State Policies and Research on Alternate Assessment Accommodations

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Executive Summary

States have been required to provide alternate assessments based on alternate academic achievement standards (AA-AAAS) for students with the most significant cognitive disabilities since 2000. These assessments were developed to ensure that all students, including those with the most significant cognitive disabilities, could participate in state assessment and accountability systems. Although accommodations have long been a critical component of general assessments, they were not initially identified for alternate assessments. As assessment consortia began developing new alternate assessments in 2011, they incorporated additional approaches to accessibility, including accommodations and other accessibility features. Current approaches typically include multiple tiers of support: universal features available to all students, designated features available to any student with a documented need, and accommodations specifically for students with disabilities. This report presents findings from two studies examining AA-AAAS accommodations policies and research.

The policy analysis conducted from April 1 to May 31, 2024 found that 49 of 51 states had publicly available documents containing AA-AAAS accommodations policies, with most states (36) having at least two documents. The most commonly provided accommodations were signed administration (48 states), magnification (46 states), assistive technology (46 states), manipulatives (43 states), human reader (44 states), and calculator (42 states). States used varying terminology and organizational approaches for their accommodations policies, and many incorporated universal design features directly into test development and administration rather than listing them as separate accommodations. Information about accommodations was often difficult to locate and sometimes inconsistent across documents within states.

The literature review revealed only six research studies on AA-AAAS accommodations published from 2000 to 2023, with four published after 2016, suggesting growing interest in recent years. The studies focused primarily on documenting accommodations use, examining effects of accommodations on specific student populations, and analyzing universal design elements in test development. Most studies used secondary data analysis and mixed methods approaches. The research emphasized the importance of aligning instructional and assessment accommodations, properly preparing students to use accommodations, and providing clear guidance on accommodations implementation.

These findings point to several important implications. There is a need for more consistent approaches to documenting and communicating AA-AAAS accommodations policies, along with comprehensive professional development for educators on selecting and implementing accommodations. A significant gap exists in research on AA-AAAS accommodations effectiveness, necessitating innovative research approaches given the unique characteristics of the student population. Most critically, there must be better coordination across policy, practice, and research to ensure evidence-based accommodations support. The findings highlight both

progress in AA-AAAS accommodations policies and significant opportunities for improvement in policy documentation, implementation support, and research. Addressing these gaps will be crucial for ensuring appropriate accessibility and valid AA-AAAS results for students with the most significant cognitive disabilities.

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Introduction

States have been required since 2000 to have alternate assessments available for students with disabilities who are unable to participate in a state's general assessments (*Individuals with Disabilities Education Act* – IDEA, 1997). Much has happened in the evolution of alternate assessments since they were first developed (e.g., Quenemoen, 2008, 2009). Included in the evolution were changes in formats, clarification of the students who should participate in alternate assessments (see also Lazarus et al., 2024), clearer development processes, more rigorous standard setting, and the inclusion of alternate assessment results in state accountability systems. Regulations promulgated after the reauthorization of the Elementary and Secondary Education Act (ESEA-2001) indicated that alternate assessments could be based on alternate academic achievement standards (AA-AAAS) and that they must be designed only for students with the most significant cognitive disabilities (U.S. Department of Education, 2003). These regulations were incorporated into the 2015 reauthorization of ESEA, also known as the *Every Student Succeeds Act* (ESSA). ESSA also placed a 1.0% cap on the percentage of tested students who could participate in the AA-AAAS.

In the past, accommodations were not identified for alternate assessments. In fact, even today, IDEA only requires that states report on the number of students assigned accommodations for the general assessment, but not for the AA-AAAS. As consortia of states started to develop alternate assessments in 2011 (e.g., Dynamic Learning Maps – DLM, National Center and State Collaborative now the Multi-State Alternate Assessment – MSAA), accessibility and the need for accommodations were among the innovative approaches that were taken for AA-AAAS.

The developers of general assessments for consortia of states (Smarter Balanced Assessment Consortium, Partnership for Assessment of Readiness for College and Careers) at that time adopted an approach to accessibility that included both accommodations and other accessibility features. Although their terminology varied (Shyyan et al., 2016), most included three tiers: (a) universal features designed to be available to all students, (b) designated features designed to be available to any student for whom an adult or team of adults indicate a need and document that need, and (c) accommodations that were available only to students with disabilities who had a documented need in an Individualized Education Program (IEP) or a 504 Plan.

