

Alignment of Instruction, Expectations, and Accountability Testing for Students With Autism Spectrum Disorder

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Abstract

Current large-scale assessment and accountability policies in the United States emphasize the need for all students to be appropriately included. However, there are many challenges to effective inclusion. Students with autism spectrum disorder (ASD) exhibit unique social communication and behavior challenges that can hinder their effective inclusion in instruction and testing. However, no studies have systematically examined how this unique group of students is currently included in accountability programs. A statewide representative sample of 191 teachers selected a student with ASD and reported on (a) the extent to which the student received instruction according to the general curriculum, (b) the teacher's academic expectations for the student, and (c) the method by which the student participated in accountability testing. Results indicated that many students were reported to rarely receive instruction according to the general curriculum, and many were reported to participate in an alternate assessment.

Keywords

assessment, inclusion, instruction

Equity in the provision of educational services to all students, including students with disabilities, has been a focus of many recent educational reform efforts throughout the world. Inclusive education has been an approach used to promote greater equity for students with disabilities. In a review of inclusive education across 18 countries, Curcic (2009) highlighted that although many countries are creating legislation requiring greater inclusion of students with disabilities, such legislation is not necessarily effectively put into practice.

Part of the discrepancy between policy and practice regarding inclusion is likely due to different conceptualizations of inclusion, and challenges in implementing more comprehensive inclusive programs for all students with disabilities. Ryndak, Jackson, and Billingsley (2000) found that even experts provided quite different definitions of inclusion. Some definitions focused solely on placement in a general education environment, others focused on the supports necessary for learning to occur, and yet others focused on a student's actual involvement in educational activities. Policies are often intended to promote practices that reflect a more complete definition of inclusion that encompasses the associated supports and student involvement. However, failure to effectively train teachers may lead to educational practices that lack the intended qualities and expected positive student outcomes. Teachers from a variety of countries experience challenges in putting inclusive policies into practice,

specifically for students with autism spectrum disorder (ASD). They appear to lack training in how to handle the unique communication and behavioral challenges that these students exhibit and experience challenges in knowing how to adapt instruction to address the needs of these students (Emam & Farrell, 2009; Jennett, Harris, & Mesibov, 2003; Soto-Chodiman, Pooley, Cohen, & Taylor, 2012).

The increasing implementation of national and state testing programs for accountability purposes has begun to highlight many of the challenges of promoting a comprehensively inclusive educational system. Exclusion and exemption of student with disabilities from large-scale assessment and accountability programs has been a common practice noted in many countries. Dempsey and Conway (2005) describe the conditions under which various countries have allowed student with disabilities to be exempted from national testing, but also point to the ways in which several countries have worked to develop assessment and accountability policies that are intended to facilitate greater inclusion. Such efforts toward inclusive assessment practices are considered necessary to ensure all

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students have access to the intended benefits of accountability programs (Thurlow, Elliott, & Ysseldyke, 1998). However, it remains questionable whether such inclusive accountability assessment policies are effectively implemented in practice.

In the United States, federal legislation calls for assessment of students' academic performance for the purpose of accountability, and highlights specific expectations for the progress of students with disabilities as a subgroup (U.S. Department of Education, 2001; No Child Left Behind Act [NCLB] of 2001). Emphasis has been placed on holding schools accountable for specific outcomes (i.e., proficiency on a test) rather than on educational processes (i.e., the instructional methods and specific supports provided), which are to be determined at the local level. The aim of the current study is to explore related inclusive education and accountability practices for students with ASD as reported by practicing teachers within one state located in the United States. Although the results may not fully generalize to other contexts, this study is intended to provide an illustration of current inclusive practices for students with autism in light of this legislation.

In the United States, federal legislation requires the inclusion of all students with disabilities in large-scale assessment and accountability programs (Individuals with Disabilities Education Improvement Act [IDEIA], 2004). It is expected that all students will be instructed in the associated grade-level content standards, with most working toward grade-level achievement standards. Up to 1% may be considered proficient using alternate assessments (see Note 1) that are based on alternate achievement standards, and an additional 2% may be considered proficient using alternate assessments that are based on modified achievement standards (Code of Federal Regulations, 2007). These rules for teaching and testing all students according to grade-level standards are intended to ensure that all students with disabilities have appropriate access to the learning opportunities of all other students. However, these expectations can initially seem inappropriate and unattainable for some students, including many students with ASD, who by definition have significant social communication and behavioral difficulties. Although some students on the autism spectrum may easily be able to attain proficiency according to grade-level achievement standards, there are many who experience substantial difficulties in the development of academic skills. It can be challenging to determine how they should be included in large-scale assessment and accountability programs.

Early on in the standards-based reform movement within the United States, many students with disabilities were excluded from statewide assessment and accountability programs (McGrew, Thurlow, & Spiegel, 1993). This exclusion was considered potentially due to a variety of factors, including (a) students with disabilities having limited access

to the general curriculum such that the test did not seem appropriate given their instructional experiences, (b) tests having been designed in a way that prevented appropriate access for students with disabilities, (c) fear that the performance of students with disabilities would pull the overall school scores down, resulting in certain negative consequences for schools, and (d) concern that testing would cause students with disabilities undue anxiety (Ysseldyke, Thurlow, McGrew, & Vanderwood, 1994). Today, law requires that all students, including students with ASD, be included to ensure that they have access to the same intended benefits of educational accountability, namely, improved instruction and learning. Research on school professionals' perceptions of the impact of accountability reforms suggests a corresponding increase in the performance of students with disabilities (Christenson, Decker, Triezenberg, Ysseldyke, & Reschly, 2007).

However, one of the major challenges in helping students with disabilities, including students with ASD, experience the intended benefits of educational accountability is making instruction according to the general curriculum more accessible. If the majority of students are to be tested according to the standards that are a part of the general curriculum, it is essential that they all have access to instruction according to those standards. For many years, functional skills rather than academic skills were the intended focus for teachers of students with severe disabilities (Meyer, Eichinger, & Park-Lee, 1987), and the potential needs of such students were ignored in the design and delivery of instruction according to the general curriculum. Even now, questions remain about the extent to which instruction for students with ASD should focus on functional versus academic skills, with teachers often questioning the relevance of the general curriculum for students with severe disabilities (Agran, Alper, & Wehmeyer, 2002). Some disability experts have argued that a focus on the general curriculum can actually include functional skills for students with disabilities (Browder & Spooner, 2011; Collins, Hager, & Galloway, 2011). These experts have focused their efforts on identifying strategies for modifying general education instructional activities to allow students with severe disabilities to have access to instruction in the same content as those without disabilities (Browder et al., 2012). IDEIA (2004) similarly emphasizes the need for all students with disabilities to access the general curriculum, and indicates that accommodations and modifications should be provided as deemed appropriate to facilitate that access. However, the extent to which this actually happens in educational settings remains somewhat unclear.

