This monograph reports on a national mail survey to validate a set of general growth outcomes for children, including those with disabilities, between birth and age 8. The survey was part of a 5-year project to create a comprehensive measurement system to track the developmental progress of individual children with disabilities in this age range as well as to help families and professional educators generate interventions to facilitate children's growth over time. Surveys were sent to 1,099 parents of children with and without disabilities, as well as 1,275 professionals in early childhood and early elementary education. Respondents (351 parents and 672 professionals) were asked to rate the importance of 15 general growth outcomes describing young children's developmental trajectories between birth and age 8. Results indicate parents and professionals overwhelmingly supported the selected outcomes. Results are evaluated in terms of parental and professional acceptance of outcomes, applicability to subgroups of children, and limitations. Appendices include a list of outcomes and both parent and professional surveys. (DB)
MEASURING GROWTH & DEVELOPMENT

TECHNICAL REPORT # 3

NATIONAL SURVEY TO VALIDATE GENERAL GROWTH OUTCOMES FOR CHILDREN BETWEEN BIRTH AND AGE EIGHT: INITIAL RESULTS
EARLY CHILDHOOD RESEARCH INSTITUTE
ON

MEASURING GROWTH & DEVELOPMENT

Technical Report # 3

NATIONAL SURVEY TO VALIDATE GENERAL GROWTH OUTCOMES FOR CHILDREN BETWEEN BIRTH AND AGE EIGHT: INITIAL RESULTS

November, 1998
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ABSTRACT

Investigators of the *Early Childhood Research Institute on Measuring Growth and Development* conducted a national mail survey to validate a set of general growth outcomes for children between birth and age eight. This work is part of a five-year cycle of research to create a comprehensive measurement system to track the developmental progress of individual children with disabilities from birth to age eight, as well as help families and professional educators generate interventions to facilitate children’s growth over time. Working with the Minnesota Center for Survey Research, surveys were sent to 1,099 parents of children with and without disabilities, as well as 1,275 professionals in early childhood and early elementary education. Respondents were asked to rate the importance of 15 general growth outcomes describing young children’s developmental trajectories between birth and age eight. Results indicate parents and professionals overwhelmingly supported the outcomes we selected.

BACKGROUND

In the spring of 1996, researchers at the Universities of Minnesota, Kansas, and Oregon responded to a request for a research proposal from the Office of Special Education and Rehabilitation Services (OSERS) of the U.S. Department of Education. The federal request called for the creation of a comprehensive system for measuring the developmental performance of children with disabilities between birth and age eight. The request also stipulated the performance measurement system should consist of child outcomes to serve as the foundation for such a system. OSERS asked for the development of two sets of outcomes: (a) common competencies applicable to most children between birth and age eight; and (b) a set of subgroup specific outcomes for any subsets of children for whom the general outcomes did not describe development adequately.

Once we launched work on the Institute in October, 1996, we followed four steps to identify a set of developmental outcomes we believed described young children’s growth between birth and age eight:¹ (a) selection of qualifying criteria for outcomes; (b) identification of action steps to generate prospective outcomes; (c) initial selection of outcomes for three age groups of children (birth to three-years-old, three- to five-years-old, and five- to eight-years-old) by staff at each of the three Institute sites; and (d) review of age-based outcomes by the entire Institute staff and condensation into a single set of outcomes to describe children across the entire age range of birth to eight. In the end, we selected five superordinate outcomes and 15 general growth outcomes (see Appendix A).

¹ A detailed review of the process we followed to develop child outcomes may be found in *Technical Report #2: Selection of General Growth Outcomes for Children Between Birth and Age Eight.*
PURPOSE

Although we relied extensively on current literature and the accumulated expertise of Institute staff and consultants to select these general growth outcomes, we realized from the outset we must validate them with our ultimate consumers, i.e., families of children between birth and age eight with and without disabilities and professionals in early childhood and early elementary education, all of whom will eventually use the performance measurement system we create from these outcomes. Thus, we conducted a mail survey of a nationally drawn sample of families and professionals to accomplish two goals: (a) evaluate the understandability and acceptance of our general growth outcomes; and (b) elicit qualitative feedback on the outcomes to allow us to revise any that fail to describe the development of subgroups of children we may have overlooked initially.

PROCEDURES

We proceeded with the following steps to conduct the survey: (a) creation of two sets of general growth outcomes, one for families and another for professionals; (b) identification of prospective respondents; (c) development of survey instruments, one for parents and one for professionals; (d) pretest of survey instruments; (e) mailing surveys; and (f) data management and analysis.