There has been considerable documentation of states' accommodations policies for their general assessments (for example, see the National Center on Educational Outcomes [NCEO] *Accommodations Toolkit*) (NCEO, 2024). In addition, staff at NCEO and others have summarized general assessment accommodations policies across many years (e.g., Lazarus et al., 2009). Researchers have summarized a considerable body of research on general assessment accommodations (e.g., Buzick & Stone, 2014; Cawthon & Leppo, 2013; Lazarus et al., 2023; Ressa et al., 2024; Rogers et al., 2021, 2022, 2023).

Purpose

The purpose of this report is to present the results of two studies undertaken to explore what state policy and research literature reveal about accommodations (defined broadly to include all tiers of accessibility) for students who participate in AA-AAAS. Our research questions for each study were:

Study 1: State AA-AAAS Accommodations Policies

1. To what extent do states include their AA-AAAS accommodations policies on their websites?
2. Where do states document their AA-AAAS accommodations policies?
3. What are the most frequently identified accommodations for states' AA-AAAS?

Study 2: AA-AAAS Accommodations Research

1. How many research studies addressed AA-AAAS accommodations from 2002 through 2023?
2. What were the characteristics of AA-AAAS accommodations research?
3. What were the major findings of AA-AAAS accommodations research?

Methods

Both Study 1 and Study 2 used the term "accommodations" to refer broadly to all accessibility features (e.g., universal features, designated features, accommodations). Any accessibility features listed in state policies are referred to as "accommodations" in this report. Typically, research used the term "accommodation" to refer to a change in the typical ways of presenting test items.

Study 1 Methods

We reviewed state education agency (SEA) websites to collect data on state accommodations policies for their AA-AAAS. This search included 50 states and the District of Columbia (DC). It was conducted from April 1 to May 31, 2024. For each state, one researcher searched the SEA website for AA-AAAS accommodations policies. These could be available on the state website or included in downloadable assessment manuals and guides (e.g., accessibility manuals, test administration manuals). The states and DC (51 total states) were divided among the three researchers. Each person recorded policy findings on a Google form; Appendix A shows the coverage of the state policy coding form. The information on the forms was imported into a spreadsheet for later review by the three researchers.

For each state, we recorded how many documents included AA-AAAS accommodations policies. We noted whether they were documents for alternate assessment only or were documents for all state assessments. We also recorded the terms the state used to refer to accommodations (e.g., tiers of accessibility, universal design features, etc.), the consistency of policies across documents if they were in more than one document, and the specific accommodations mentioned.

We used a verification process to provide states the opportunity to review the documents we found, to confirm that none were missed, and to verify the AA-AAAS accommodations we listed were mentioned in state documents (see sample verification form in Appendix B). All SEA assessment and special education directors were invited to review the verification form for their state. Thirty-nine SEAs responded to the verification process. Thirty-eight requested changes to the reported findings for their states. Requested changes ranged from the state providing additional documents that were not initially identified to listing features that were built into the test design and were not included in the state's tiers of accessibility features. Researchers reviewed and verified the requested changes before making final adjustments. Not all changes were accepted depending on whether they met the initial criteria researchers used when coding.