Although research has accumulated on the effects of test accommodations for students with disabilities more broadly over the past few decades, relatively little accommodation research has focused specifically on the test accommodation needs of students with ASD. Studies of state accommodation

policies have shown a trend toward states allowing more accommodations for all students with disabilities (Thurlow, Seyfarth, Scott, & Ysseldyke, 1997), and the provision of accommodations has been associated with increasing participation in the regular assessment among students with disabilities (Olson & Goldstein, 1996). In many studies, accommodations have been associated with gains in test scores, with differential test score gains resulting from accommodation use for students with disabilities (L. S. Fuchs, Fuchs, Eaton, Hamlett, Binkley, & Crouch, 2000; L. S. Fuchs, Fuchs, Eaton, Hamlett, & Karns, 2000; Tindal, Heath, Hollenbeck, Almond, & Harniss, 1998; Weston, 1999). However, most accommodation policies and associated studies have focused on accommodating students' academic difficulties (e.g., providing reading assistance, writing assistance, calculators, extended time), and have not necessarily focused on the unique behavioral challenges of students with ASD. More research has recently begun examining participation in large-scale testing for students with emotional and behavioral difficulties (Carr-George, Vannest, Willson, & Davis, 2009; Temple-Harvey & Vannest, 2012) with findings indicating that just 56% of students with emotional and behavioral disorders participated in the regular test, and just 34% met proficiency thresholds; however, similar studies have yet to be conducted for students with ASD.

One study was identified that surveyed teacher perspectives about large-scale test participation among students with ASD, and more specifically investigated whether there were differences according to the severity of the autism symptoms that students experienced. In Simpson, Griswold, and Myles's (1999) work, participating teachers were provided three case scenarios in which three different students were presented, including one described as having mild autism and receiving only resource room support, one described as having moderate autism and receiving 4 hr of pull-out services, and one described as having severe autism and receiving self-contained services. Teachers were then asked to report the extent to which each student should be included in the regular test. Very few (8%) thought that the student with severe ASD should be included, a greater proportion (55%) thought that the student with moderate ASD should be included, and the majority of teachers (86%) thought that the students with mild ASD should be included. Teachers were also asked to report on accommodations that each student should receive. Based on the results, the authors indicated that teachers appeared to be relatively conservative both with the types of students they would consider appropriate for inclusion in the regular assessment, and in the types of accommodations they would recommend. As indicated, this was the only study identified that focused on the inclusion of students with ASD in large-scale assessment, and was limited in that it only examined

their decisions associated with artificial scenarios and not their actual decisions with genuine students.

Current policies intended to inform participation in alternate assessment versus regular assessment decision making vary by state (for updated information on these policies, see <http://www.cehd.umn.edu/NCEO/TopicAreas/AlternateAssessments/StatesAltAssess.htm>). The alternate assessment in the state in which this study was conducted offers three versions of the alternate assessment (i.e., participation, supported independence, and functional independence). Each version includes items that involve both selected response and open-ended responses to questions linked to the areas of English language arts (E/La), math, and science. The alternate assessment is intended for those with cognitive impairments whose Individual Education Plan (IEP) team has decided that the student cannot appropriately participate in the regular assessment even with accommodations. Although students with ASD may have concurrent cognitive impairments, such impairments are not a defining feature of ASD, and therefore it is a questionable practice to allow many students with ASD to participate in the alternate assessment. Permitting many students to participate in the alternate assessment may in fact reduce the expectations placed on those students, and the corresponding nature of instruction teachers provide. Recent research has pointed to the fact that more flexible accommodation policies that permit a wider range of accommodations have been found to be associated with a lesser need for the alternate assessment (Lazarus, Cormier, & Thurlow, 2011). Perhaps if more accommodations were considered permissible, and teachers were willing to provide those accommodations, the regular assessment might be considered a more appropriate option for students with ASD.

Given that ASD is a spectrum disorder, it is anticipated that students will need varying levels of support to access the general curriculum; some may need very limited accommodation whereas others may need substantial modification of instructional activities, and corresponding alternative methods for demonstrating their knowledge and skills. However, for an accountability system to function as intended to improve student learning and achievement, it is essential that students have the opportunity to access instruction in the areas in which they will be tested (Thurlow et al., 2008). Furthermore, it is essential that those in instructional and assessment decision-making roles recognize the importance of having high expectations for student success, and display those expectations in the individual student decisions that they make, including how students participate in large-scale assessment. Currently, limited information is available on the accommodations and accountability assessment decisions that are made for students with ASD. The current exploratory study is intended to begin to address this gap in the research literature.

Purpose of This Study

The purpose of this study was to examine the current status of access to the general curriculum and associated participation in large-scale assessment and accountability systems for students with ASD within one state in the United States. More specifically, the researchers sought answers to the following questions from teachers of students with ASD across a Midwestern state:

1. To what extent do students with ASD have access to the general education curriculum?
2. To what extent are students with ASD expected to reach grade-level achievement on general education content standards?
3. How do students with ASD participate in accountability testing?
4. To what extent is there alignment in instruction, expectations, and accountability testing for students with ASD?

Methods

During the spring of 2010, a sample of teachers, paraprofessionals, and other educational specialists (e.g., autism consultants) working with students with ASD in a Midwestern state were asked to complete a survey that included questions about a target student with ASD with whom they worked. Several of the survey items related to goals, programming, and participation in large-scale assessment for the targeted student, and the associated responses were used to address the current research questions. All data collection efforts were approved through the Institutional Review Board at the associated university prior to initiation.