Creation of two sets of outcomes. We believed educators would readily understand the language we used to craft the original general growth outcomes. To maximize parents’ comprehension, however, we decided to revise the statements. Working with staff at the Minnesota Center for Survey Research (MCSR), we drafted an alternative set of general growth outcomes, simplifying language without changing the basic meaning of each statement. For example, in its original form, one outcome states a child between birth and age eight “appropriately varies or continues behavior to achieve desired goals, and maintains effort or tries different strategies if first efforts don’t work.” To enhance families’ understanding of this statement, 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.” We planned on pre-testing survey instruments to evaluate the understandability of outcomes before mailing them to the full list of prospective respondents.

Identification of respondents. We contacted national organizations devoted to early childhood and early elementary education to begin to identify prospective respondents from their membership lists. To identify individuals in certain subgroups, we needed to contact national marketing firms, since we...
could not locate a national organization at the time that maintained a suitable membership list. Table 1 shows the subgroups of parents and professionals we targeted as prospective respondents, the organizations from which we received names and addresses of individuals, and the number of surveys we sent to members of each target group. All names were selected randomly from national databases maintained by each of the organizations.

Table 1. Initial Sample of Respondents for a National Survey to Validate General Growth Outcomes for Children Between Birth and Age Eight

<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 elementary 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>

We sent surveys to a total of 1,099 parents and 1,275 professionals in early childhood and early elementary education (i.e., grades K through three).

Survey instrument for parents. After adapting the language of general growth outcomes to facilitate understanding by families, we constructed a survey instrument specifically for parents of children with and without disabilities (see Appendix B). To maximize responses from parents of young children, we tried to obtain names of parents with children under the age of 13-years-old from national organiza-
tions whom we contacted. Aware of error rates across databases in identifying such individuals, we decided to ask parent respondents if any children under the age of 13-years-old lived in their household. If parents answered the question affirmatively, we instructed them to complete the remainder of the survey. If they answered in the negative, we asked them to return the survey without completing it. We then asked parents to respond to four questions concerning the adequacy and importance of information about their children's development before and after their children enrolled in school. We followed these questions with presentation of the 15 general growth outcomes, asking parents to rate each of them as "critically important," "very important," or "somewhat important." We also provided space for respondents to record revisions of outcome statements, if they chose. We asked parents to rank order their five most important outcome statements among the set of 15. We concluded the survey with demographic questions (see Appendix B).

Survey instrument for professionals. Relying on the original wording of the general growth outcomes, we constructed a survey instrument specifically for professionals in early childhood and early elementary education (see Appendix C). We presented the 15 outcomes to professionals at the beginning of the survey, asking them to rate the statements using the same system employed with parents, i.e., "critically important," "very important," or "somewhat important." We also provided space for professionals to offer revisions of outcomes, and we asked them to rank order their five most important outcomes.

We asked professionals to answer questions concerning the adequacy and importance of information they have to share with parents about an individual child's rate of development, their ability to evaluate intervention effects on individual children's development, and their perceptions about the usefulness of an alternative system for monitoring individual children's development from birth to age eight and for helping to plan interventions. We concluded the professional survey with questions concerning parents' management of children's challenging behavior, as well as demographic questions (see Appendix C).

Pre-testing of survey instruments. To pretest survey instruments, we mailed surveys to 25 parents of children without disabilities and 25 professionals in early elementary education. Since the initial response rate of the pretest seemed low, staff at MCSR conducted a telephone follow-up, asking parents and professionals if they had received the survey, if they did not understand any questions on the survey, and if they were willing to complete and return the survey. Response rates improved after these telephone contacts, and initial results indicated parents and professionals understood the general growth outcomes and questions posed on the survey. Based on this feedback, we made only slight revisions to the survey instrument for parents and no changes to the instrument for professionals. Given the minimal changes made, we added results from pre-testing to the final pool of survey data.

Mailing surveys. In November, 1997, we mailed surveys to parents and professionals on the full list of prospective respondents. One week later, we mailed reminder postcards to all parents and professionals. In early December, 1997, we mailed a second copy of the appropriate survey to parents and professionals who had not returned the initial survey. We terminated data collection at the end of January, 1998, slightly more than two months after mailing the first set of surveys.
Table 2 shows the final response status of parents and professionals to whom we mailed surveys.

