

The Alignment of Alternate Assessment Content with Academic and Functional Curricula

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The 1997 amendments to the Individuals with Disabilities Education Act required states to provide access to the general curriculum and alternate assessments for students with disabilities who were unable to participate in statewide assessments. For this study, we examined the curricular focus of alternate assessments using performance indicators in math, language arts, and functional skills from 31 states. Experts in math education, language arts, and severe disabilities, along with a group of stakeholders (i.e., teachers and administrators), examined the performance indicators relative to their alignment to national standards and curricula. Experts and stakeholders identified states that had alternate assessment performance indicators that were clearly aligned to math or language arts and those that did not. A subgroup also considered the functionality of the indicators. Through a series of discussions, experts and stakeholders identified features of the performance indicators that exemplified alignment with general or functional curricula, including specificity of content, wording, required response, and grade- or age-level appropriateness. The results suggest that alternate assessments have a strong focus on academic skills but also reflect an additive curricular approach linking academic and functional skills.

Curriculum, the content of instruction, has been one of the most controversial areas in education because determining what students will learn in school reflects both educational philosophy and societal values (Doll, 1996; Queen, 1999). As societal perspectives change, so does the focus of school curriculum. One of the strongest current influences on curriculum is the school accountability movement. Nearly all states have curriculum standards, and most have statewide assessments to address the extent to which the standards are being met.

Since the 1997 amendments to the Individual with Disabilities Education Act (IDEA), students with disabilities must be included in statewide assessment systems. IDEA required that as of July 2000, states provide an alternate assessment for students unable to participate in the statewide assessment system. Although not limited to this population, most students with severe disabilities (severe cognitive disabilities, multiple disabilities, severe autism, deaf-blindness) require an alternate assessment. Societal perspectives about individuals with severe disabilities have changed dramatically in the last three decades, with concurrent shifts in curricular focus. First, the shift was from developmental models to functional models. A second shift added a general curriculum focus to the functional models. Most recently, there has been interest in aligning alternate assessments and general curriculum. The interesting question that arose in the creation of many of these alternate assessments is what curriculum to use as their foundation (i.e., academic or functional).

Developmental Models

In the mid-1970s, when the Education For All Handicapped Children Act of 1975 (P.L. 94-142) established the right for all students with disabilities to have a free, appropriate education, many schools created their first services for students with severe disabilities. In the absence of a curriculum model for these new services, professionals adapted preexisting infant and early childhood curriculum for students in Grades K through 12. This approach, known as the developmental model, was based on the assumption that the educational needs of students with severe disabilities could best be met by focusing on their mental age as derived from a developmental assessment. Early textbooks and chapters in textbooks emphasized early childhood skills like Piagetian cognitive stages and self-care (Bricker & Iacino, 1977; Robinson & Robinson, 1983; Stephens, 1977). Researchers demonstrated methods to teach skills, and many studies were conducted in institutions for individuals with mental retardation (e.g., Azrin & Armstrong, 1973; Azrin & Foss, 1971; Azrin, Schaeffer, & Wesolowski, 1976; Gold, 1972).

Functional Models

In a classic paper, L. Brown, Nietupski, and Hamre-Nietupski (1976) challenged the field to reject the developmental model

and instead use the criterion of ultimate functioning in the community to select skills based on current and future environments. *Haldermann v. Pennhurst State School and Hospital* (1977/1979) and other landmark cases of this era involving residents in institutions (*Lessard v. Schmidt*, 1972; *Souder v. Brennan*, 1973; *Wyatt v. Stickney*, 1972) resulted in a large population of individuals with severe disabilities moving into community contexts. During the 1980s, many new community alternatives emerged for individuals with severe disabilities. L. Brown et al. (1979) introduced the term *functional* to refer to a new curriculum model that promoted community access by targeting skills needed to function in daily life. L. Brown et al. (1979) described four domains of functional skills—community, recreation, domestic, and vocational—that became the new content areas for curriculum. The shift in thinking about curriculum was widespread. Most textbooks and resources on curriculum published in the 1980s and early 1990s used functional life domains as chapter organizers (Browder, 1987, 1993; Cipani & Spooner, 1994; Falvey, 1986; Snell, 1983, 1987, 1997; Westling & Fox, 1995). Westling and Fox (2000) cited 18 authors from this era who supported this shift to functional skills. Most intervention studies in the late 1980s and early 1990s focused on functional life skills (Nietupski, Hamre-Nietupski, Curtis, & Shrikanth, 1997). By the late 1980s, strong consensus had emerged among professionals that curriculum should focus on age-appropriate functional skills (Meyer, Eichenger, & Park-Lee, 1987). Thus, the shift from a developmental model to a functional curriculum model was transformational (i.e., a paradigm shift).

During this era, curriculum guides that provided resources for planning functional skills instruction also emerged. An interesting feature of these guides was the assumption that not all students would learn all the skills listed; instead, a prioritization process was presented for selecting a subset of skills (Ford et al., 1989; Giangreco, Clonginger, & Iverson, 1993; Wilcox & Bellamy, 1987). Thus, in contrast to the scope and sequence found in general education curriculum, functional curriculum guides were viewed as catalogs from which priority skills could be selected. Knowlton (1998) described the need for the curricula of students with severe disabilities to be personalized. Students' Individualized Education Programs (IEPs) became the tool for defining these individual curricular priorities.

Additive Models

Some other changing societal perspectives created additive curricular priorities but did not totally shift the primary focus from functional skills. In the 1990s, many new resources emerged regarding how to include students with severe disabilities in general education schools and classrooms with a strong emphasis on social inclusion (e.g., Certo, Haring, & York, 1984; Downing, 1996; Haring & Romer, 1995). By the mid-1990s, research (Nietupski et al., 1997) and textbooks

(Cipani & Spooner, 1994; Ryndak & Alper, 1996) reflected this new interest in social inclusion.