Sampling and Recruiting Procedures

Two data sets were obtained from the state educational agency. These data sets included (a) the names of all special educators providing special education services to students in public schools in the state and (b) the number of students served under the category of "Autistically Impaired" from each district in the state. These data sets included teachers working in center-based programs that serve only students with disabilities and those working in schools that serve both students with and without disabilities. Using this information, two samples, each containing 500 individuals, were selected from the special educator database. Individuals were selected such that the proportion selected from each district matched the proportion of students with ASD in the given district as determined using the student database. Furthermore, those educators in the database with the assignment code "Autistic Impaired" (which indicated that they taught students with ASD) and "Teacher Consultant: Autistic

Impaired" (which indicated that they served as a consultant for students with ASD) were selected first. We included the consultants in our sample because we had prior knowledge that some students with ASD were provided special education services merely through indirect consultative services, and we wanted to ensure that our sample included data representing the entire population of students with ASD receiving special education services. When more teachers were needed to proportionally represent the students with ASD in the given district, we selected from special education teachers listed as serving other groups of students (e.g., students with learning disabilities, students with cognitive impairments, etc.). This was done given our knowledge that not all students with ASD are served by autistically impaired teachers and consultants; some may receive special education services from those with other titles, such as those serving students with learning disabilities, cognitive impairments, and so on. The two samples were set up to be matched in the following way: The samples were combined and names were organized in alphabetical order of district name, with individual names in alphabetical order of last name within each district. Then, every other individual was placed in the first sample, and the remaining individuals were placed in the second sample. Email addresses of each individual in both samples were located, and those in the primary sample were contacted first. For situations in which the person in the first sample could not be contacted (e.g., email address not working), we identified and contacted a special education professional who did serve in the given district. If the primary sample participant reported no longer serving a student with ASD, he or she was asked to provide the contact information for someone from the same district who did serve such a student. If the individual from the primary sample was contacted, but did not respond following two reminder emails spaced approximately 1.5 weeks apart, we followed the same recruiting procedures with the matched individual in the secondary sample.

Survey Items

The survey initially required participants to select one student with ASD with whom they currently worked who had a last name that came as close as possible after their own last name alphabetically. If they came to the end of the alphabet prior to identifying such a student, they were instructed to choose the student with ASD with a last name closest to the beginning of the alphabet. These directions were provided to prevent individuals from reporting on the most salient students with ASD with whom they worked, such that the results could better represent the experiences of students with ASD across the state, as well as to ensure confidentiality of the students on whom they were reporting (whose identifying information was never requested or provided to the researchers).

Participants reported on a number of different characteristics about themselves and their own training, as well as about characteristics of the target student and his or her instructional programming. The entire survey required an average of 15 min for participants to complete; the original survey was piloted with 20 special educators and minor word changes to items were made prior to official data collection. The specific items selected for analysis to address the research questions in the current study are provided in the appendix. Several of these items are very similar to or represent slight modifications to those used in the Special Educational Elementary Longitudinal Study (SRI International, 2003). Given that some of the respondents were not expected to work directly with the student (i.e., autism consultants), and may not know the student well, an “unsure” option was available for the majority of items. In addition to examining the results for the entire sample, results were also examined in a disaggregated fashion by grade grouping (i.e., elementary [K–5]; middle school [6–8]; high school [9–12]; ungraded program). Finally, results were examined for a subset of students who were considered to have a mild form of ASD. This subset ($n = 22$) included teachers reporting information on students who were indicated to have either (a) a specific diagnosis of Asperger syndrome or (b) a primary disability of learning disability, other health impairment, or speech language impairment.

Results

Demographic Information

A total of 191 individuals out of the 746 who were contacted (which included 224 from the secondary sample) completed the survey by responding to questions about a K–12 student with ASD with whom they worked. This represented a response rate of 26%. The majority of respondents were special educators (83%), although some consultants (11%), paraprofessionals (4%), and general educators (1%) also responded. The school districts that the respondents represented were highly representative both geographically and socioeconomically of the state in which the study was conducted, with just slightly greater representation of districts in counties considered to have a medium household income (33% represented in actual sample; 25% desired based on planned sample) than low or high household income, slightly greater representation from the southwest area of the state (24% in actual sample; 18% desired based on planned sample), and slightly less representation from the largest urban area in the state (42% in actual sample; 52% desired based on planned sample). Overall, although our response rate was somewhat low, the careful procedures used to select the sample and corresponding demographic characteristics of the sample suggest that the responses represent individuals working in a highly representative set of districts from across the state.

The 191 target students with ASD who were selected and on whom respondents reported (see Procedures section for the selection process) were all reported to have ASD and were receiving special education services at the time of survey completion, although some were not classified as having autism as their primary educational disability. The majority ($n = 179$) were reported as having autism as their primary disability; others were reported as having learning disability ($n = 4$), attention-deficit/hyperactivity disorder ($n = 3$), speech language impairment ($n = 2$), developmental delay ($n = 2$), or other health impairment ($n = 1$) as their primary educational disability. Respondents were asked to report on the student’s specific psychological diagnosis if they were aware of it; responses suggested that students represented several psychological disorders on the autism spectrum, including autistic disorder (81%), Asperger syndrome (11%), and pervasive developmental disorder (not otherwise specified; 2%); however, 7% of the respondents recorded “unsure” for the corresponding item. Eighty-one percent were male, which corresponds to the typical 4:1 male-to-female gender ratio reported for ASD students. Students represented the range of grade levels, including elementary (K–5; 46%), middle school (6–8; 20%), and high school (9–12; 22%), with the remaining classified as “other/ungraded.” The students on whom individuals reported were primarily White, non-Hispanic (69%), although some were African American/non-Hispanic (21%), Hispanic (22%), or of other races. Thirty-one percent of the students on whom individuals reported were reported to be receiving free or reduced price lunch. Overall, this information suggests that the students appeared representative of the state population in which the study was conducted.

Access to General Curriculum

Target students were reported to participate in general education classroom activities an average of 10.6 hr per week ($SD = 10.6$; range = 0–35 hr per week). Figure 1 provides information on the percent of time students were reported to spend receiving special education services outside the general education classroom. More than half of the students were reported to spend the majority (over 50%) of their school time receiving special education services outside the general education classroom. This was particularly the case for those classified as “ungraded,” although not true for the mild ASD subset. Figure 2 provides information on the extent to which students were reported to have access to general education curriculum materials. A majority of students were reported to use materials that represent a substantial modification from general education curriculum materials or to use specialized curriculum materials (55% of students), with only 10% using general education curriculum materials without modification. Those in ungraded programs were particularly likely to be reported as using a