Table 2. 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>Number</td>
<td>Percent</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>

As Table 2 indicates, the number of parents who informed us they did not have a child in their household under the age of 13-years-old substantially reduced the total number of parents who returned completed surveys, resulting in a large difference in effective response rates between parents (32%) and professionals (53%). Within the group of parents who returned completed surveys, 54 (15%) had children with a disability or special need who were under the age of nine-years-old, while 297 (85%) had typically developing children.

Table 3 shows demographic characteristics of survey respondents. The typical parent respondent was a White, middle-class female with a four-year college degree (or higher education). The typical professional respondent was a White female with a graduate degree.
Table 3. Demographic Characteristics of Survey Respondents

<table>
<thead>
<tr>
<th></th>
<th>Parents (n = 351)</th>
<th>Professionals (n = 672)</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 grad</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 grad</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 grad</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>
<tr>
<td><strong>Gross Income (1996)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$100,000 or more</td>
<td>53 (16)</td>
<td></td>
</tr>
<tr>
<td>$75,000 - $99,999</td>
<td>45 (13)</td>
<td></td>
</tr>
<tr>
<td>$50,000 - $74,999</td>
<td>114 (34)</td>
<td></td>
</tr>
<tr>
<td>$25,000 - $49,999</td>
<td>99 (30)</td>
<td></td>
</tr>
<tr>
<td>$15,000 - $24,999</td>
<td>19 (6)</td>
<td></td>
</tr>
<tr>
<td>Less than $15,000</td>
<td>5 (2)</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Values in parentheses are percentages.
Data management and analysis. MCSR staff assumed responsibility for editing and coding returned surveys. They followed quality control procedures to eliminate dual responses when single-answer responses were appropriate, or to create new categories from dual responses. MCSR staff hired personnel from a commercial data entry firm to create computer data files and clean data entry errors. Institute staff assumed responsibility for conducting detailed analyses of data to compare and contrast responses within and between groups of parents and professionals.

RESULTS

Acceptance of outcomes. In general, parents and professionals expressed overwhelming support for the importance of our general growth outcomes to describe children's development between birth and age eight. Highlights of results include:

1. With one exception (i.e., child remembers stories he/she has heard or events he/she has seen), most parents rated these outcomes as critically important, especially those pertaining to children's development of communication and basic adaptive skills (see Appendix D).

2. On average, 63% of parents of typically developing children and 70% of parents of children with disabilities rated the general growth outcomes as critically important (see Appendix F).

3. While professionals did not rate the majority of outcomes as highly as parents, they rated all 15 statements as either critically or very important (see Appendix E).

4. On average, 50% of individuals comprising professional subgroups (including early childhood professionals, elementary-level professionals, school psychologists, and “other” professionals) rated the general growth outcomes as critically important (see Appendix F).

5. Both parents and professionals ranked the first outcome (i.e., child uses gestures, sounds, words, or sentences to let others know what they want or need, or to express meaning to others) as most important. Thirty-two percent of parents and 57% of professionals recorded this outcome first on their list of five most-important statements.

6. Regardless of subgroups of parents or professionals to which respondents belonged, all respondents rated the three outcomes related to language and the single outcome concerning engagement in basic self-help skills as the most important four out of the group of 15 outcomes.

7. Relationships between rankings of the 15 outcomes across all subgroups of parents and professionals were highly significant, with Spearman rank correlation coefficients ranging from .71 to 1.0, ps < .01. Thus, regardless of subgroup, parents and professionals strongly agreed on the relative importance of each outcome statement.
8. While 83% of parents attached great importance to information about their children's development before and after the children enrolled in school, slightly less than half indicated the information they received qualified as "very adequate." Roughly the same percentage of parents (~40%) indicated the information they received was "somewhat adequate."

9. While 78% 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% indicated they had "very adequate" information to share. Forty-five percent stated they had "somewhat adequate" information to share with parents.

10. Only 21% of professionals indicated they could evaluate an intervention's effects on an individual child "to a great extent," while 64% stated they could evaluate effects "to a moderate extent." At the same time, 79% of professionals indicated an assessment system that easily and directly helps them to monitor individual children's rates of development from birth to age eight and helps them plan changes in intervention would be "very useful" to them.

Applicability to subgroups of children. Qualitative feedback from parents and professionals indicated the general growth outcomes did not require revision to apply to specific subgroups of children. A small number of parents and professionals wondered if these outcomes apply equally well to children with disabilities as to typically developing children. However, only children with physical impairments were mentioned by professionals as a subgroup to consider specifically in relation to motor outcomes.