Complementing both community and school access was an additive curricular focus that promoted student self-determination. This was reflected in growing resources on honoring student preferences through person-centered planning (Mount & Zwernik, 1988; O'Brien, 1987), offering choices during daily routines (F. Brown, Belz, Crosi, & Wenig, 1993), and teaching students self-determination skills like goal-setting and problem-solving (Wehmeyer, Agran, & Hughes, 1998). A large body of research emerged on preference assessment (Lohrmann-O'Rourke & Browder, 1998), choice-making (Kern et al., 1998), and teaching self-determination skills (Hughes, Korinek, & Gorman, 1991). Textbooks provided more emphasis on self-determination in curriculum planning (Browder, 2001; Snell & Brown, 2000; Westling & Fox, 2000).

With continued efforts to promote school inclusion, finding ways for students to participate in the general curriculum also became an additive curricular focus (Downing, 1996; Ryndak & Alper, 1996). Giangreco et al. (1993) described two basic approaches to adjusting the general educational program. The first was using multilevel curriculum, which called for students to learn the same curriculum content but with different expectations for outcome. For example, in a second-grade social studies lesson on their neighborhood, some students could focus on naming community helpers and others could provide information on where they live in the community (e.g., street address). In Giangreco et al.'s second option, curriculum overlapping, students learned functional or social skills in the context of an academic lesson. For example, a student with severe disabilities might attend a biology or French class to receive exposure to the general curriculum but with expectations for learning social skills like turn-taking rather than the class content. A few studies have emerged that demonstrate how students can learn functional curriculum in general education classes (e.g., Hunt, Staub, Alwell, & Goetz, 1994), but much more literature is available on the social benefits of inclusion (Cole & Meyer, 1991). In general, although some resources describe general curriculum access, research currently provides minimal guidance on how to achieve this access for students with severe disabilities.

Aligning Assessments and Curriculum

The 1997 IDEA Amendments had two requirements that created the need for educators to determine what the curriculum focus should be for students with severe disabilities. The law not only mandated the use of alternate assessments but also required access to the general curriculum. Given the widespread adoption of a functional curriculum focus, it is not surprising that many states first developed their alternate assessments to evaluate performance of functional skills (Thompson & Thurlow, 2001). While surveying national experts to validate the performance indicators for alternate as-

assessment, Kleinert and Kearns (1999) found support for focusing on functional skills. In fact, the highest rated performance indicators, in order, were integrated environments, functionality, chronologically age appropriate, and choice-making, reflecting the curricular foci of the last two decades. In contrast, 9 of the 44 respondents questioned the focus on functional domains and suggested instead using general academic content areas as vehicles for achieving functional outcomes. As a result of this validation, Kentucky changed the focus of its alternate assessment from functional life domains (personal management, recreation/leisure, and vocational) to academic domains that mirrored the general curriculum (language arts, math, science, social studies, and either arts/humanities or physical education). By 2001, most states were using state standards (typically academic) as the basis for their alternate assessments or linking functional skills to these standards (Thompson & Thurlow, 2001). Thus, alternate assessment seemed to reflect a potential shift in thinking about curriculum for students with severe disabilities. States struggled with the question of whether students with severe disabilities should be in a separate functional curriculum, in the general curriculum with adaptations, or in both.

Early resources on alternate assessment stressed the need for this process to be linked to the state's standards and access the general curriculum (Kleinert & Kearns, 2001; Thompson, Quenemoen, Thurlow, & Ysseldyke, 2001). Between 1998 and 2001, many states began developing curriculum guides that described how to extend state standards and gave examples of skills to be targeted for alternate assessment. These performance indicators provide an important resource for understanding curriculum for students with severe disabilities. Some states created these performance indicators only for academic content areas (e.g., language arts, math), some organized them by functional domains (e.g., personal management, community skills), and some did both (Browder et al., 2002). These organizational structures suggest a tension between the widespread adoption of a functional curriculum approach and the newer concept of access to general curriculum for students with severe disabilities. Is access to the general curriculum transformational, like the shift that occurred from the developmental model? Is it additive, like the recent focus on social inclusion and self-determination? Or, is it cosmetic in simply renaming the same functional skills as access to general curriculum?

The purpose of this study was to examine the alignment of the content on alternate assessments to academic standards and functional life domains. We were interested in how and to what extent alternate assessments were aligned with curricula within states. Data were collected from content experts and stakeholders who reviewed the examples of extended state standards provided in states' alternate assessment materials. We limited our focus to math and language arts because if a state had used an academic content area for extensions, these were the ones most often represented. Our hypothesis was that curriculum transformation would be evident if these examples

were closely aligned with the standards of the National Council of Teachers of English (NCTE) and the National Council of Teachers of Mathematics (NCTM) and were credible to stakeholders as representatives of math and language arts curricula. The impact on curriculum would be additive if the examples not only reflected math and language arts standards but also continued to represent functional curriculum and chronological age appropriateness. In contrast, a cosmetic change would be evident in listings of functional skills under the headings of math or language arts that did not align with NCTE and NCTM standards and were not credible to stakeholders as reflecting these content areas.

Method

We used a method suggested by Crocker and Algina (1986) for conducting a content validation study that included the following steps:

1. defining the performance domains of interest,
2. selecting a panel of qualified experts,
3. providing a structured framework for the process of matching items to the performance domain, and
4. collecting and analyzing the responses.

Surveys and focus groups were used to collect data. The following research questions were of interest:

1. Are alternate assessments aligned to national math standards?
2. Are alternate assessments aligned to national language arts standards?
3. Are functional performance indicators aligned to general curriculum?
4. Do functional performance indicators reflect the major life domains?
5. What age or grade levels are reflected on alternate assessments? and
6. Considering the recent focus on functional skills for this population, is the curricular focus of alternate assessment performance indicators transformative, additive, or cosmetic?

