Research Report

SERVE's Expanded Learning Opportunities National Leadership Area

March 2005

INSIDE THE CONTENT: THE BREADTH AND DEPTH OF EARLY LEARNING STANDARDS

Executive Summary

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Introduction

Standards for children's learning and development have become increasingly common in the United States. As states and the federal government have invested resources in early care and education, the need to define what children are learning in the programs has become increasingly clear. Federal policies such as the Head Start Child Outcome Framework and the Good Start Grow Smart requirement that states develop voluntary early learning guidelines have further accentuated the importance of early learning standards. In 2002, 27 states had developed early learning standards, most since 1999 (Scott-Little, Kagan, & Frelow, 2003). The number of states with early learning standards increased to 41 in 2004 (Scott-Little & Kagan, 2004). With this tremendous increase in the number of states with early learning standards comes a pressing need to better understand the content included in the standards.

Purpose of This Study

The purpose of this study is to analyze the content of early learning standards, operationally defined as documents that articulate expectations for children's development and learning during the preschool period (ages three to five years). Data from the content analysis will show what areas of children's learning and development have been covered within the standards. Standards from 36 states were collected and analyzed to address the following research questions:

1) To what extent have various dimensions of development and learning (i.e., the dimensions of physical, social-emotional, approaches toward learning, language and communication, and cognition and general knowledge) been addressed in early learning standards? What is the relative degree of emphasis within the standards on each of the dimensions of development and learning?
2) To what extent have specific indicators of children's learning and development within each of the dimensions been addressed in early learning standards? What is the relative degree of emphasis placed on the indicators within the five dimensions?

Methodology

An extensive search process was utilized to locate all early learning standards documents published as of November 2003. Personal contacts with Early Childhood State Specialists in State Departments of Education and other key informants within states, coupled with a search of the World Wide Web, yielded a total of 38 documents from 36 states. Two states had two separate sets of standards, each developed by a separate entity within the state. These have been identified by the name of the document or the agency responsible for development of the particular set of standards. The states with early learning documents included in this analysis are listed in Table 1.

Table 1

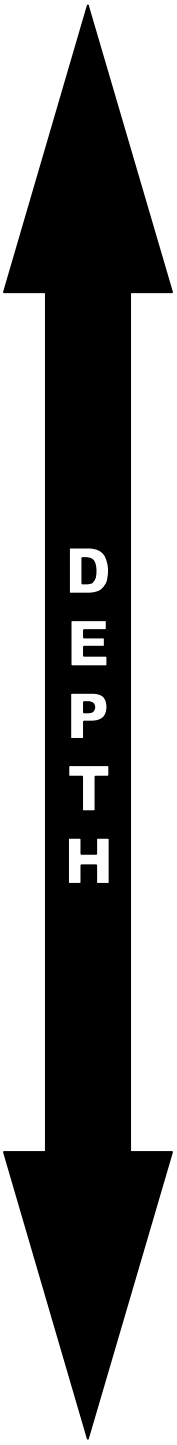
States with Early Learning Standards Included in This Content Analysis*

States	
Arkansas	Minnesota
Arizona	Mississippi
California	Missouri
Colorado	New Jersey
Connecticut	New Mexico
Delaware	New York
Florida	Ohio
Georgia	Oklahoma
Hawaii	Pennsylvania
Idaho	Rhode Island
Illinois	South Carolina
Indiana	Texas
Kentucky	Utah
Louisiana	Vermont
Maine—Learning Results	Virginia
Maine—Early Learning Results	Washington—Early Childhood Ed. & Assistance Program
Maryland	Washington—Office of Superintendent of Public
Massachusetts	Instruction
Michigan	Wisconsin
	Wyoming

* Standards documents included in this analysis were published as of November 2003. Although some of these states have published revised versions of their standards and others have published new sets of standards since November 2003, they are not included in this analysis

The standards documents vary tremendously in format, content, and length, so it was necessary to develop a coding scheme that could accommodate a wide variety of standards. The research team carefully studied the National Education Goals Panel's description of dimensions of school readiness, the standards documents themselves, and the research literature related to children's early development and learning. Based on this work, the team developed a coding framework that included five dimensions of learning and development—physical well-being and motor development, social and emotional development, approaches toward learning, language and communication, and cognition and general knowledge. Indicators that further articulated specific skills and knowledge were developed for each dimension. The result was a coding system that included 36 indicators divided across the five dimensions, although the number of indicators was not equal across the five dimensions. The physical, approaches toward learning, and cognition dimensions each have four indicators. Social-emotional development has eight indicators and language and communication has sixteen indicators. Figure 1 lists the indicators within each of the five dimensions.