Comments from respondents converged on three recommended revisions of the outcome statements. First, numerous professionals and one parent commented that all three of the outcomes concerning language development neglected to include the use of sign language or alternative/augmentative systems to communicate with others. 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 his or her motor skills. Finally, seven professionals recommended we use the phrase "developmentally appropriate" in place of "age appropriate" in the following outcome: Child demonstrates an understanding of age appropriate information. Based on this feedback, we will reconsider the wording of at least six of the outcome statements, perhaps revising some or all of them prior to widespread dissemination of a final set of general growth outcomes.

Limitations. Although parents and professionals strongly supported these outcomes, two limitations prevent widespread generalization of results: (a) low numbers of parent respondents; and (b) lack of diversity of respondents. In general, one of three parents responded to the survey, only 15% of whom are raising a child with a disability under the age of nine-years-old. While 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.
In a related vein, we must avoid generalizations across cultural and socioeconomic groups, given the overrepresentation of White, highly-educated women who comprised the vast majority of 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 indicate we did not receive feedback representative of a typical cross-section of the nation's parents. Future work of the Institute may provide an opportunity to gather additional information from a more diverse group of parents to evaluate the applicability of these outcomes to all of America's young children.

CONCLUSION

A nationally drawn sample of parents of children with and without disabilities and professionals in early childhood and early elementary education supported our selection of a set of 15 general growth outcomes to describe young children's development. These outcomes will serve as the basis for the creation of efficient and sensitive indicators of individual children's growth over time\(^3\), as well as solutions-oriented assessment tools educators and families can use to generate intervention ideas for children whose developmental trajectories do not meet expectations\(^4\). A comprehensive, decision-making process for addressing the needs of individual children based on these indicators and solutions-oriented assessments will provide professionals with the tools they desire and need to communicate developmental information to parents and monitor individual children's rates of development. In turn, parents will receive the information they value and need to understand their children's development continuously over time.

\(^3\) Additional information on the Institute's development of these indicators may be found in Technical Report \#4: Research and Development of Individual Growth and Development Indicators for Children Between Birth and Age Eight.

\(^4\) Additional information on the Institute's development of these solutions-oriented assessments may be found in Technical Report \#5: Research and Development of Exploring Solutions Assessments for Children Between Birth and Age Eight.
APPENDIX A

GENERAL GROWTH OUTCOMES FOR CHILDREN BETWEEN BIRTH AND AGE EIGHT

The child uses language to convey and comprehend communicative and social intent
- Child uses gestures, sounds, words, or sentences to convey wants and needs or to express meaning to others.
- Child responds to others' communication with appropriate gestures, sounds, words, or word combinations.
- Child uses gestures, sounds, words, or sentences to initiate, respond to, or maintain reciprocal interactions with others.

The child takes responsibility for his or her behavior, health, and well-being, even in the face of challenge or adversity
- Child engages in a range of basic self-help skills, including but not limited to skills in dressing, eating, toileting/hygiene and safety/identification.
- Child meets behavioral expectations (such as following directions, rules, and routines) in home, school, and community settings.
- Child appropriately varies or continues behavior to achieve desired goals.

The child negotiates and manipulates the environment
- Child moves in a fluent and coordinated manner to play and participate in home, school, and community settings.
- Child 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
- Child interacts with peers and adults, maintaining social interactions and participating socially in home, school, and community settings.
- Child appropriately solves problems in his/her interactions with others.
- Child shows affect appropriate to the social context.

The child uses cognitive skills to explore the environment, reason, and solve problems
- Child demonstrates an understanding of age-appropriate information.
- Child demonstrates recall of verbal and non-verbal events.
- Child understands and uses concepts related to early literacy and math skills.
- Child solves problems that require reasoning about objects, concepts, situations, and people.
APPENDIX B

SURVEY OF PARENTS ABOUT CHILD DEVELOPMENT

Please circle the number that corresponds to the answer closest to your opinion, or write in the information requested. All individual responses will be confidential.

Q1. Are there any children who are 12 years of age or younger currently living in your household?
   1 Yes ——> (PLEASE CONTINUE)
   2 No ——> (YOUR SURVEY IS COMPLETE. Please return it in the enclosed envelope.)

