scott R. McConnell, and Mary A. McEvoy are at the University of Minnesota; Dale Walker, Judith J. Carta, and Charles R. Greenwood are at the University of Kansas; Ruth A. Kaminski, Roland H. Good III, and Mark Shinn are at the University of Oregon. Preparation of this manuscript was supported by the Early Childhood Research Institute on Program Performance Measures (renamed the Early Childhood Research Institute on Measuring Growth and Development) (Grant No. H024S00010), a cooperative agreement between the U.S. Department of Education, Office of Special Education Programs and the Universities of Minnesota, Kansas, and Oregon. The opinions expressed in this paper are those of the authors only, and no official endorsement should be inferred. Order of authorship for the final four authors was determined by random draw.

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