Figure 1
Indicators for Coding Standards



Indicators Used to Code Standards				
Physical & Motor	**Social & Emotional**	**Approaches Toward Learning**	**Language & Communication**	**Cognition & General Knowledge**
Growth Fitness Motor skills Functional performance	Regulation of emotions Feelings of others Self-concept Self-efficacy Social skills w/ adults Relationships w/ adults Social skills w/ peers Relationships w/ peers	Curiosity Initiative Reflection & interpretation Invention & imagination	Listening Speaking Social uses of language Vocabulary Questioning Creative uses of language Creative expression Non-verbal communication Phonemic awareness Literature awareness Comprehension Print awareness Book awareness Alphabet awareness Story sense Writing process	Physical knowledge Logico-mathematical knowledge Social-conventional knowledge Social knowledge

The unequal distribution of indicators across the dimensions is likely due to a number of factors, including varying degrees of research on specific skills and knowledge within the dimensions and varying degrees to which the skills and knowledge within a dimension lend themselves to standards.

Using this coding scheme, the research team coded each individual standard within a standards document according to the indicator that best fit the content of the standard. Each standard was coded based on only the content of the standards (i.e., not the subject area heading within which it was found or any accompanying explanatory text) and was coded for only one indicator. This process meant that each standard was coded as one of the indicators within the framework and, by default, was coded according to the corresponding dimension. The research team then examined the "breadth" of the standards (the extent to which each of the five dimensions has been addressed within the content) and the depth of the standards (the extent to which each indicator within a specific dimension has been addressed).

Findings

The standards documents varied tremendously in the number and types of items included. The number of standards items ranged from 50 to 371 (mean = 151.1, standard deviation = 83.7). Data from coding these indicators further accentuates the differences between the standards, both in terms of their breadth and in terms of the depth of coverage within the five dimensions.

Breath of Coverage Across the Five Dimensions

The majority of states (n = 32) had at least one indicator within each of the five dimensions. Each of the states (N = 38) had at least one indicator for Language and Communication and for Cognition and General Knowledge. The Physical Well-Being and Motor Development dimension was the area most likely to be omitted from the standards. Six states had no standards related to this dimension. Three states had no standards coded within the Social and Emotional Development dimension, and two states had no standards coded as Approaches Toward Learning.

To gain an understanding of the degree to which each of the dimensions was emphasized within the standards, the research team examined the percentage of standards that were coded within each of the five dimensions. By far the standards emphasized Cognition and General Knowledge and Language and Communication. An average of 38.6% of the standards items were coded as Cognition and General Knowledge, and an average of 30.9% of the standards were coded as Language and Communication. Approximately 9% of the standards items developed by states were coded as Physical Well-Being and Motor Development. Approaches Toward Learning standards made up 10% of the items, and 12% of the standards were coded as Social and Emotional Development.

Depth of Coverage Within the Five Dimensions

Next, the research team examined the extent to which each of the individual indicators within each of the five dimensions was covered within the standards. Standards were most likely to address each of the four indicators within the Cognition and General Knowledge dimension. Twenty-eight out of the 38 standards documents addressed all four indicators within this dimension. States were least likely to address all indicators within the Social and Emotional and the Physical Well-Being and Motor dimensions, with only two states addressing all eight indicators within the Social and Emotional dimension and five states addressing all four indicators in the Physical Well-Being and Motor area.

The percentage of standards items coded for each indicator within each dimension was calculated in order to provide data related to which of the individual indicators has been emphasized the most within the dimensions. Within the Physical Well-Being and Motor dimension, almost half (mean = 49.1%) of the standards items developed by states related to motor development. Functional performance or self-help skills was the next most commonly addressed skill within Physical Well-Being and Motor Development, with an average of 24% of the standards items addressing functional performance. The standards within Physical Well-Being and Motor Development addressed physical fitness (mean = 11.5%) and overall health and growth (mean = 2.1%) much less often.

Within the Social and Emotional dimension, the standards were most often coded as social skills with peers (mean = 33.4%) or the ability to express emotions appropriately (mean = 19.1%). Relationships with adults (mean = 2.2%), relationships with peers (mean = 4.8%), and self-efficacy (mean = 4.2%) were the social-emotional indicators addressed least often within the standards.

Standards within Approaches Toward Learning were relatively evenly distributed across the four indicators. Curiosity (mean = 32.1%) and reflection and interpretation (mean = 27.6%) were most commonly addressed, but initiative (mean = 17.4%) and capacity for invention and imagination (mean = 16.9%) were also represented within the standards.

The Language and Communication dimension had the largest number of indicators within the coding scheme—16. While individual states ranged in the degree to which they addressed each of the individual indicators, the average across states was fairly evenly distributed. Writing (mean = 11.4%), vocabulary (mean = 10.3%), and creative uses of language (mean = 10.6%) were the indicators addressed, on average, by the highest percentage of standards items within this dimension. Questioning (mean = 2.2%), non-verbal communication (mean = 1.2%), book awareness (mean = 3.3%), story sense (mean = 3.0%), and comprehension (mean = 3.9%) were the indicators with the lowest percentages of standards items. Further analysis revealed that a number of the standards documents did not address important early literacy skills. Five out of 38 standards documents did not address phonemic/phonological awareness. Fifteen states did not address comprehension. Eleven states had no standards related to book awareness. Five states did not address alphabet awareness, and ten states did not address story sense.