Defining the Performance Domain and Sampling Performance Indicators

Through the review of state Web sites and individual contacts with state administrators, written guidelines for alternate assessment systems for 42 states were found between July and November of 2001. Because some states had only a few, if any, performance indicators in their written guidelines, the criterion for inclusion in this study was for a state to have at least five performance indicators in language arts and math or

five in functional domains (some states “linked back” to their state standards through the use of functional domains). This process yielded sets of skills from a total of 31 states that were included in this analysis. Of these 31 states, 16 used only mathematics and language arts domains, 4 used only functional performance domains, and 11 used both. Some states’ alternate assessments included additional academic domains (e.g., science, social studies). These additional domains were excluded from the study.

Even though states used varying labels to describe their most basic level of skills included in their alternate assessments, we refer to these as “performance indicators” for clarity and consistency. Because some states had a large number of performance indicators (e.g., more than 1,000), a sampling strategy was designed to produce a representative sample of performance indicators for each state. The process for each state follows:

1. Count all the performance indicators for each domain (e.g., the math domain might have 1,000 indicators).
2. Identify the number of performance indicators needed for a representative sample using the Krejcie and Morgan (1970) sample size table (e.g., 278 is representative for 1,000).
3. Randomly select performance indicators.
4. Type these randomly selected performance indicators into a list clustered by states.
5. Replace state’s names with pseudonyms to conceal their identities.

We then created separate packets for each curricular area with 27 states’ lists each for the mathematics and language arts packets and 15 for the functional packet. A total of 1,684 indicators were sampled from the mathematics domain, 1,759 were sampled from the language arts domain, and 1,564 were sampled from the functional domain.

Selection of Participants

To obtain diverse views about how well alternate assessment performance indicators conform to performance domains, we asked multiple groups to serve as reviewers. These groups included experts in severe disabilities, math education, and language arts education and special education teachers and administrators. We first identified one primary expert in each field—math education, language arts education, and special education for severe disabilities—from our own university faculty to serve as a coordinator in each area. These coordinators identified experts from across the United States and invited the participation of at least 11 experts in each area. The group of national curricular experts who participated was composed of six math educators, seven language arts educators, and five special educators of individuals with severe disabilities.

The special education teachers and administrators from North Carolina who served on an advisory council for this alternate assessment project were invited to participate as a group of stakeholder reviewers. Nine teachers, two local school administrators, and three state-level employees chose to participate. All nine teachers and the local administrators were also involved in a model demonstration project that called for them to implement alternate assessments with students with severe disabilities in their classrooms and had thus undergone a series of training sessions on alternate assessment. The state-level employees were involved in various aspects of the development of the alternate assessment system for North Carolina. The stakeholders also received Web site information for NCTE and NCTM as a reference to national standards.

A third group, which as a research panel to review preliminary results, was composed of two national experts in alternate assessment; five researchers in low-incidence disabilities from North Carolina; our research coordinators in math, language arts, and special education; and a researcher from the state’s developmental disabilities council.

Data Collection for Curriculum Alignment Review

Data collection included an open-ended survey and focus group interviews. Three separate surveys were prepared for each of the lists of performance indicators (i.e., math, language arts, and functional). Each expert and stakeholder respondent received the list of performance indicators and the open-ended survey to use in reviewing and analyzing the lists of performance indicators provided for one curricular area. Sample questions from the survey are provided in the Appendix.

The national experts only responded to their area of expertise (e.g., math educators only reviewed math lists and completed the math survey). The experts in severe disabilities reviewed the functional indicators and were also asked to consider how well these indicators followed general curriculum in language arts and math. Stakeholders provided written responses to the survey and were given the opportunity to complete all three sets. A total of 6 math experts, 7 language arts experts, 5 severe disabilities experts, and 14 stakeholders returned the surveys. The 14 stakeholders completed 13 language arts, 11 math, and 9 functional surveys. The research panel was only given one survey (functional skills) to use to become familiar with the task. During the focus group, they received the full set, including math, language arts, and functional indicator lists. A flow chart depicting the procedure for the review of performance indicators is displayed in Figure 1.

Focus groups were conducted with the stakeholders and research panel. The first focus group interview was conducted with the stakeholder group in a full-day session. In the morning, the stakeholders reviewed their individual written responses in small groups. In the afternoon, the research panel