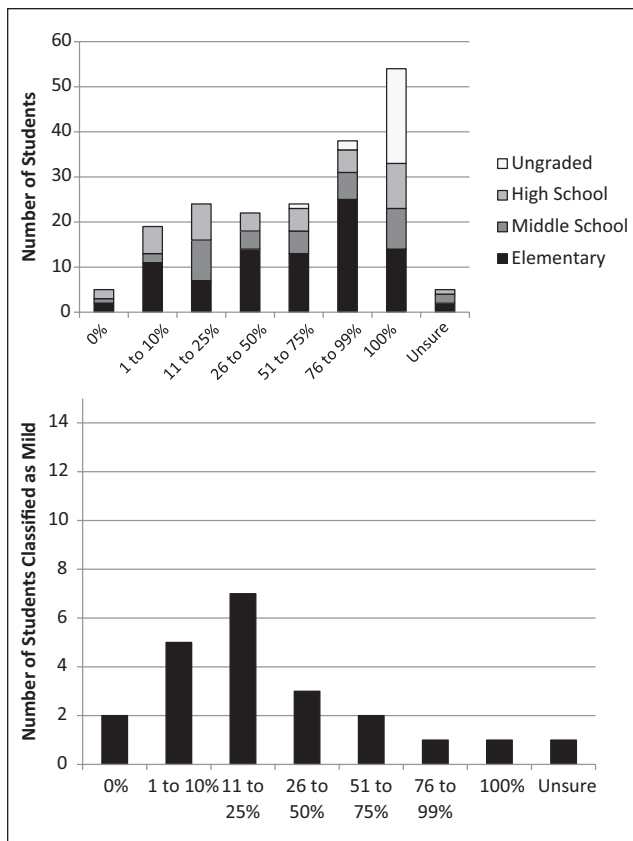


Figure 1. Percent of time spent receiving special education services outside the general education classroom.

specialized curriculum and associated materials. The most common response for elementary students was “some modification to general education curriculum materials,” whereas the most common response for middle school and high school students was “specialized curriculum or materials.” Those in the mild subset were most commonly reported to receive “some modification to general education curriculum materials.” Figure 3 shows the reported frequency of access to curriculum and/or materials used by students receiving general education services. Although some students were reported to never use materials designed for students receiving general education services, the majority were reported to use such materials often or always. For all elementary, middle, and high school students, the most common response was “often” or “always,” whereas for ungraded students, the most common response was “never.”

Expectations for Learning

Figure 4 provides information on the extent to which students were expected to reach grade-level achievement on academic content standards. The most common response was “none” ($n = 60$); however, the majority ($n = 124$) indicated they expected students to reach grade-level

achievement on at least a few of the content standards. Among elementary students, the most common response was that the student was expected to meet “most” of the academic content standards, whereas for middle school and high school students, the most common response was “none.” The majority of those with mild disabilities were indicated as being expected to attain grade-level achievement on most or all of the standards. Figure 5 shows the Individualized Education Plan (IEP) goals of students. As expected, many students were reported to have goals in the areas of behavior, social skills, and communication; these were the most frequently reported IEP goal areas for all graded subgroups and the mild subset. However, only 56% of students were reported to have an academically focused IEP goal. Among those who reported IEP goals in specific academic areas, most reported goals in both E/la and math ($n = 20$), some reported goals in just E/la ($n = 11$) or math ($n = 6$), and the remaining reported goals in E/la, math, social studies, and science ($n = 2$). It is important to note that in the state where we conducted this study, it is expected that IEP goals align with the content expectations that make up the general curriculum; at the time that the study was completed, the state was beginning to provide additional support to teachers to know how to write such goals.

Participation in Testing

Figure 6 shows how students were reported to participate in statewide testing for accountability purposes. The majority of those for whom there was such a test at their grade level were reported as participating in an alternate assessment ($n = 80$). A very small number participated in the alternate assessment for some, but not all, content areas ($n = 4$). A sizable proportion ($n = 56$) were reported to take the regular assessment either with or without accommodations and modifications. Similar patterns emerged when examining results for the various graded subgroups, with the exception that students in ungraded programs were quite commonly reported as participating in the alternate assessment or not taking such a test. Students classified as mild were highly represented among those students reported to participate in some way in the regular assessment (with or without accommodation/modification).

Respondents were asked to report on what accommodations the students received during statewide testing. The most commonly reported accommodations were extended time and small group/individual administration ($n = 34$), followed by tests read aloud ($n = 27$), separate setting ($n = 17$), scribe ($n = 12$), directions read/restated/reread/clarified ($n = 10$), audio version of the test ($n = 7$), calculator and frequent breaks ($n = 6$), word process ($n = 5$), and redirection for focusing/prompts ($n = 3$).

Respondents expressed varying views on the extent to which the statewide test was an adequate indicator of their