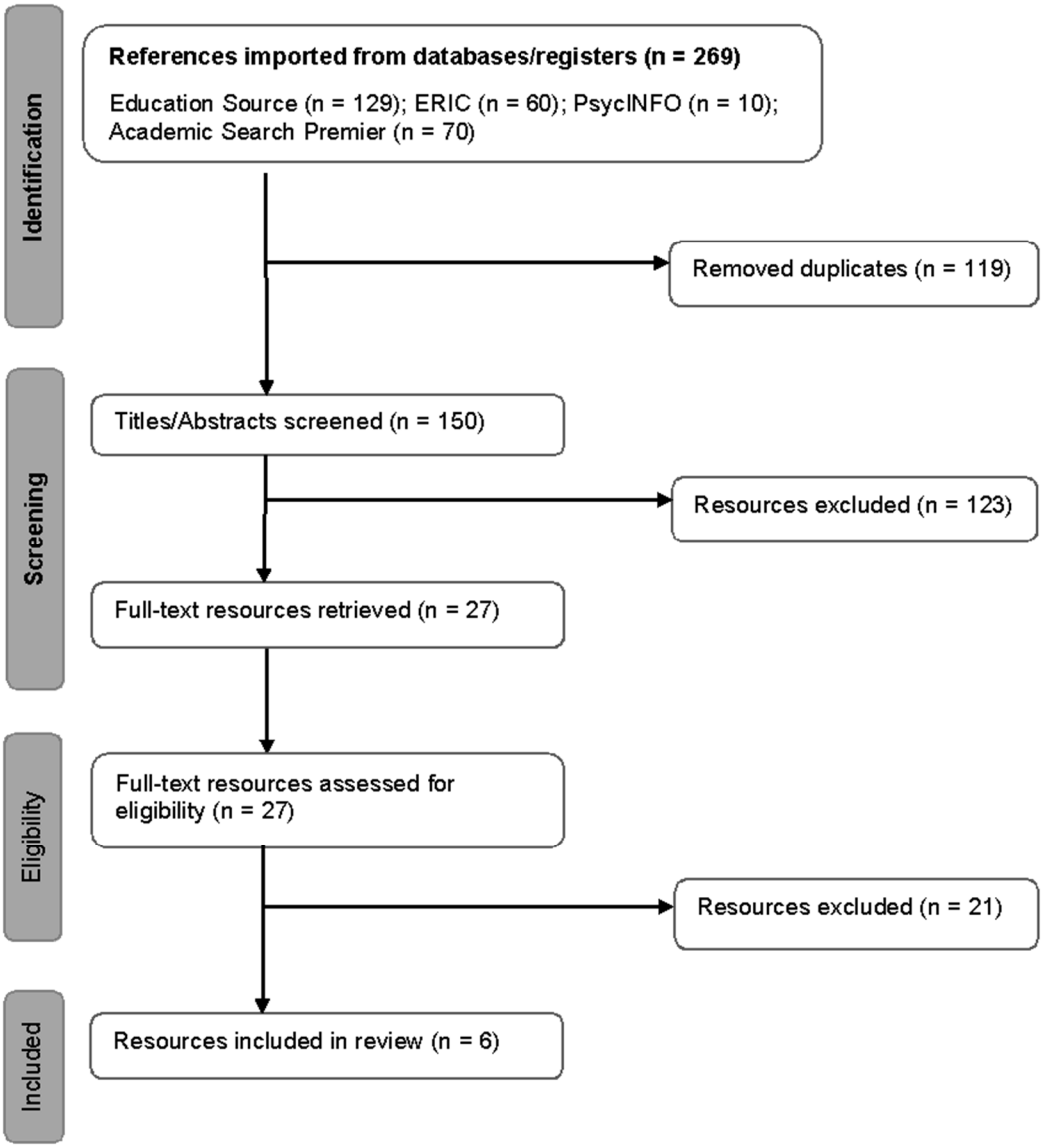
After reviewing the states' verifications, it became clear that states were including numerous accessibility features as part of their test design and administrative procedures rather than in a separate list of accommodations. Thus, we conducted a second review of state policy documents to identify accessibility features described as part of the test design or procedures. Two researchers reviewed each state's documents for this review, with a third researcher settling any differences.

In addition to the review of features embedded in test design or procedures, we double-checked the accommodations data for the AA-AAAS consortia states (i.e., DLM, MSAA). We compared policy data from each consortium to ensure we had consistently coded state policies. In some instances, consortia states did identify additional accommodations beyond what was offered by the consortia (for example, a state using a consortia science assessment might identify additional accommodations beyond those defined by the consortia).

Study 2 Methods

Our literature review search process included four steps. The first step was an initial search of databases using preselected search terms and Boolean strings. Databases searched were ERIC, Academic Search Premier, PsycInfo, and Education Source. The search was limited to journal articles published between 2000 and 2023 and conducted in a U.S. context with students in grades K-12. (See Appendix C for details of search terms.) The search produced 150 articles to review (see Figure 1).

Figure 1. Review and Identification Process



To support our work, we used Rayyan, a free web application for screening articles for inclusion in and exclusion from a literature review. It assisted in tracking search results, assigning reviewers, and recording results. We used it for the next three steps of our review process: (2) review of titles and abstracts for inclusion in the literature review, (3) full text review of articles for final determination about inclusion in the literature review, and (4) coding of the articles for the literature review.

Articles identified in our initial search (150 studies) were exported into Rayyan for the second review step, which involved applying specific inclusion and exclusion criteria to each article's title and abstract. (Appendix D presents the inclusion and exclusion criteria used to screen titles

and abstracts.) The articles were reviewed by the three researchers, with each individual article reviewed by two researchers. When there were disagreements about whether to include an article for a full text screening, or if at least one researcher indicated that they were unsure about inclusion, the third researcher also reviewed the title and abstract. This occurred for 80 of the 150 articles. The three researchers then held a discussion and reached agreement on whether to include the article. A total of 27 articles resulted from the screening of titles and abstracts (see Figure 1).