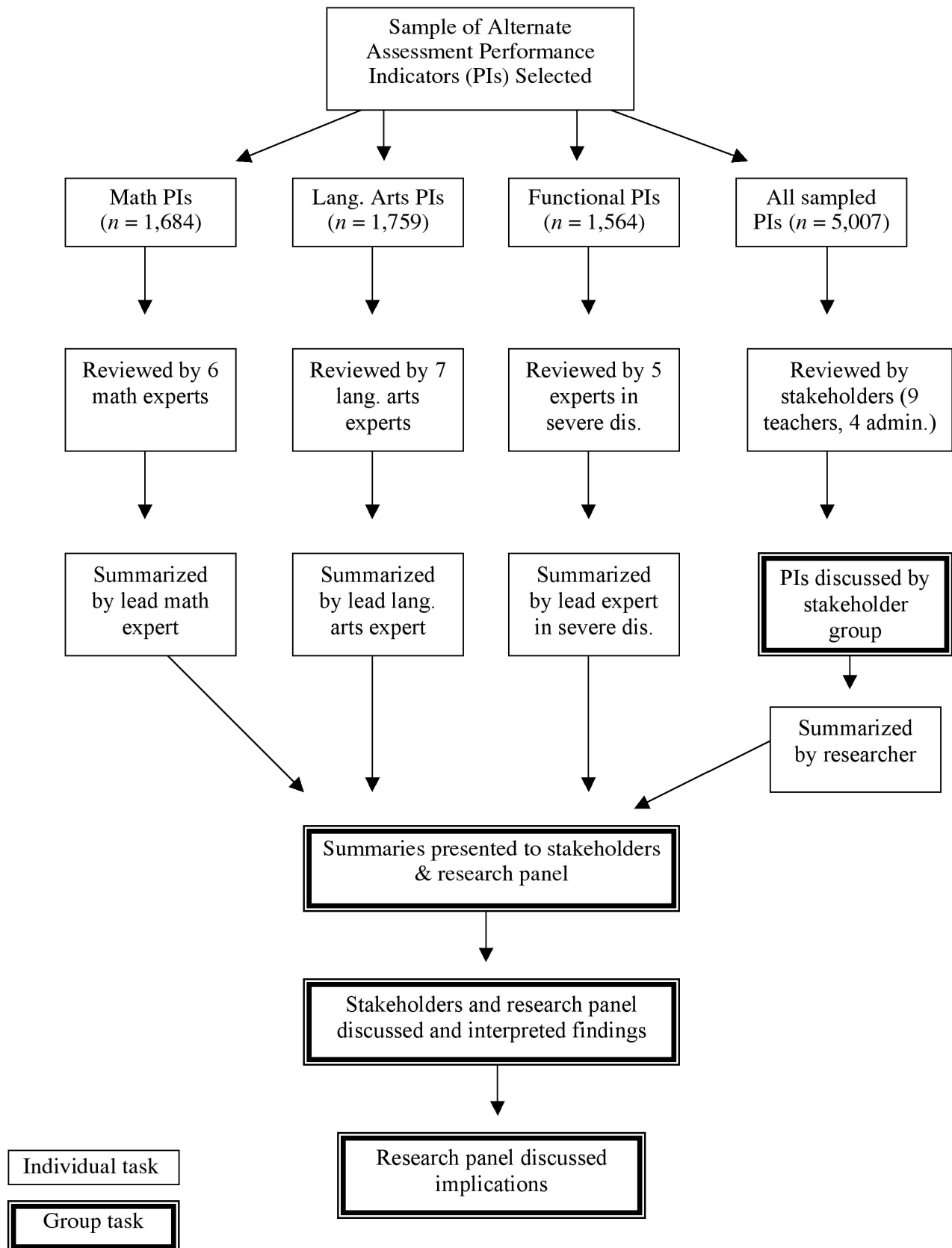


FIGURE 1. Procedure for review and data analysis of alternate assessment performance indicators.

and our research team (the authors) joined the group as non-participant observers. As the stakeholders shared information from their small groups, the facilitator (first author) wrote key points on newsprint. The group then discussed emerging themes from the groups, which were also listed on newsprint. Then the coordinators in math education, language arts education, and severe disabilities provided summary presentations of the results of the written national expert surveys. Detailed notes were made of this discussion and distributed to the research panel the next morning. On the 2nd day, the research panel met with two stakeholders (one teacher and one administrator), our research group, and the coordinators in math education, language arts education, and severe disabilities to discuss the stakeholder and national expert results in detail. This focus group session was recorded and transcribed. During this focus group, participants considered the historical context for curriculum in severe disabilities and answered the question "Given the advent of alternate assessment, has anything changed in the curricular focus for students with severe disabilities? If so, what?"

Analysis of the Response Data

After the focus group meetings, the facilitator wrote a detailed memo based on the 2-day discussion and her knowledge of curriculum in severe disabilities. Three members of our research team whose primary area of expertise is research methodology rather than special education reviewed this memo, the survey responses, and the focus group transcripts to identify primary themes. These three researchers then met to reach consensus on these themes. Next, these three researchers met with the three special educators on the team to review and interpret the themes. While substantial information was obtained, the team focused on results that were supported across multiple respondents and sources (survey and focus groups) using the research questions as a guide.

Results

Are Alternate Assessments Aligned to National Math Standards?

On the surveys, 86% of math experts and 70% of stakeholders indicated that some states' lists of performance indicators were clearly linked to mathematical standards. In their surveys, most experts and the stakeholders identified South Dakota and Colorado as clearly linking their performance indicators to math standards. The focus group participants agreed that Colorado was an exemplary state in aligning alternate assessment performance indicators to math standards. On the survey, math education experts identified features of the performance indicators that illustrated a better alignment to math standards, including an emphasis on math skills and process

standards and indicators that were well written and comprehensive. Stakeholders identified the high-quality indicators as being "functional skills representing a wide range of levels of ability." Some examples of Colorado's performance indicators in math were "make and read simple graphs representing meaningful information and relationships," "demonstrate a beginning sense of measurement (e.g., big, little, heavy, light, etc.)," "match number symbols with appropriate amount," and "find months and dates on the calendar."

Eighty-six percent of math experts and 100% of stakeholders said that performance indicators for some states were clearly not aligned to math standards. Reasons for identifying indicators as not being aligned to math standards included that they were too broad or too limited, that they were vague, and that they were more like vocational or communication goals than mathematical standards. As one stakeholder remarked on her survey, "[This state] seems to really push the limit as far as what is considered a math competency. It's like they had an idea and kept going with that idea, but then it got away from the mathematical concept." Some examples of poor indicators of math were "displays object permanence," "completes simple puzzles, peg boards, form boards," "demonstrates ability to maneuver appropriately in space," and "sits upright in a wheelchair."