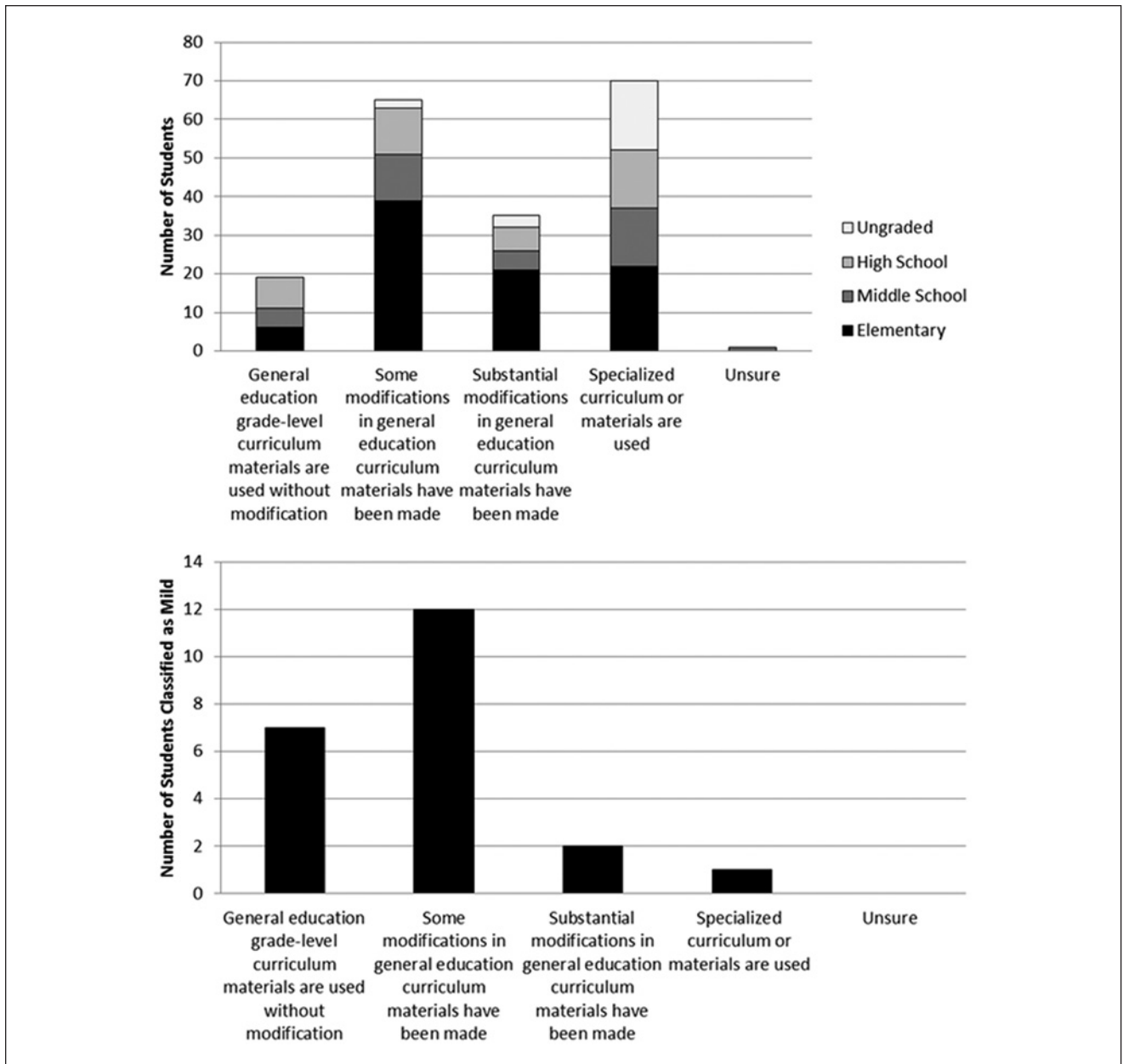


Figure 2. Nature of students' curriculum materials.

target student's achievement. Twenty percent reported that it was a very poor measure of the student's achievement, and 27% indicated that they thought it was a poor measure of the student's achievement; 42% indicated that they thought it was an adequate or highly adequate measure, and the remaining 11% reported being unsure.

Alignment of Access, Expectations, and Testing

Figures 7 and 8 provide visual displays of the extent to which respondents reported responses that suggested an

alignment between instructional access and testing, and expectations and testing. It was anticipated that those who were reported to never or rarely work with curriculum and/or materials designed for students in general education would participate in the alternate assessment, and those reported to often or always work with curriculum and/or materials designed for students receiving general education services would participate in the regular assessment; these categories are shaded in Figure 7. Given that the largest cells in the figure correspond to these categories, it appears that for most students, the nature of their instruction aligned

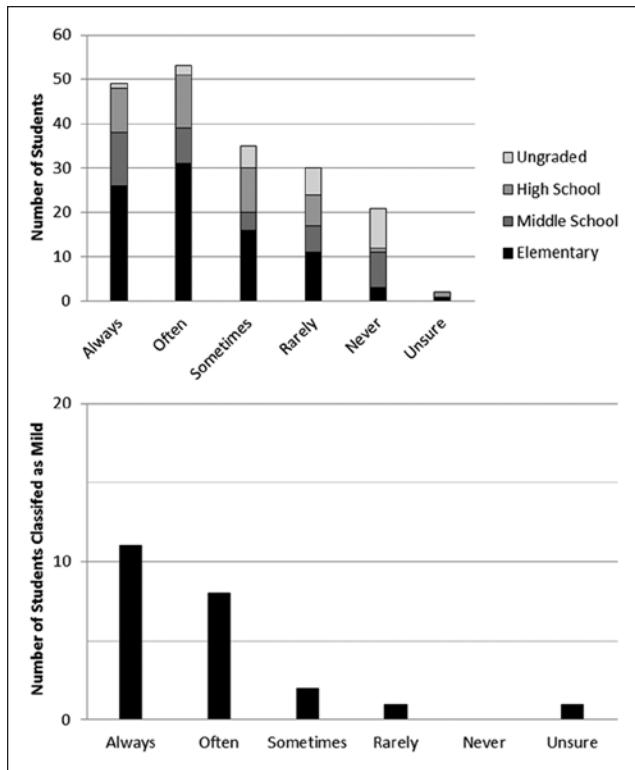


Figure 3. How often instruction involves working with curriculum and/or materials designed for students receiving general education services.

with the nature of the assessment in which they participated. However, there does seem to be a large number of students who were reported to have quite regular access to the curriculum and materials used for students receiving general education services who participated in the alternate assessment ($n = 46$). Figure 8 displays the number of students in each cross-category for expectations and testing, with the expected categories highlighted. It was anticipated that those who were expected to achieve grade-level achievement expectations on none of the content standards would participate in the alternate assessment, and those expected to achieve grade-level achievement on most or all would participate in the regular assessment. Finally, it was anticipated that those expected to meet grade-level achievement on only a few or some of the content standards would participate partly in the alternate assessment and partly in the regular assessment (depending on the nature of the content tested). Again, many students were reported in the associated categories. However, there were many who were expected to reach grade-level achievement on a few to all of the content standards who participated fully in the alternate assessment ($n = 35$), as well as some not expected to reach grade-level achievement who were tested using the regular assessment ($n = 10$). The option to have the student

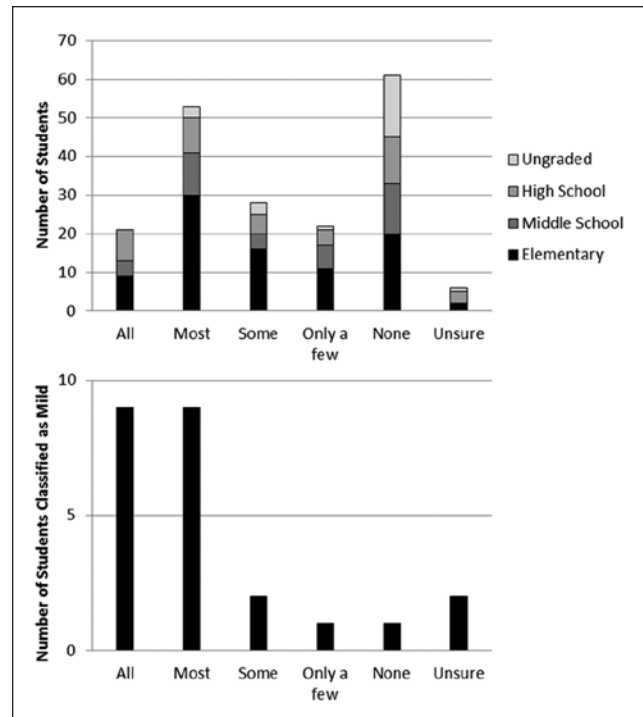


Figure 4. Amount of academic content standards on which the student is expected to attain grade-level achievement.

participate partly in the alternate assessment and partly in the regular assessment seemed to have been utilized for only a very small group of students ($n = 4$).