For the full text screening of the 27 articles (step 3), each article was randomly assigned to two of the three researchers, with each of the three researchers reviewing the full text of 15 to 17 articles. The purpose of this step was to determine whether each article should be included for final coding of the contents of the article. Appendix E shows the inclusion and exclusion criteria for the full text screening. When there was disagreement among the two researchers about whether an article should be included for coding the contents, or if at least one researcher indicated that they were unsure about inclusion, a third researcher read the article. This occurred for seven of the 27 articles. The three researchers discussed these articles and reached agreement on whether to include the article based on the inclusion and exclusion criteria.

The fourth step in the review process involved coding each article. We coded each article for 11 characteristics: (a) purpose, (b) research questions, (c) type of research, (d) data collection source, (e) instruments and methods, (f) content assessed, (g) disabilities discussed, (h) participant characteristics, (i) accommodations discussed, (j) findings, and (k) implications or recommendations. Appendix F shows the coding form information, including selection items and open-ended items.

Results

Results of State AA-AAAS Accommodations Policies (Study 1)

The policy search revealed significant variation in AA-AAAS accommodations policies across states in terms of the number of documents found, terminology used to label accessibility features, and accommodations addressed. A total of 124 documents were analyzed from 49 of the 51 states we searched. States had up to six publicly available documents containing AA-AAAS accommodations information, with the majority of states (N=36) having at least two documents. Two states (Delaware, Nevada) did not have publicly available manuals.[1] Eighty-eight of the 124 documents were standalone documents for the alternate assessment, whereas 34 documents

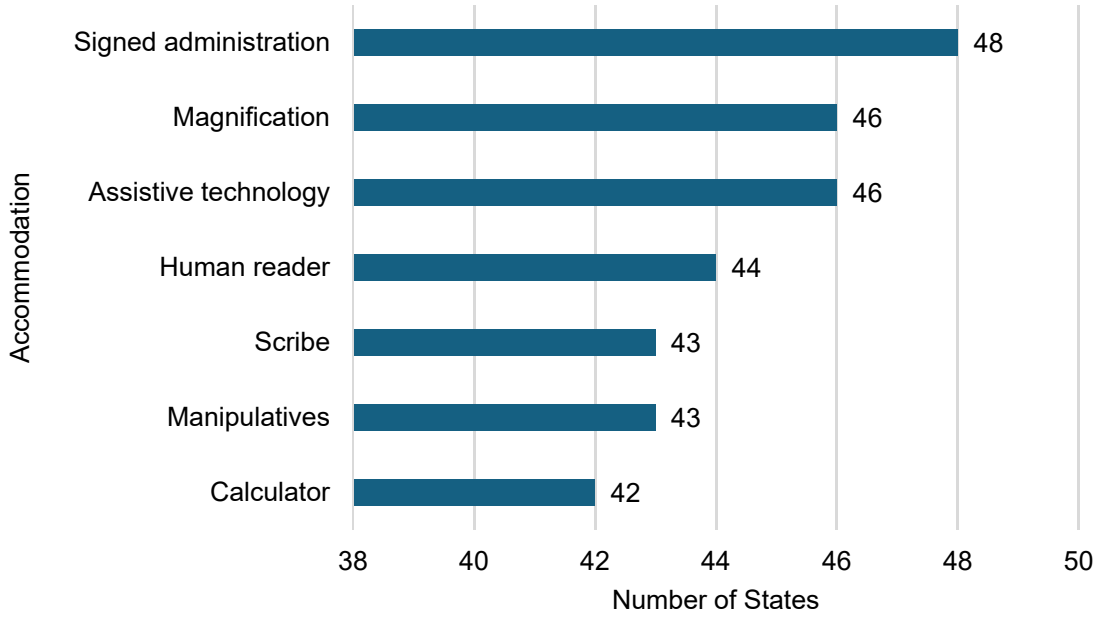
[1]Both states acknowledged their identification as not having publicly available policies at the time of our study. One state indicated that its documents were under revision and are now available on its website. The other noted that its documents were in a non-public portal for educators and test administrators.

covered information for both the general and the alternate assessment, and two resources were not clearly identifiable as being standalone or combined. Over one-third of the documents were test administration manuals, while 45 documents were accessibility manuals. Six documents were test coordinator manuals, and 24 documents were "other" types of resources. The two most frequently used sets of terms for accommodations were "Categories 1, 2, and 3" (N=13) and "Universal features, Designated features, and Accommodations" (N=13). Nine states used "Accessibility features and Accommodations," while five states used only "Accessibility features," and four used only "Accommodations." Nine states used some other set of terms unique to their states.