Q2. During the time before your children enrolled in school, how adequate was the information you had (or have) about your child's overall development? (Circle one)
   1 Very adequate
   2 Somewhat adequate
   3 Not very adequate
   4 I had no information about my child's preschool development

Q3. During the time before your children enrolled in school, how important was it to you to have information about their overall development? (Circle one)
   1 Very important
   2 Somewhat important
   3 Not very important
   4 Not at all important
Q4. During the time after your children enrolled in school, how adequate was the information you had (or have) about your child's overall development (including their performance in school)? (Circle one)
1. Very adequate
2. Somewhat adequate
3. Not very adequate
4. I had no information about my child's overall development

Q5. During the time after your children enrolled in school, how important was it to you to have information about their overall development (including their performance in school)? (Circle one)
1. Very important
2. Somewhat important
3. Not very important
4. Not at all important

Q6. In your opinion, how important is it that your own children achieve the following skills during the time from birth to age eight? (Circle one answer for each item. If you have any suggestions for revisions of the statements, please write these in the space provided.)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Critically Important</th>
<th>Very Important</th>
<th>Somewhat Important</th>
<th>Suggestions for Statement Revisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Uses gestures, sounds, words, or sentences to let others know what they want or need, or to express meaning to others</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>b. Responds to others with appropriate gestures, sounds, words, or sentences</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>c. Uses gestures, sounds, words, or sentences to talk or have conversations with others</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>d. Uses basic self-help skills, for dressing, eating, toileting, and safety (such as crossing the street) and knowing his/her name, address, and phone number</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>e. Behaves appropriately (such as following directions, rules, and routines) in home, school, and community settings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Statement</td>
<td>Critically Important</td>
<td>Very Important</td>
<td>Somewhat Important</td>
<td>Suggestions for Statement Revisions</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>--------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>f. Behaves appropriately to get what he or she wants or needs; keeps up effort or tries different strategies if first efforts don't work</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>g. Moves (walks, runs, etc.) in a way the child can play and take part in other activities in home, school, and community settings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>h. Uses toys, materials, and objects to play and participate in home, school, and community settings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>i. Talks or plays with other children and adults in home, school, and community settings; participates in social activities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>j. Appropriately solves problems in his/her interactions with others</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>k. Shows feelings (like sadness or happiness) in ways that fit social situations</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>l. Understands what she or he is told or learns in a way that is appropriate for his/her age</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>m. Remembers stories he/she has heard or events he/she has seen</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>n. Understands and uses reading and math skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>o. Solves problems that require reasoning about objects, concepts, situations, and people; can think about the best thing to do before doing it</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Q7. For the 15 statements in Q6, which FIVE would you rank as the most important? *(Write the letter of the five statements in the spaces below.)*

1st  ________  (Most important statement)

2nd  ________

3rd  ________

4th  ________

5th  ________  (5th most important statement)
Please answer the following questions about yourself. The information will be used only to compare people's answers. It will not be used to identify you in any way.

Q8. Including yourself, how many people currently live in your household?  

_______ people

Q9. Do any children under the age of 18 currently live in your household?  

1  Yes  
2  No (PLEASE SKIP TO Q10)

Q9a. What are the ages of these children? (Please list ages of all children.)  

Ages: 

Q9b. If you have children in your household eight years old or younger, do any of them receive special education services at the school they attend? (Circle one)  

1  Yes  
2  No  
3  No children 8 years or younger

Q9c. If you have children in your household eight years old or younger, do any of them have a disability or special need? (Circle one)  

1  Yes  
2  No  
3  No children 8 years or younger
Q10. What is the highest level of education you have completed? (Circle one)

1. Less than high school
2. Some high school
3. High school graduate or GED
4. Some technical school or two-year college
5. Technical school or two-year college graduate
6. Some classes at a four-year college
7. Four-year college graduate
8. Some graduate work beyond a four-year college degree
9. Graduate or professional degree
10. Other (Specify: ____________________________)

Q11. Which of the following best describes your racial or ethnic background? (Circle one)

1. African American
2. American Indian
3. Asian/Pacific Islander
4. Hispanic/Latino/Chicano/Mexican
5. White/Caucasian
6. Other (Specify: ____________________________)

Q12. Are you female or male?

1. Female
2. Male
Q13. What is your relationship to the children in your household who are eight years or younger? (Circle all that apply)
   a. Parent
   b. Grandparent
   c. Other relative
   d. Foster parent or other legal guardian
   e. Other (Specify: ________________________________)

Q14. What is your zip code?

Q15. What was your total household income in 1996 before taxes? (Circle one)
   1. Less than $15,000
   2. $15,000 - $24,999
   3. $25,000 - $49,999
   4. $50,000 - $74,999
   5. $75,000 - $99,999
   6. $100,000 or more

Thank you very much for your help with the survey!
Please return your survey in the postage-paid envelope provided to:
Minnesota Center for Survey Research
University of Minnesota
2331 University Avenue, Suite 14
Minneapolis, Minnesota 55414

NATIONAL SURVEY TO VALIDATE GENERAL GROWTH OUTCOMES FOR CHILDREN BETWEEN BIRTH AND AGE EIGHT
APPENDIX C

SURVEY ABOUT CHILD DEVELOPMENT

Please circle the number that corresponds to the answer closest to your opinion, or write in the information requested. All individual responses will be confidential.