In addition to some disagreement between stakeholders and experts about whether certain states did a good or a bad job of linking performance indicators to mathematical standards, there was a disagreement within the expert and stakeholder groups. One state was selected as both the best and the worst example of alignment of performance indicators to math standards. Twenty-nine percent of experts and 40% of stakeholders listed this state as a good example, but 20% of experts and 40% of stakeholders listed it as a bad example. It is possible that the mixed endorsements of this state by members of the same area of expertise was in part due to the fact that this state had the most indicators listed; therefore, some indicators were identified as good examples and others as bad examples. None of the specific indicators listed as illustrations in survey or focus group examples were listed as both good and bad.

Are Alternate Assessments Aligned to National Language Arts Standards?

Eighty-six percent of language arts experts and 100% of stakeholders that responded to the survey indicated that some states' lists of performance indicators were clearly aligned to language arts standards. One state identified as clearly linking its performance indicators to language arts standards was Arizona. Language arts experts identified features of the performance indicators that illustrated a better alignment to language arts standards, including that the indicators clearly identified specific behaviors of the students and went beyond physical consciousness. Language arts experts also noted that states' good examples of performance indicators included a

good scope and range of skills that included all four domains of language arts (i.e., speaking, listening, reading, and writing). As one expert noted while evaluating Arizona's indicators,

I am impressed by these because they . . . discriminate among those children that meet the standard and those that do not. They are not so broad, general, vague, or unclear that nearly all children could pass; they are not so specific, narrow, isolated, or idiosyncratic that they would be applicable to only certain children.

As with the math domain, stakeholders identified the high-quality indicators as being functional and related to basic life skills. Some examples of Arizona's performance indicators aligned to language arts standards were "copy letters (e.g., using computer keyboard, Braille, or print)," "tell story about objects/pictures," "identify main characters," "recognize name," "match picture to word," "make lists (e.g., pictorial/word shopping list)," and "answer questions related to a sequence of events."

Sixty-seven percent of language arts experts and 78% of responding stakeholders said that performance indicators for some states were clearly not examples of language arts standards. Reasons experts identified indicators as not being aligned to language arts standards included that they were too limited (e.g., to verbal/nonverbal communication), vague, or general; that they were "kindergarten level"; and that they lacked representation of all four domains of language arts. One expert pointed out that poor examples of some states' performance indicators combined activities with standards, presuming that "any activity that involves language is a language activity." One indicator that exemplified this point is "searches for book that has been misplaced."

There were some disagreements within the expert and stakeholder groups about whether some states did a good or a bad job of linking performance indicators to language arts standards. The same state that had mixed results in mathematics also had mixed results among experts and stakeholders in language arts. For example, 40% of stakeholders listed this state as a good example, but 71% of experts and 30% of stakeholders listed it as a bad example of alignment of performance indicators to language arts standards. Like the math results, it is possible that the mixed endorsements of this state by members of the same area of expertise was in part due to the fact that this state had the most indicators listed, allowing some indicators to be cited as good examples and others as bad examples. Again, none of the specific indicators were identified as both good and bad. Another possibility for this disagreement may be its placement within the packet; it appeared at the beginning (9th) of the packet of 27 states to be considered. It may have been that reviewers took more time to consider the states and indicators that were at the beginning of the packet.

Are Functional Performance Indicators Aligned with General Curriculum?

Forty percent of severe disability experts and 71% of stakeholders indicated that some states' lists of functional performance indicators were clearly aligned with the general curriculum. In contrast, 60% of experts in severe disabilities stated that the states overall did not do a good job of aligning the general curriculum with their performance indicators.

Several of the stakeholders were hesitant in answering this question, stating that they were uncertain of the defining characteristics of the general curriculum. During the focus groups, stakeholders pointed out that they were never trained or had never been provided a copy of the general curriculum. As one stakeholder said, "There is a general lack of knowledge about what the curriculum is."

One state, Connecticut, was identified by both experts and stakeholders as properly accessing the general curriculum. Experts pointed out that the indicators addressed literacy and numeracy and it was easy to see the alignment between the functional skills and academics. Stakeholders also noted that the link between functional academic indicators and the general curriculum was clear, with indicators providing detailed descriptions of objectives that were tied to future personal independence (e.g., "indicate a choice that distinguishes between healthy and unhealthy foods").

Do Alternate Assessments Reflect Major Life Domains?

Seventy-five percent of the severe disability experts and 88% of stakeholders indicated that some states' lists of performance indicators reflected the major life domains. Experts and stakeholders cited two states, Arizona and Connecticut, as having functional performance indicators that correctly reflected the major life domains. The experts and stakeholders noted that the performance indicators in these states were clear, gave good examples, equally addressed all the life domains, and set high expectations for students. A stakeholder remarked about one of the states with good examples, "[This state] starts with simple, lower level skills and covers the gamut from self-help [and] communication to vocational and social skills."

There was no consensus among the reviewers concerning states that were over- or underrepresenting some of the major life domains. Most experts and stakeholders tended to comment on the poor quality of the performance indicators. One expert wrote, "These indicators are biased toward academics . . . or daily/community living . . . but not the full range." During the focus groups, both the experts and the stakeholders noted that some of the indicators were passive (e.g., "tolerates face being washed") or therapy-oriented (e.g., "lifts head," "reach and grasp").

What Age or Grade Levels Are Reflected on Alternate Assessments?

Among those who reviewed mathematic indicators, 100% of experts and 20% of stakeholders thought the indicators represented skills appropriate for elementary grades. The remaining 80% of stakeholders showed no clear agreement on the range of grades or ages represented by the states' performance indicators. Fifty-seven percent of language arts experts and 33% of stakeholders described the performance indicators as representative of skills appropriate for preschool or lower elementary grades. Other respondents indicated they were unsure about the age range or that it varied greatly from state to state. Forty percent of experts in severe disabilities and 67% of stakeholders stated that the states' functional performance indicators addressed skills for students of all ages. The remaining responses varied with regard to the specific age or grade ranges represented in the indicators, but respondents tended to believe that they most accurately represented lower elementary grades, especially kindergarten. Stakeholders identified some performance indicators as aimed toward not school-age children but infants or young children.