Most Frequently Identified Accommodations

The most frequently identified accommodations were signed administration, magnification, assistive technology (AT), human reader, scribe, manipulatives, and calculator, with at least 40 states identifying each of these accommodations (see Figure 2). Additional frequently identified accommodations included braille (N=39), color contrast (N=38), and colored lenses/overlays (N=38). Additional accommodations that were identified by at least half of states included: paper format (N=32), test administrator entering of student responses (N=31), recorded delivery (N=31), breaks during testing (N=30), language translation of text (N=29), tactile graphics (N=27), line reading device or software (N=26), and highlighter (N=26). For additional details, see Appendix G.

Figure 2. Most Frequently Identified Accommodations



Test Design and Procedures

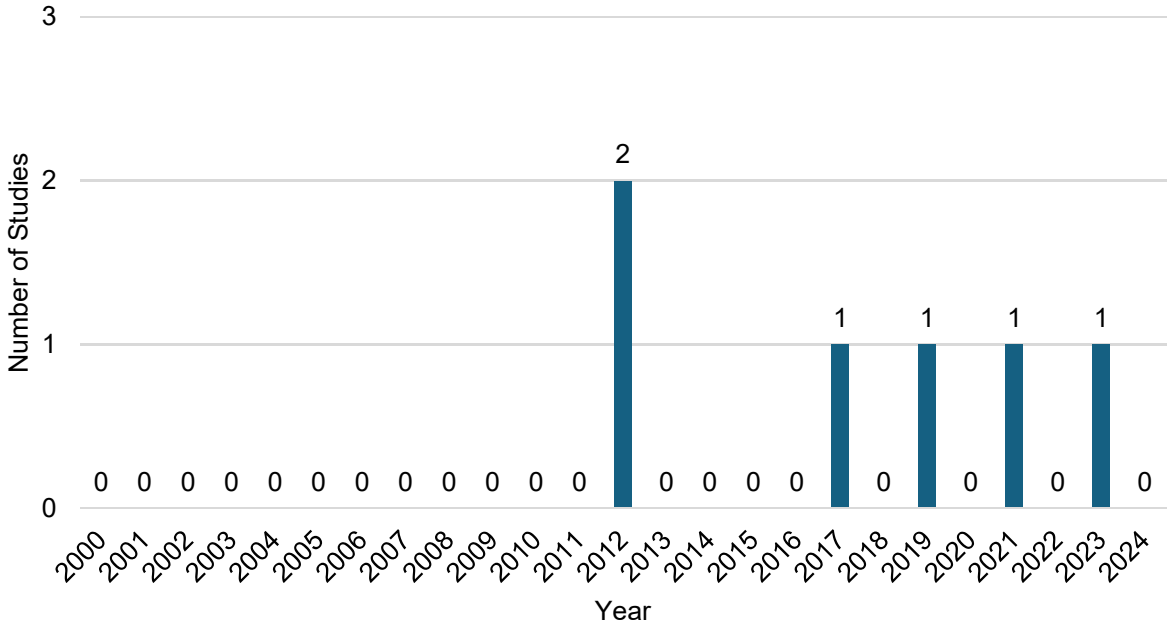
With the shifting landscape of accommodations, many states appeared to be moving toward integrating aspects of universal design (UD) into the development and administration of their assessments. Most states (N=48) specified a number of accessibility supports that were built into the test design or procedures. These features were separate from the tiers of accessibility features (e.g., universal features, designated features, accommodations) and were often found in text portions of the AA-AAAS manuals rather than in lists. Terms used to describe these features of the test design and procedures included those such as "optimal testing conditions," "supports that are allowed," and "allowed administration activities," although many states did not use specific terminology to describe these features. The most frequently included features of test design or procedures included alternate response method (N=35), assistive technology (N=33), and breaks during testing (N=30). For additional details, see Appendix G.

Results of Literature Review (Study 2)

Number of Studies Published

Six articles were found that studied AA-AAAS accommodations between 2000 and 2023. As shown in Figure 3, all of these studies were published after 2011. Two were published in 2012 and four were published between 2017 and 2023.

Figure 3. Number of Studies Published by Year



Purposes and Research Questions

There was little overlap in the purpose of the six studies. Purposes ranged from evaluating accessibility in test specifications, examining the participation of English learners on the alternate assessment, and identifying differential item functioning for students with visual impairments on the alternate assessment. Still, four of the six studies included a research question specifically aimed at determining which accommodations were used by students on the alternate assessment. Additional details can be found in Appendix H.