Discussion

The purpose of this study was to explore existing instructional and accountability testing practices for students with ASD, as well as the alignment of these practices, in light of the current federal and state legislation related to inclusion and accountability testing. Based on our survey of teacher practices, many students with ASD appear to be receiving the majority of their instruction outside of the general education environment, and many are not currently expected to reach grade-level achievement standards. Although it is possible for students with ASD to have comorbid cognitive difficulties, it has been estimated that a slight majority of those with ASD have either no cognitive impairment or score in the mild to moderate intellectual disability range on tests of IQ (Lord & Rutter, 1994). One might therefore anticipate many more to be included in the general education environment and to experience higher expectations for their academic success than what was found in the current study. It may be the case that students' communication and behavioral difficulties, and teachers' and schools' associated challenges in adequately addressing these difficulties, are ultimately contributing to lowered expectations and less

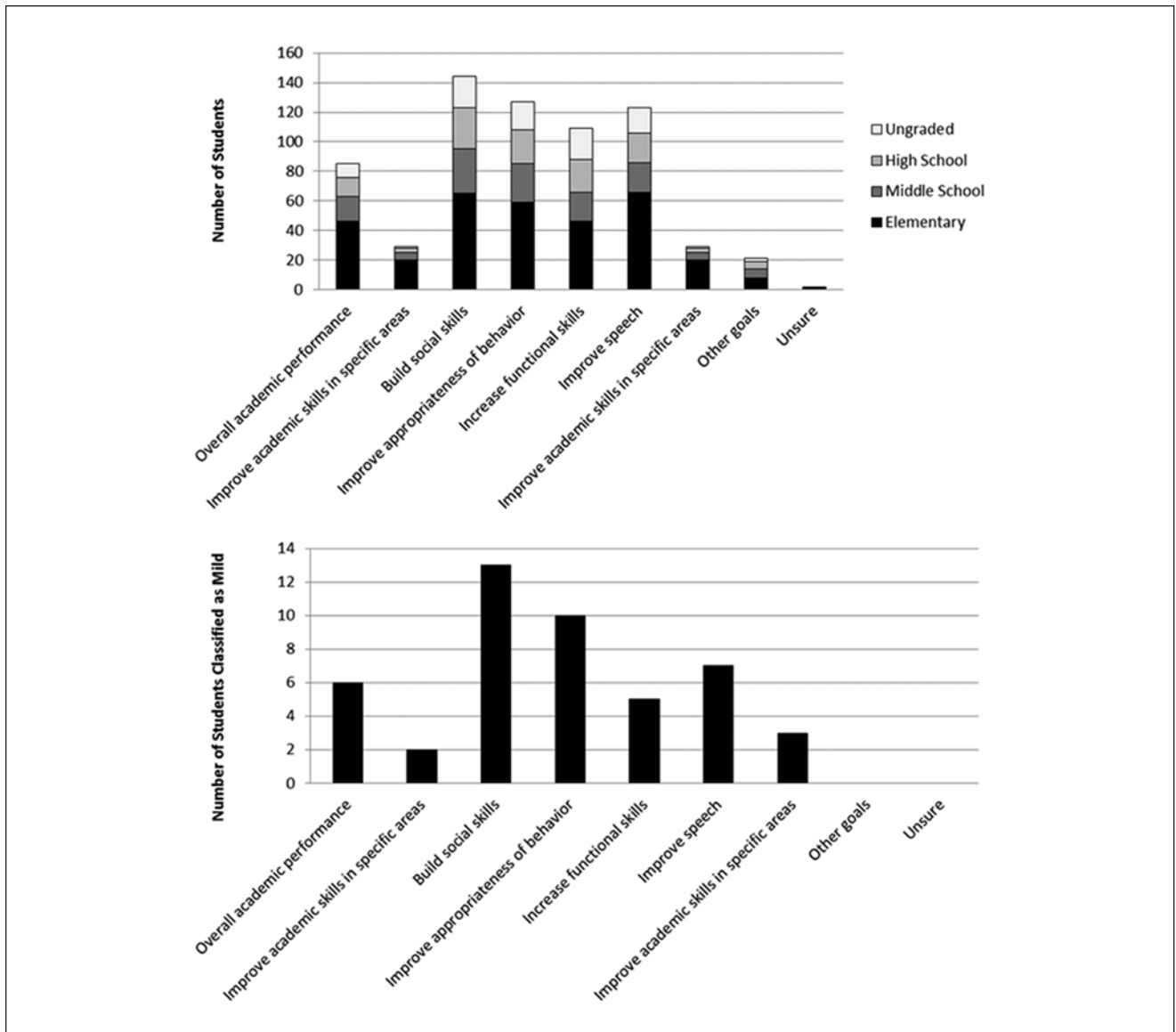


Figure 5. Nature of IEP goals.
 Note. IEP = Individualized Education Plan.

access to the general curriculum. This appears to be supported by additional data in this study showing that the most common IEP goals of students with ASD relate to their behavior and communication skills, rather than their academic skills. Although there was some alignment evident in terms of the nature of instruction and participation in testing for individual students (i.e., students who had greater access to the general curriculum tended to be more likely to participate in the regular assessment), a substantial number of students were identified who were reported to have regular access to the general curriculum, and expected to reach grade-level achievement, but tested for accountability purposes using the alternate assessment. Furthermore, a

handful of teachers were identified ($n = 8$; 4%) who reported that the students would not be tested for accountability purposes, even though the student was at a grade level at which such testing was mandated.