Is the Curricular Focus Transformative, Additive, or Cosmetic?

The experts and stakeholders determined that some of the same states were not aligned with math and language arts standards, even though they labeled their performance indicators with these academic categories. That is, some states seemed to have made only a cosmetic change by labeling functional skills as language arts or math skills. In contrast, most of the experts and stakeholders agreed that overall states were aligned with math and language arts standards. As one language arts expert said in response to the question of whether the states adequately represented reading/language arts skills, "Taken as a total list [all states], I would agree. Some [states'] lists by themselves would not be."

Although these academic links were identified, evidence was also found for a continuing emphasis on functional skills. More than one third (11) of the 31 states used both academic and functional domains to organize their alternate assessments. Arizona, the state identified as having well-aligned performance indicators in language arts, was also identified as correctly representing the major functional life domains. Connecticut, the state identified as having good access to general curriculum using a functional approach, was also strong in representing the major life domains. This comment from one of the math experts reflects this additive approach: "There are math skills among the life skills."

In the research panel, the group focused on the blend of academic and functional curriculum that emerged from the best examples. In describing what made some states better, they noted the functional and academic blend. In considering

what had changed, they noted the new emphasis on academics in alternate assessments. Several focus group members mentioned the value of a functional approach, but differences emerged in their views on teaching academic standards. Several expressed concern that a standards-based focus would compete with a person-centered functional approach. Others embraced an additive approach, as reflected in this comment from one of the research panel members: "Kids without disability are taught academics. Are kids with disabilities being only taught functional things? Kids with disabilities should be taught both." Others noted the field's confusion and need for further work on creating this blend: "We aren't at the next step yet, because we have to be person-centered and follow along with general education curriculum at the same time."

Discussion

The performance indicators of three states were determined by the individual and group analyses of both experts and stakeholders to be in alignment with math and language arts standards. Although these results lack the state-by-state specific analysis that would permit determining the prevalence of states that have succeeded in aligning their performance indicators for alternate assessment with academic content standards, they do suggest that some states have created lists of indicators that are accurate representatives of math and language arts. In contrast, they also suggest that some states and some indicators, even within the best states, have missed the mark. Given that states may be struggling to align performance indicators with academic content standards in language arts and math, it is interesting to consider how the three states identified as doing the best job of this alignment approached the task.

Three States' Examples

First, these states did not replace functional curriculum with academic general curriculum but rather blended the two to create performance indicators for alternate assessment. For example, Arizona used both academic and life domain categories. Connecticut linked functional curriculum to state standards to develop its indicators. These states extended standards without shifting from one curriculum philosophy to another as many states did when adapting an early childhood curriculum to a functional curriculum. Instead, these performance standards for students with severe disabilities reflect a move toward an additive curriculum model. Wehmeyer, Lattin, and Agran (2001) argued that access to the general curriculum does not mean that all students with disabilities will learn only the general curriculum; this would be incompatible with their legal right for an IEP. Traditionally, however, some students have had no access to the general curriculum because the focus was on an alternate functional curriculum. Our stakeholder group noted that

some special educators are not even familiar with the general curriculum.

A second interesting point in looking at the three states identified by experts and stakeholders as having the best access to general curriculum is that they used different frameworks to achieve this threading. In a related study, Browder et al. (2002) conducted a document analysis to identify how states categorized the performance indicators for the alternate assessment. Colorado used two curricular categories for its alternate assessment: reading/writing and math. After task analyzing their content standards into 173 benchmarks, they defined 10 subcategories of skill areas. Two of these categories stemmed directly from reading/writing and math. The other 8 were "access skills": communication, decision-making/problem-solving, self-advocacy/self-determination, inter- and intrapersonal skills, organization, physical-motor, technology skills, and career development. The end results were performance indicators with a more traditional academic flavor (e.g., "identify solid geometrical figures"), with a more functional focus (e.g., "use coins and bills"), or that were access skills (e.g., "convey a message understood by another person," "participate in class discussion"). Thus, Colorado began with two categories from the general curriculum and threaded functional and access skills into these.

Arizona, which was declared to be strong in language arts and use of functional domains, used an approach that involved choosing nine academic categories and four functional categories to create performance indicators for the alternate assessment. Arizona's examples ranged from simple skills like "rotate pictures/books to correct left/right and up/down orientation" to more complex academic responses like "anticipate patterns in a familiar story." The end result was 188 functional indicators, including those related to reading and math, and 3,030 indicators for nine general curriculum areas. In contrast, Connecticut, which was notable for its good access to the general curriculum in our study, used a functional curriculum to develop performance indicators but organized these by language arts/communication and math/quantitative skills. Whether these states began with state standards and extended them (Colorado), began with a functional curriculum and linked back to academic standards (Connecticut), or did both (Arizona), all produced performance indicators that our experts and stakeholders considered reflective of good access to general curriculum.

Has Anything Changed?

Nolet and McLaughlin (2000) noted that special education students have a history of receiving an alternate curriculum. This alternate curriculum may be outlined in a guide (e.g., functional curriculum guide) or created through the IEP. They proposed that access to the general curriculum may involve accommodations or modifications. In contrast, an alternate curriculum has separate content and goals from the general curriculum. Educators have traditionally used an alternate

curriculum for students with severe disabilities. In the earliest days of educational services, this was an adaptation of early childhood curriculum. With the focus on community access, curriculum thinking shifted to a focus on functional curriculum. Self-determination and social inclusion were processes of instruction more than content. By offering opportunities for interaction with nondisabled peers and providing choices, teachers could incorporate these philosophies while continuing to teach functional skills. Billingsley and Albertson (1999) warned educators not to drop functional skills instruction in the push toward social inclusion. Before alternate assessment forced educators to think about state standards, access to the general curriculum could also be achieved by teaching students functional skills in the context of general curriculum activities. One popular approach was to create a matrix to show how to embed the student's IEP goals into general education classes (Downing, 1996). Some experts in severe disabilities laid the groundwork for the current era by describing how to focus on the same content but have different expectations for performance (Downing, 1996; Ryndak & Alper, 1996; Snell & Brown, 2000). Some experts have proposed using critical, or access, skills like communication and choice-making that have applicability across multiple contents (Grisham-Brown & Kearns, 2001).