Data Sources and Collection Methods

Figure 4 shows the data sources used in the studies. Five studies analyzed secondary data, while one study (Davidson et al., 2021) collected and analyzed primary data. The secondary data included survey or test data from previous data collection efforts (DLM, National Longitudinal Transition Study-2 [NLTS2], Special Education Elementary Longitudinal Study-SEELS), as well as one state's alternate assessment (Pennsylvania). The primary data examined the accessibility features and processes of the tests of two alternate assessment consortia.

Figure 4. Data Sources

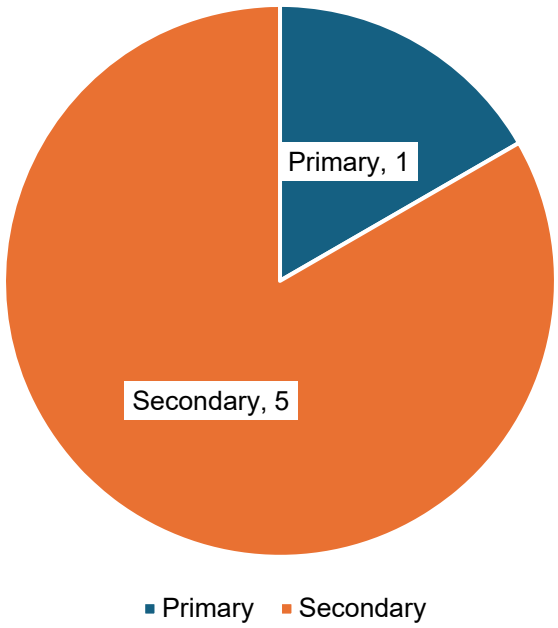
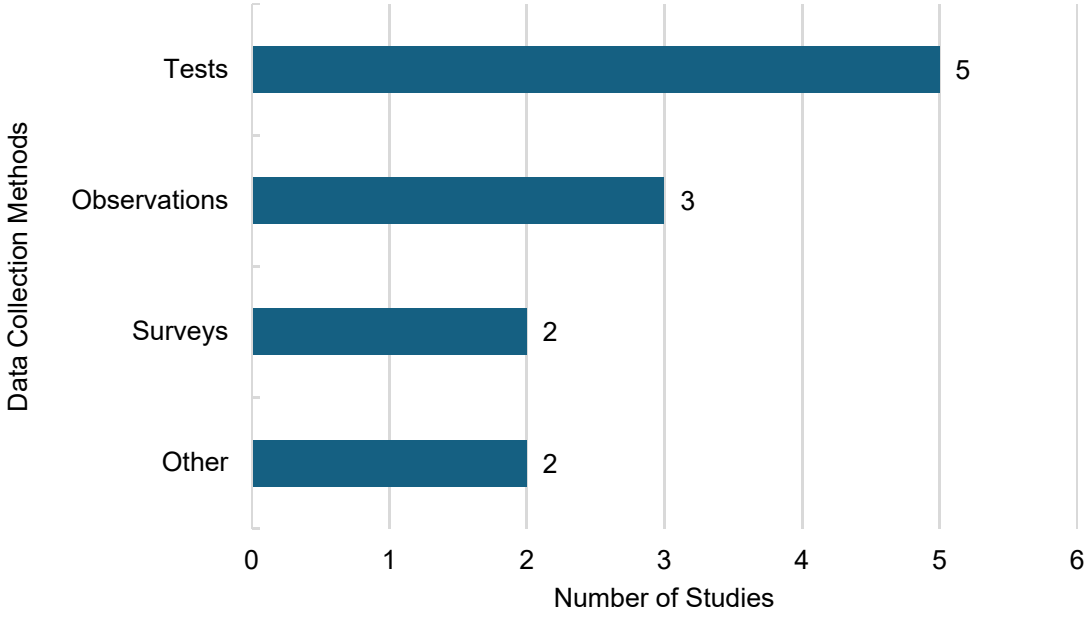


Figure 5 presents the types of data used by researchers. The most common type was tests (N=5), followed by observations (N=3), and surveys (N=2). Other sources of data used in two studies included: First Contact Survey, Access Profile, English learner (EL) service data, Peer Review Critical Elements, Universal Design elements, and Council of Chief State School Officers (CCSSO) guidelines.