Q1. In your opinion, how important is it that children like those you serve achieve the following developmental outcomes during the time from birth to age eight? (Circle one answer for each item. If you have any suggestions for revisions of the statements, please write these in the space provided.)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Critically Important</th>
<th>Very Important</th>
<th>Somewhat Important</th>
<th>Suggestions for Statement Revisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Uses gestures, sounds, words, or sentences to communicate (convey wants and needs or to express meaning to others)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>b. Responds to others with appropriate gestures, sounds, words, or sentences</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>c. Uses gestures, sounds, words, or sentences to start, respond to, or maintain conversations and interactions with others</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>d. 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>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>e. Meets behavioral expectations (such as following directions, rules, and routines) in home, school, and community settings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>f. Appropriately varies or continues behavior to achieve desired goals; maintains effort or tries different strategies if first efforts don't work</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>g. Moves in a fluent and coordinated manner to play and participate in home, school, and community settings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>h. Manipulates toys, materials, and objects in a fluent and coordinated manner to play and participate in home, school, and community settings</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Critically Important</td>
<td>Very Important</td>
<td>Somewhat Important</td>
<td>Suggestions for Statement Revisions</td>
</tr>
<tr>
<td>---</td>
<td>----------------------</td>
<td>----------------</td>
<td>--------------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>i.</td>
<td>Interacts with peers and adults, maintaining social interactions and participating socially in home, school, and community settings</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>j.</td>
<td>Appropriately solves problems in his/her interactions with others</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>k.</td>
<td>Shows feelings (e.g., happiness, sadness, anger) appropriate to varying social situations</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>l.</td>
<td>Demonstrates an understanding of age-appropriate information</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>m.</td>
<td>Demonstrates recall of verbal stories and experiences, as well as past events</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>n.</td>
<td>Understands and uses concepts related to early literacy and math skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>o.</td>
<td>Solves problems that require reasoning about objects, concepts, situations, and people</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Q2. For the 15 statements in Q1, which FIVE would you rank as the most important? (Write the letter of the five statements in the spaces below.)

1st __________ (Most important statement)
2nd __________
3rd __________
4th __________
5th __________ (5th most important statement)

Q3. During the time before children enroll in school, how adequate is the information you have to share with parents about an individual child's rate of development? (Circle one)

1 Very adequate
2 Somewhat adequate
3 Not very adequate
4 No information is available
Q4. During the time before children enroll in school, how important do you feel it is to have clear, easy-to-understand information about an individual child's rate of development? (Circle one)

1 Very important
2 Somewhat important
3 Not very important
4 Not at all important

Q5. To what extent can you currently evaluate how well an intervention is addressing an individual child's developmental needs and easily develop alternative plans for intervention? (Circle one)

1 To a great extent
2 To a moderate extent
3 To a minor extent
4 Not at all

Q6. How useful would it be for you to have an assessment system that easily and directly helped you monitor individual children's rates of development from birth to age 8 and helped you plan for changes in intervention when needed? (Circle one)

1 Very useful
2 Somewhat useful
3 Not very useful
4 Not at all useful

Q7. How adequately do you think parents or caregivers effectively manage child behavior problems? (Circle one)

1 Very adequately
2 Somewhat adequately
3 Not very adequately
4 No opinion
Q8. When do you think parents or caregivers intervene most frequently with child behavior problems? (Circle one)

1. Before the behavior occurs
2. During the behavior
3. After the behavior
4. Don't know

Q9. How much information do you think parents or caregivers have about how to manage challenging child behavior? (Circle one)

1. A lot
2. Some
3. Little
4. None

Q10. How important do you think it is to provide some form of training to parents or caregivers about child behavior management strategies? (Circle one)

1. Very important
2. Somewhat important
3. Not very important
4. Not at all important
Please answer the following questions about yourself. The information will be used only to compare people's answers. It will not be used to identify you in any way.

Q11. Which one of the following best describes your primary job responsibility? (Circle one)

1. Early childhood education for special education students
2. Early childhood education for students not receiving special education
3. Early childhood education for BOTH special education and other students
4. Elementary education primarily for special education students
5. Elementary education primarily for students not receiving special education
6. Elementary education for BOTH special education and other students
7. School psychologist
8. Other education specialist (Specify:______________________________)
9. Other (Specify:______________________________)

Q12. How many years have you worked in the profession you indicated in Q11?