These results correspond with recent studies that have examined the participation of students with emotional and behavioral disorders, which have found large proportions of students receiving services outside of the general education classroom and participating in the alternate assessment (Carr-George et al., 2009). Although there are very distinct differences between students with ASD and students with emotional and behavioral disorders, they are similar in that they (a) commonly exhibit behavioral challenges that can

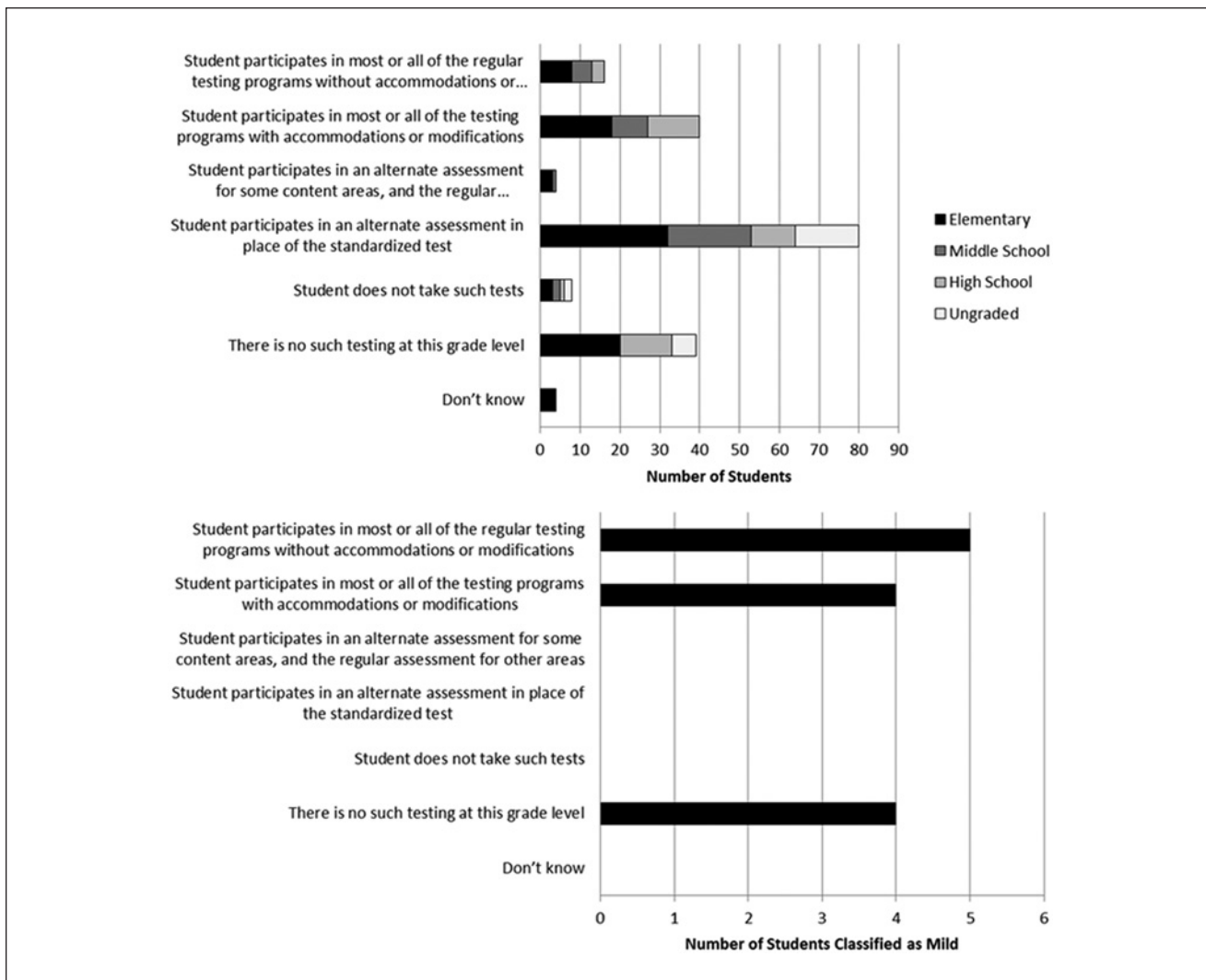


Figure 6. Participation in statewide testing.

be difficult for educators to address, and (b) do not, by definition, have intellectual deficits (although some may have a comorbid intellectual disability). It therefore seems appropriate to speculate that there may be aspects of the traditional testing format and environment that are not generally considered appropriate for these students. Behavioral challenges among students are often difficult to predict; students with related difficulties may appear to demonstrate appropriate behavioral and academic skills at one point in time, but not 2 hr later. It may be that IEP teams working with students with behavioral challenges are cognizant of these fluctuations in performance and fearful of letting a point-in-time test determine a student’s actual achievement level, thereby resorting to use of the alternate assessment. Relatedly, it may be the case that the accommodations available and typically used by teachers do not help to

address the behavioral challenges that these students exhibit.

Analysis of results by grade level suggests that students with ASD appear to receive less modification to the general curriculum at the elementary level than at the middle school and high school levels. Furthermore, more teachers tend to expect students to meet the majority of grade-level achievement standards at the elementary level than at more advanced grade levels. Although this trend could be due to a variety of explanations, one potential explanation relates to the shift in the nature of academic content being taught at higher levels that may be particularly challenging for students with ASD. Many students with ASD are often quite literal in their receptive and expressive language (Mitchell, Saltmarsh, & Russell, 1997), and at higher grade levels, there is typically an expectation for students to understand

Frequency with which have access to curriculum and materials used by students receiving general education services	Statewide Test Participation		
	Alternate Assessment	Alternate & Regular Assessment	Regular Assessment with or without Accommodations/Modifications
<i>Never</i>	17	0	0
<i>Rarely</i>	16	1	2
<i>Sometimes</i>	19	1	2
<i>Often</i>	16	1	29
<i>Always</i>	11	0	23

Figure 7. Alignment of access and testing.

Number of content standards on which student is expected to reach grade-level achievement	Statewide Test Participation		
	Alternate Assessment	Alternate & Regular Assessment	Regular Assessment with or without Accommodations/Modifications
<i>None</i>	44	1	2
<i>Only a Few</i>	14	0	2
<i>Some</i>	11	1	6
<i>Most</i>	7	2	28
<i>All</i>	3	0	15

Figure 8. Alignment of expectations and testing.

more abstract ideas and concepts. This may require substantial instructional modification for students with ASD in advanced grades.

Interestingly, many students with ASD were reported to be in ungraded programs, which is a practice that does not align with federal requirements for all students to be taught according to grade-level standards. This seems to be a particularly strong example of the discrepancy between what has been legislated and what actually happens in practice related to inclusive education. The ungraded subset seemed to follow a pattern of high levels of exclusion from expectations, instruction, and assessment that does not align with legislation intended to promote inclusion. The analysis of the mild subset highlights the notion of ASD as a spectrum disorder and corresponding differences in needs for individual students; those who were classified as “mild” within this study followed the expected patterns of greater inclusion across instruction and assessment. Although the classification process used in this study for determining that a child could be considered “mild” in ASD severity was not particularly robust (i.e., we relied primarily on a reported diagnosis of “Asperger syndrome” to define the mild subset), the results of this exploratory analysis do seem to point out expected differences across severity levels, as has been reported in other related research (Simpson et al., 1999).