Figure 5. Data Collection Methods

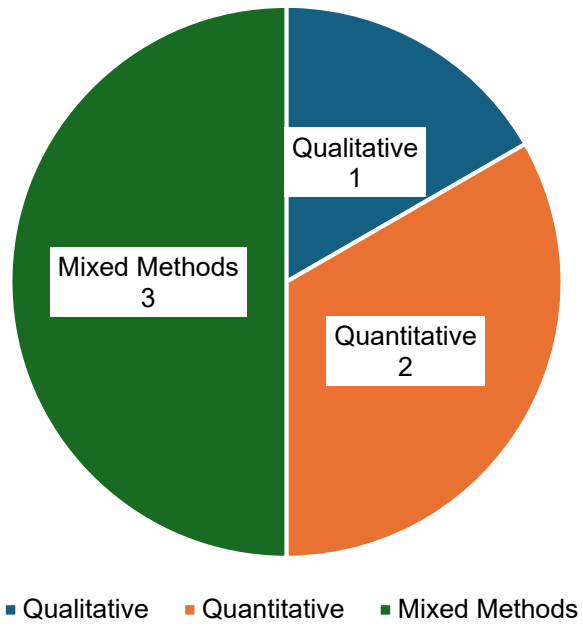


Note: Studies could include more than one type of data.

Research Methods Used

Figure 6 presents the types of research that were conducted in the six studies. Three studies used mixed methods, two studies used quantitative methods, and one study used qualitative methods. Each of the three studies with mixed methods used both surveys and data analyses.

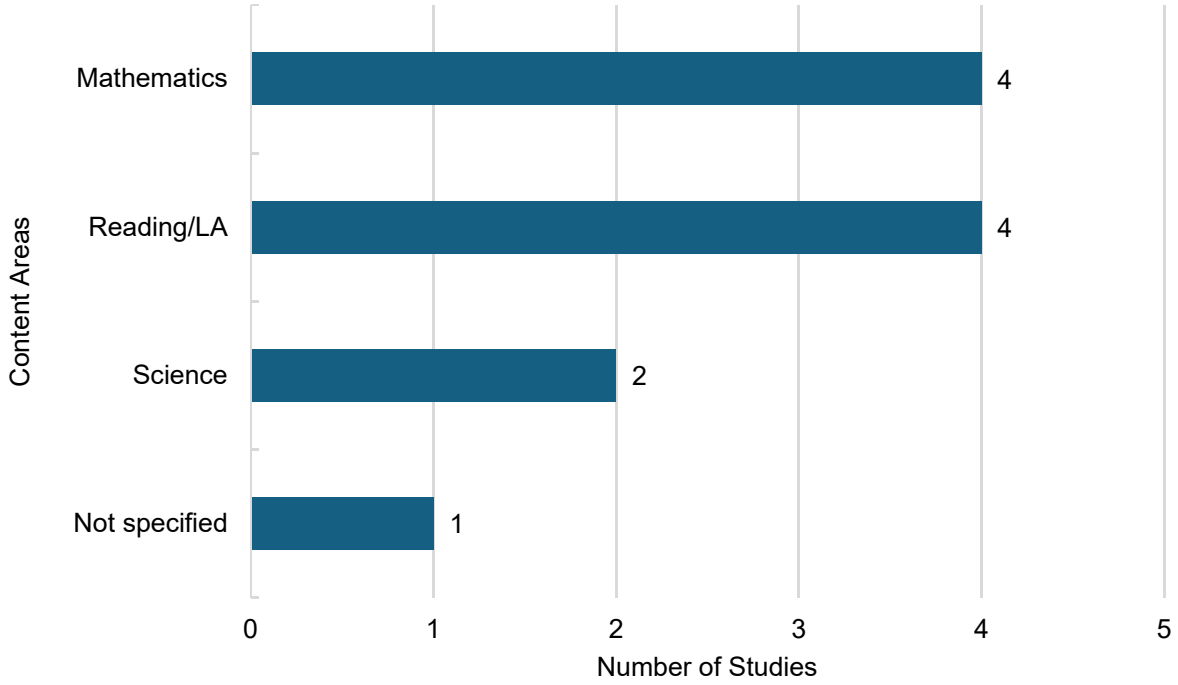
Figure 6. Research Methods Approach



Content Areas Assessed

The most commonly assessed content areas were mathematics and reading/language arts (LA), with each assessed in four studies (see Figure 7). Two studies assessed science, and one study did not specify a content area.