_______ years

Q13. How many years have you worked in your current position?

_______ years

Q14. What is the highest level of education you have completed? (Circle one)

1. Graduate of a two-year college program
2. Some coursework at a four-year college
3. Graduate of a four-year college program (bachelor's degree)
4. Some coursework beyond bachelor's degree
5. Master's degree
6. Some coursework beyond a master's degree
7. Doctoral degree (Ed.D. or Ph.D.)
8. Other (Specify:______________________________)
Q15. Which of the following best describes your racial background? (Circle one.)
1. African American
2. American Indian
3. Asian/Pacific Islander
4. Hispanic/Latino/Chicano/Mexican
5. White/Caucasian
6. Other (Specify: _____________________________)

Q16. Are you female or male?
1. Female
2. Male

Q17. What is your zip code where you work?

Thank you very much for your help with the survey!
Please return your survey in the postage-paid envelope provided to:
Minnesota Center for Survey Research
University of Minnesota
2331 University Avenue, Suite 141
Minneapolis, Minnesota 55414
## APPENDIX D

### Parents' Ratings of General Growth Outcomes

<table>
<thead>
<tr>
<th>A child between birth and age eight:</th>
<th>Critically Important</th>
<th>Very Important</th>
<th>Somewhat Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses gestures, sounds, words, or sentences to let others know what he or she wants or needs, or to express meaning to others</td>
<td>85</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>Responds to others with appropriate gestures, sounds, words, or sentences</td>
<td>78</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Uses gestures, sounds, words, or sentences to talk or have conversations with others</td>
<td>77</td>
<td>21</td>
<td>2</td>
</tr>
<tr>
<td>Uses basic self-help skills, for dressing, eating, toileting, and safety (such as crossing the street) and knowing his/her name, address, and phone number</td>
<td>81</td>
<td>18</td>
<td>1</td>
</tr>
<tr>
<td>Behaves appropriately (such as following directions, rules, and routines) in home, school, and community settings</td>
<td>69</td>
<td>28</td>
<td>2</td>
</tr>
<tr>
<td>Behaves appropriately to get what he or she wants or needs; keeps up effort or tries different strategies if first efforts don't work</td>
<td>64</td>
<td>34</td>
<td>1</td>
</tr>
<tr>
<td>Moves (walks, runs, etc.) in a way the child can play and take part in other activities in home, school, and community settings</td>
<td>56</td>
<td>40</td>
<td>4</td>
</tr>
<tr>
<td>Uses toys, materials, and objects to play and participate in home, school, and community settings</td>
<td>48</td>
<td>47</td>
<td>5</td>
</tr>
<tr>
<td>Talks or plays with other children and adults in home, school, and community settings; participates in social activities</td>
<td>62</td>
<td>36</td>
<td>3</td>
</tr>
<tr>
<td>Appropriately solves problems in his/her interactions with others</td>
<td>64</td>
<td>32</td>
<td>4</td>
</tr>
<tr>
<td>Shows feelings (like sadness or happiness) in ways that fit social situations</td>
<td>57</td>
<td>39</td>
<td>4</td>
</tr>
<tr>
<td>Understands what she or he is told or learns in a way that is appropriate for his/her age</td>
<td>67</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Remembers stories he/she has heard or events he/she has seen</td>
<td>40</td>
<td>45</td>
<td>15</td>
</tr>
<tr>
<td>Understands and uses reading and math skills</td>
<td>65</td>
<td>29</td>
<td>7</td>
</tr>
<tr>
<td>Solves problems that require reasoning about objects, concepts, situations, and people; can think about the best thing to do before doing it</td>
<td>59</td>
<td>33</td>
<td>7</td>
</tr>
</tbody>
</table>