On examining the most frequently reported accommodations used by students with ASD in this study, it becomes particularly apparent that the accommodations offered to students are limited in nature and may fail to address the typical behavioral challenges that these students exhibit.

Despite the fact that behavioral support plans can be particularly helpful in managing the behavior of students with ASD (Koegel, Matos-Fredeeen, Lang, & Koegel, 2012), these were never mentioned as accommodations made available to students with ASD during testing. Instead, some of the most frequently reported accommodations focused on addressing academic deficits (e.g., reading assistance, scribe). It may be the case that if more behaviorally focused accommodations were part of state testing accommodation policies, teachers may be more likely to use such supports to increase the participation of students with ASD in state testing programs. Although some teachers reported that they thought the test was an appropriate measure of the student’s skills, many did not. Additional probing into why the test is considered inappropriate by some teachers may help in identifying potential strategies for improving assessment among these students.

It is important to note that this study is the first identified to focus on an examination of accountability test participation of actual students with ASD, and was limited to one state within the United States, and therefore it would be helpful to conduct similar examinations in other places. In doing so, it may be helpful to examine results separately for students at different points on the autism spectrum in a more systematic way, taking into consideration the child’s behavioral and cognitive characteristics. Furthermore, the results of the current study are based on responses to a small number of survey items; the development of more robust measurement tools will likely help in examining the aforementioned relationships between instruction,

expectations, and assessment participation. Also, ensuring adequate knowledge of the student by the respondents would help ensure a high level of validity of the results and analysis. Although 92% of our sample reported working directly with the student for at least 1 hr each week, the remaining respondents were primarily consultants and did not interact with the students on a regular basis. Although this limitation was necessary for our results to represent the full spectrum of students with ASD receiving special education services, it is important to note that some of the respondents may not have known the student particularly well. At the same time, these results provide an important examination of accountability testing practices in one state for a group of students that appears to have been neglected in research on accountability policies and related testing. Despite the fact that the results of this study represent the nature of inclusion practices occurring within just one context (i.e., a particular state in the United States), similar challenges in implementing aspects of inclusive assessment and instructional programming are likely to be experienced in other places where related legislation and policies are enacted.

Although it is essential for instructional and testing decisions for students with disabilities to be made on an individual basis by those who know the student well, it can be helpful to explore trends in decision making across groups, including specific groups of students with disabilities, to better understand if the accountability system is meeting their needs. The results of the current study point to a potential need for more in-depth examination of the accountability testing needs of students with ASD, and due consideration of the challenges associated with putting legislation into practice with regard to more comprehensive inclusive programming for students with disabilities. The current study highlights some potential existing gaps between policy and practice, as well as a need to further explore factors that may promote more comprehensively inclusive practices in the future.

Appendix (see Note 2)

A. General Education Instruction

1. Overall, approximately how many hours per week does this student currently spend in the following:

General Education Classroom: _____ hours per week
 Special Education Self-Contained Classroom: _____ hours per week
 Special Education Resource Classroom: _____ hours per week
 Individual or Home-Bound Instruction: _____ hours per week

2. Please indicate the percentage of the total weekly hours in school the student receives special education and related services outside of a general education classroom.

0% 1–10% 11–25% 26–50% 51–75% 76–99% 100% Don't Know

3. Please indicate how often the student's instruction involves the following using the scale below.

Never Rarely Sometimes Often Always Don't Know

Work with curriculum and/or materials designed for students receiving **general** education services

4. Which of the following best describes the curriculum materials for this student in general?

- General education grade-level curriculum materials are used **without** modification
 Some modifications in general education curriculum materials have been made

(e.g., modified content expectations, somewhat below-grade-level curriculum used)

- Substantial** modifications in general education curriculum materials have been made

(e.g., very different content expectations, significantly below-grade-level curriculum used)

- Specialized** curriculum or materials are used

(e.g., parallel curriculum, individualized curriculum or materials)

B. Learning Expectations for the ASD Student

1. Please rate the extent the student is expected to achieve the same general education goals as other students at his/her grade level by indicating the amount of academic content standards the student is expected to attain grade level achievement on. Mark "**Not Applicable**" if there are no academic content standards at this grade level.

- None
 Only a Few
 Some

- Most
- All
- Not Applicable
- Don't Know

2. For this school year, what are the primary goals for this student? (Check all that apply)

- Improve overall academic performance
- Improve academic performance in a specific area (specify all specific areas):
- Build social skills
- Improve appropriateness of general behavior
- Increase functional skills
- Improve speech and communication skills
- Don't know
- Other (please specify)

Please Specify

C. Large-Scale Testing

1. During this school year, to what extent did/will this student participate in any mandated standardized test(s)?

- There is **no such testing** at this grade level
- Student does **not** take such tests
- Student participates in an **alternate assessment** in place of the standardized test
- Student participates in an **alternate assessment** for **some content areas**, and the regular assessment

(with or without accommodations) for the remaining content areas

- Student participates in **most or all** of the testing programs **with** accommodations or modifications
- Student participates in **most or all** of the regular testing programs **without** accommodations or modifications
- Don't know

2. To what extent do you believe the testing option indicated in the previous question is an appropriate measure of this student's achievement?

- Very poor** measure of this student's learning
- Poor** measure of this student's learning
- Adequate** measure of this student's learning
- Highly adequate** measure of this student's learning

3. If this student receives accommodations on the mandated standardized test(s), what accommodations does he/she receive?

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Notes

1. An alternate assessment is a type of assessment created for the purpose of including students with special assessment needs in a large-scale assessment and accountability system. It is important to distinguish alternate assessment from another commonly used term that is similar, namely, *alternative assessment*. Alternative assessment refers to an approach to assessment that requires an individual to engage in an authentic task that commonly involves creativity and problem-solving skills (Herman, Aschbacher, & Winters, 1992). Although some alternate assessments include characteristics similar to those of alternative assessments, many alternate assessments do not include such characteristics.
2. Several of these items are very similar to or represent slight modifications to those used in the Special Educational Elementary Longitudinal Study (SRI International, 2003).

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