Mehren (1998) concluded that if stakes were high enough, and if teachers deemed content appropriate, there would likely be a shift in the curriculum and instruction to match the content sampled by the test. Overall, our findings suggest that experts and stakeholders accept performance indicators that blend functional and general curriculum. This suggests a trend toward merging these two types of curricula for students with severe disabilities. Our findings do not show that overall states have achieved this blend, nor that the indicators are relevant for all students. The participants found examples, across and within states, of skills that were not good representations of math or language arts standards or that were not functional. The stakeholder focus groups also expressed the view that the performance indicators were not relevant for students with the most severe disabilities. Most of the math and language arts examples had also been derived from the early grades, which may make them inappropriate for secondary students with severe disabilities. What do seem to be emerging are some good examples of how to retain the traditional focus on functional skills for students with severe disabilities while also accessing the general curriculum. We also still need to enhance the quality of the examples of extended standards so that they meet the dual priorities of being both representative of the content area and relevant for students with severe disabilities.

Limitations

In interpreting these results it is important to realize that the focus of this study was only the performance indicators that states used to provide examples of standards to be assessed.

We did not address the format or quality of the alternate assessment itself. Thompson and Thurlow (2001) found that states developed a variety of formats for the alternate assessment. Most used a portfolio, but others used a checklist or some form of IEP analysis. A limitation of our research is that we did not examine the alternate assessment itself to determine if the curriculum reflected in the performance indicators was also reflected in the assessment itself. One reason this would have been difficult is that many states allow teachers to determine the specific content of the alternate assessment. Consistent with the view that curriculum for students with severe disabilities must be personalized (Knowlton, 1998; Wehmeyer et al., 2001), most states specify the content areas and standards to be assessed but allow teachers the option of defining what skills address these standards (Browder et al., 2002). A few seem to have moved away from this perspective by using a checklist of skills that must be completed for all students. Connecticut uses this checklist approach. In contrast, Colorado uses performance on specified standards, and Arizona uses a combination of a checklist, a parent questionnaire, and an activity-based performance assessment.

A second limitation is that we focused on the performance standards to be used for the alternate assessment. Most states have two types of standards: content standards and performance standards. Content standards set the broad curriculum goals, whereas performance standards translate that content into specific knowledge and skills that students are expected to demonstrate (Nolet & McLaughlin, 2000). During the stakeholder focus group, there was some discussion about whether the group should be looking at the content standards from which the performance indicators had been derived. Our perspective was that these content standards typically were the states' academic standards. Our interest was in whether the performance standards specified for students with severe disabilities bore any resemblance to the general curriculum. Cuban (1992) noted that there are three levels of curriculum—the *intended* curriculum, the *taught* curriculum, and the *learned* curriculum. Whereas the content standards are the intended curriculum for all students, the performance indicators are more likely to be the taught curriculum for students with severe disabilities. These indicators were also sometimes several levels of translation from the original content standards. Browder et al. (2002) found that states varied in how they translated content standards into performance indicators for the alternate assessment. Some used as many as five levels of task analysis in extending the standard to reach the performance indicator. For example, Kansas defined the general standard, extended standard area, benchmark, indicator, and a clarifying example. For all states, we chose the most specific level for review. If the participants had examined all levels of extension or the content standard, their perspectives may have differed.

A third limitation of this study is that reviewers were not instructed to make judgments of each individual state listed in the three packets of performance indicators. Due to the sheer number of states and indicators, such a task would have

been extremely time-consuming. Instead, reviewers were asked to review all the states' lists of performance indicators, select states they considered to be the best and worst and provide examples of performance indicators that illustrated their opinion. Therefore, each state was not be individually described or rated.

A fourth limitation is the lack of agreement between the stakeholders and experts for two research questions—the age levels of the curriculum and whether the functional indicators accessed general curriculum. Disagreement also occurred in perspectives on one state that some viewed as a good example and others rated as a bad example. Math and language arts educators identified the performance indicators as appropriate for early elementary skills, whereas the special education teachers and administrators had a wide range of opinions about the age ranges. This may reflect special educators' lack of knowledge about general education. During our focus group, stakeholders reported their lack of knowledge of the general curriculum and national standards several times. This disagreement may also reflect the lack of focus on grade levels in functional curriculum. Instead, functional curriculum may be intended to teach children across grade levels skills that are necessary in adulthood. This lack of focus on grade level may also explain why experts in severe disabilities had varied opinions about the age levels of the functional indicators. The experts in severe disabilities also did not agree with stakeholders that the functional indicators accessed the general curriculum. Most experts in severe disabilities thought that most indicators were not linked to math and language arts. The third area where disagreement occurred was in the rating for one state. This state's original list had a large number of performance indicators (more than 3,000) because it cross-referenced every language arts and math skill with a functional life domain. The representative sample also was large. Some respondents may have focused on the better examples, while others focused on the weaker ones.

A fifth limitation may lie in the method used to determine how performance indicators were aligned and the conclusion drawn. Based on expert and stakeholders' opinions about the indicators, we concluded that alternate assessment is creating an additive curricular focus with a blending of academic and functional curriculum. Direct analysis of the states' documents could suggest a different conclusion. For example, more than half of the states used only math and language arts domains, with no functional domains, for their alternate assessments. Further research is needed analyzing the indicators within these domains to determine whether they are academic, functional, or both.