**Note:** All numbers are percentages. *N = 351.*
## APPENDIX E

### PROFESSIONALS’ RATINGS OF GENERAL GROWTH OUTCOMES

<table>
<thead>
<tr>
<th>A child between birth and age eight:</th>
<th>Critically Important</th>
<th>Very Important</th>
<th>Somewhat Important</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>92</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Responds to others with appropriate gestures, sounds, words, or sentences</td>
<td>83</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>Uses gestures, sounds, words, or sentences to start, respond to, or maintain conversations and interactions with others</td>
<td>75</td>
<td>23</td>
<td>2</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>68</td>
<td>29</td>
<td>3</td>
</tr>
<tr>
<td>Meets behavioral expectations (such as following directions, rules, and routines) in home, school, and community settings</td>
<td>55</td>
<td>42</td>
<td>3</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>43</td>
<td>51</td>
<td>6</td>
</tr>
<tr>
<td>Moves in a fluent and coordinated manner to play and participate in home, school, and community settings</td>
<td>19</td>
<td>53</td>
<td>28</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>23</td>
<td>54</td>
<td>22</td>
</tr>
<tr>
<td>Interacts with peers and adults, maintaining social interactions and participating socially in home, school, and community settings</td>
<td>62</td>
<td>36</td>
<td>2</td>
</tr>
<tr>
<td>Appropriately solves problems in his/her interactions with others</td>
<td>44</td>
<td>48</td>
<td>8</td>
</tr>
<tr>
<td>Shows feelings (e.g., happiness, sadness, anger) appropriate to varying social situations</td>
<td>50</td>
<td>45</td>
<td>5</td>
</tr>
<tr>
<td>Demonstrates an understanding of age-appropriate information</td>
<td>28</td>
<td>52</td>
<td>20</td>
</tr>
<tr>
<td>Demonstrates recall of verbal stories and experiences, as well as past events</td>
<td>26</td>
<td>52</td>
<td>22</td>
</tr>
<tr>
<td>Understands and uses concepts related to early literacy and math skills</td>
<td>31</td>
<td>52</td>
<td>17</td>
</tr>
<tr>
<td>Solves problems that require reasoning about objects, concepts, situations, and people</td>
<td>34</td>
<td>50</td>
<td>16</td>
</tr>
</tbody>
</table>

**Note:** All numbers are percentages. $N = 672$. 

---

**National Survey to Validate General Growth Outcomes for Children Between Birth and Age Eight**
## APPENDIX F

### MEAN SURVEY RATINGS OF GENERAL GROWTH OUTCOMES AS CRITICALLY IMPORTANT

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>M</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents</td>
<td>351</td>
<td>64.80</td>
<td>40-85</td>
</tr>
<tr>
<td>Professionals</td>
<td>672</td>
<td>48.87</td>
<td>19-92</td>
</tr>
<tr>
<td>Parents of children in SPED&lt;sup&gt;a&lt;/sup&gt;</td>
<td>54</td>
<td>71.40</td>
<td>43-91</td>
</tr>
<tr>
<td>Parents of children with disabilities&lt;sup&gt;b&lt;/sup&gt;</td>
<td>54</td>
<td>69.20</td>
<td>46-89</td>
</tr>
<tr>
<td>Parents of children in SPED or with disabilities&lt;sup&gt;c&lt;/sup&gt;</td>
<td>66</td>
<td>70.07</td>
<td>46-89</td>
</tr>
<tr>
<td>Parents of children without disabilities&lt;sup&gt;d&lt;/sup&gt;</td>
<td>285</td>
<td>63.93</td>
<td>39-84</td>
</tr>
<tr>
<td>Early childhood professionals&lt;sup&gt;e&lt;/sup&gt;</td>
<td>195</td>
<td>47.13</td>
<td>21-93</td>
</tr>
<tr>
<td>Elementary professionals&lt;sup&gt;f&lt;/sup&gt;</td>
<td>144</td>
<td>49.60</td>
<td>19-88</td>
</tr>
<tr>
<td>School Psychologists</td>
<td>121</td>
<td>51.00</td>
<td>14-96</td>
</tr>
<tr>
<td>Other professionals&lt;sup&gt;g&lt;/sup&gt;</td>
<td>211</td>
<td>49.00</td>
<td>20-91</td>
</tr>
</tbody>
</table>

**Note:** All means and ranges are percentages.

---

<sup>a</sup> Parents of children receiving special education services who are eight-years-old or younger.

<sup>b</sup> Parents of children with a disability or special need who are eight-years-old or younger.

<sup>c</sup> Parents of children either receiving special education services or with a disability or special need who are eight-years-old or younger.

<sup>d</sup> Parents of children who do not receive special education services, do not have a disability or special need, or are older than eight-years-old.

<sup>e</sup> Professionals who work in early childhood special education, early childhood education, or a combination of the two.

<sup>f</sup> Professionals who work in elementary special education, elementary education, or a combination of the two.

<sup>g</sup> Professionals who indicated their primary responsibilities differ from the survey's predetermined categories or consist of a combination of the survey's categories and other areas.
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