Standards items within Cognition and General Knowledge overwhelmingly focused either on logico-mathematical knowledge (mean = 43.4%) or knowledge of the physical world (mean = 37.9%). Social knowledge was addressed in an average of 12.8% of the standards, and social conventional knowledge was addressed in an average of 6.7% of the standards.

Discussion and Recommendations

Data from this study clearly indicate that standards for children's early learning and development are becoming increasingly common. Thirty-eight standards documents were included in this analysis, many of which were developed or revised within the last three years. Clearly states are doing a lot of work in this area, and it is an opportune time to examine the content of early learning standards and provide guidance for states as they are developing and revising standards.

Findings from the analysis revealed that the standards vary tremendously across states. The extent of the variation across states is a reflection of the lack of national standards for children's early learning, the importance of state-level policies in the design of early learning standards, and the diverse nature of the programs serving our youngest learners. Yet, in a society where families are highly mobile and a number of children may move from one state to another, implications of the variability of standards from state to state must be examined. More uniformity in the content of standards across states is likely to yield greater continuity for children who move from state to state.

Data from the content analysis indicate that states also vary in the degree to which they have addressed important elements of children's learning and development within the standards. We propose that to truly support quality early learning programs and to facilitate children's readiness for success in school, standards must be both broad and deep in their content. Simply put, our formula for quality standards is:

BREADTH + DEPTH = QUALITY STANDARDS

While these standards documents often have included at least one standards item related to each of the dimensions, further analysis revealed that several important elements of children's development and learning have been under emphasized or left out of the standards. For instance, within the Physical Well-Being and Motor Development area, almost half of the standards items addressed motor skills. Physical fitness, however, was addressed within only 11.5% of the standards and not addressed at all in 14 states. Given current concerns about children's obesity in this country, it is important that standards address the area of physical fitness.

Within the Social and Emotional dimension, standards emphasized regulation of emotions and social skills with peers. These are important areas for children's later success in school. Yet other areas that are also important were not addressed within the standards. Most notably, relationships with peers and adults and self-efficacy were

omitted in many of the standards documents. Research indicates that these are also important for children's later success in school.

Language and Communication and Cognition and General Knowledge have been emphasized within the standards. Given that many of the standards have been developed for programs serving children who are at-risk for school failure, this finding is perhaps not surprising. Data from studies such as the Head Start FACES study and the Early Childhood Longitudinal Study-Kindergarten Cohort (ECLS-K) suggest that children from backgrounds that put them at risk for school failure enter kindergarten well below national norms in their knowledge and skills related to these two areas. Yet, even though these dimensions have been emphasized within the standards, several important areas have been under-emphasized within the dimensions. Most notably within the Language and Communication dimension is the number of states that have not addressed phonemic/phonological awareness, alphabet awareness, and comprehension. Without a doubt, these are important skills for children's later literacy development. Within Cognition and General Knowledge, the limited number of standards that address social conventions is noteworthy, particularly given the importance kindergarten teachers place on children's abilities to participate in routines and to follow rules.

It is important for children to develop positive skills and knowledge within each of the five dimensions to be successful later in school. Early learning standards—and the educational programs where they are implemented—must have a comprehensive and balanced approach to learning to fully support children's development and learning. Standards can have a focus in the more academic skills within Language and Communication and Cognition and General Knowledge and still maintain some emphasis on other dimensions.

In order to maximize the potential of early learning standards to promote effective preschool programming, we recommend the following:

1) A formal content analysis be completed on early learning standards documents before they are finalized to ensure that the content of the standards reflects the intentions of the standards developers and includes skills, knowledge, and characteristics important for children's later success in school.
2) Further research be done to:
    a. better understand the content of standards and to determine the optimal balance of standards across different areas of children's learning and development.
    b. investigate the horizontal alignment between the standards, curricula, and assessments being used within early care and education programs.
    c. examine the vertical alignment between early learning standards and K–12 standards.
    d. study the implementation and utilization of standards within the field, particularly across different types of early care and education programs.

Early learning standards articulate expectations for children's development and learning and, as a consequence, have the capacity to influence the nature of early learning programs and the content of children's daily experiences within the programs. Increasingly these standards have the potential to drive what is taught and, ultimately, what young children in this nation learn. Given the potential importance of these standards, it is imperative that the field engage in careful consideration of the content of these documents, serious deliberation related to what should be included, and rigorous research to examine the alignment of these standards with other elements of the education system and how the early learning standards are implemented.

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