Given these limitations, the contribution of our study is in describing how the states' examples of extended standards reflect curriculum philosophy for students with severe disabilities. Most states developed the standards to be used for the alternate assessment through a group consensus process with stakeholders that included special educators, parents, and general educators (Thompson & Thurlow, 2001). Through our first-

hand experience in this process for our own state; interactions with colleagues from other states; and the discussion article of Ford, Davern, and Schnorr (2001), we realized that alternate assessment was creating the need to discuss curriculum philosophy for students with severe disabilities. This study was the first to explore curriculum as reflected in performance indicators for alternate assessments for students with severe disabilities.

Recommendations for Alternate Assessment Practices

States need to be involved in ongoing quality enhancement of the performance indicators used for alternate assessments. Two questions that we propose planning groups ask when revising performance indicators are (a) Is this skill clearly aligned with the content area it is purported to assess? and (b) Is the performance indicator meaningful to the lives of students with severe disabilities? In our study, content area experts in math and language arts identified some performance indicators as aligned with NCTE and NCTM standards and others as not being representative of their disciplines. Similarly, states need to involve content area specialists in validating the performance indicators used in alternate assessments. Extending state standards in content areas to be applicable for students with the most severe disabilities is a complex task. Once examples are generated, submitting them for review to content area specialists can help ensure that the intended curriculum (e.g., math, language arts) is reflected in items to be assessed.

Performance indicators also need to be validated by stakeholders and experts in severe disabilities as relevant and applicable. For example, the performance indicator “can develop a written paragraph containing a topic sentence, supporting ideas, and contributing ideas” describes the focus of many statewide writing assessments or even college writing courses, but is not applicable to alternate assessment. In contrast, the performance indicator “trim nails and observe growth of nails over the month” focuses on trivial, isolated skills, and “enjoys riding in a car” sets the low expectation of only passive responding.

Ongoing work also is needed to ensure that what is actually assessed reflects the standards. States that specify the items to be assessed (e.g., through a checklist) can specify the link between each of these performance indicators and the state standard it addresses. In contrast, specifying the exact skills to be assessed is not consistent with most experts’ recommendations to personalize curriculum for students with severe disabilities through the IEP process (Giangreco et al., 1993; Knowlton, 1998). An alternative is to provide examples of performance indicators and allow teachers to identify the specific skills to assess from the student’s IEP. If teachers select the specific skills to be incorporated in the alternate assessment, some checks and balances are needed to ensure that these actually link to state standards. To do this, states need to include an evaluation of the match between the skill as-

essed and the state standard it addresses as part of the evaluation of the alternate assessment. It also is important for states’ examples of performance indicators to model a clear link.

A third recommendation for practice is to use both access to the general curriculum and functional curriculum in specifying performance indicators. The states whose examples satisfied both content area experts and stakeholders in our study used this blended curriculum approach. To be consistent with IDEA 1997, alternate assessment should address state standards and access to the general curriculum. The No Child Left Behind Act of 2002 requires assessing all students in reading, math, and science. Assessing students with severe disabilities in these areas may require specifying real-life indicators for academic standards. Most studies demonstrating acquisition of academics for students with severe disabilities have targeted functional academics; that is, the use of academic skills in daily living (Browder & Snell, 2001). Cross-referencing general and functional curriculum provides a way to make academic standards applicable for students with severe disabilities through the use of real-life examples. In contrast, using only functional curriculum as the framework for an alternate assessment misses the point of assessing the progress of all students on state standards.

In summary, the IDEA 1997 requirements for alternate assessment are stimulating educators to consider access to general curriculum for students with severe disabilities. Merging functional and academic curriculum provides a way to create performance indicators for alternate assessment that address both the content area and students’ need to learn skills that are meaningful in real life. Alternate assessment does not mean shifting from functional to general curriculum, nor does it mean making merely a cosmetic change. Some states have begun to define performance indicators that do reflect academic content area standards for use in alternate assessment. In contrast, work is needed to develop more high-quality examples for these performance indicators.

AUTHORS’ NOTE

Support for this research was funded in part by Grant H324C010040 of the U.S. Department of Education, Office of Special Education Programs, awarded to the University of North Carolina at Charlotte. The opinions expressed do not necessarily reflect the position or policy of the Department of Education, and no official endorsement should be inferred.

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Appendix

Sample Questions From Survey on Alternate Assessment Performance Indicators

Language Arts and Math Questions

1. Quickly scan the entire list of skills across all of the states. Do you agree that these reflect reading/language arts (or math) skills that are needed in daily living?
2. How well do they reflect national standards in reading/language arts (math)?
3. Again, consider the breadth of the entire list of skills. What age or grade level would you assign?
4. Are some states' skills more clearly linked to reading/language arts (math)? If so, which five states appear to do a better job of linking the skills to reading/language arts? Why are they better?
5. Are some states' skills clearly not linked to reading/language arts (math)? If so, which five states appear inadequate? Why do you consider them inadequate?

Functional Questions

1. Consider the breath of the entire list of skills. Approximately what percentage of the skills listed address quality of life?
2. Do some states do better than others in addressing quality of life? If so, which states do you consider better? Explain why you consider them better.
3. Are there any categories of skills that are not represented? If so, which ones? Are there categories that are overrepresented? If so, which ones?
4. Do some states do a better job representing the major life domains? If so, which states?
5. To what extent do these skills access the general curriculum? Do some states access the general curriculum better? If so, which ones?
6. Do some states do a better job representing reading/language arts (math) skills? If so, which ones? Why do you consider them better?
7. What age level do these skills seem to address?