Figure 7. Content Areas Assessed

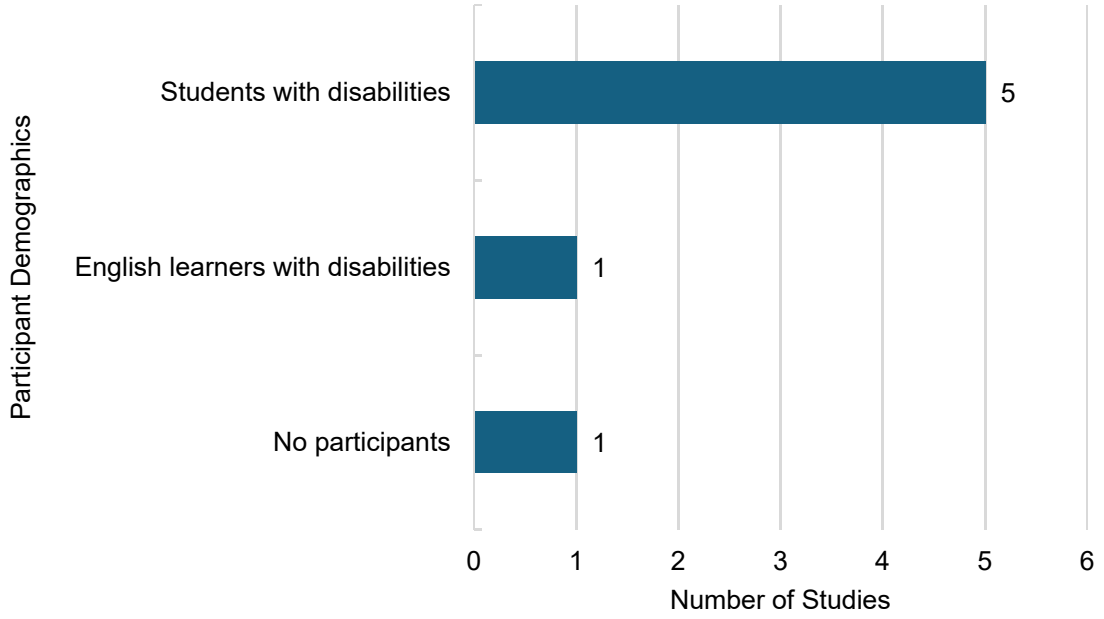


Note: Studies could address more than one content area.

Research Participants

Figure 8 presents the broad demographic information of participants in the studies. Five studies looked at students with disabilities. One of these studies looked specifically at English learners with disabilities. One of the six articles did not include any student participants but rather examined alternate assessments in relation to accessibility criteria.

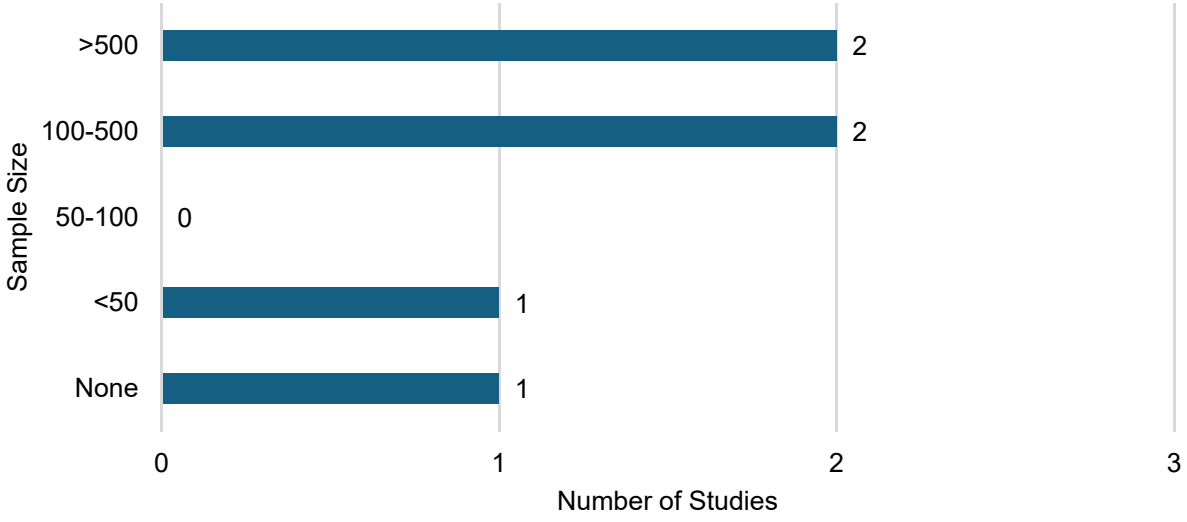
Figure 8. Student Groups Examined



Note: Studies could include more than one group.

Four of the six studies had at least 100 student participants, with two studies including several thousand participants (see Figure 9). One study included fewer than 50 participants, and one study did not involve any participants. The study that involved no participants applied accessibility criteria to alternate assessments.

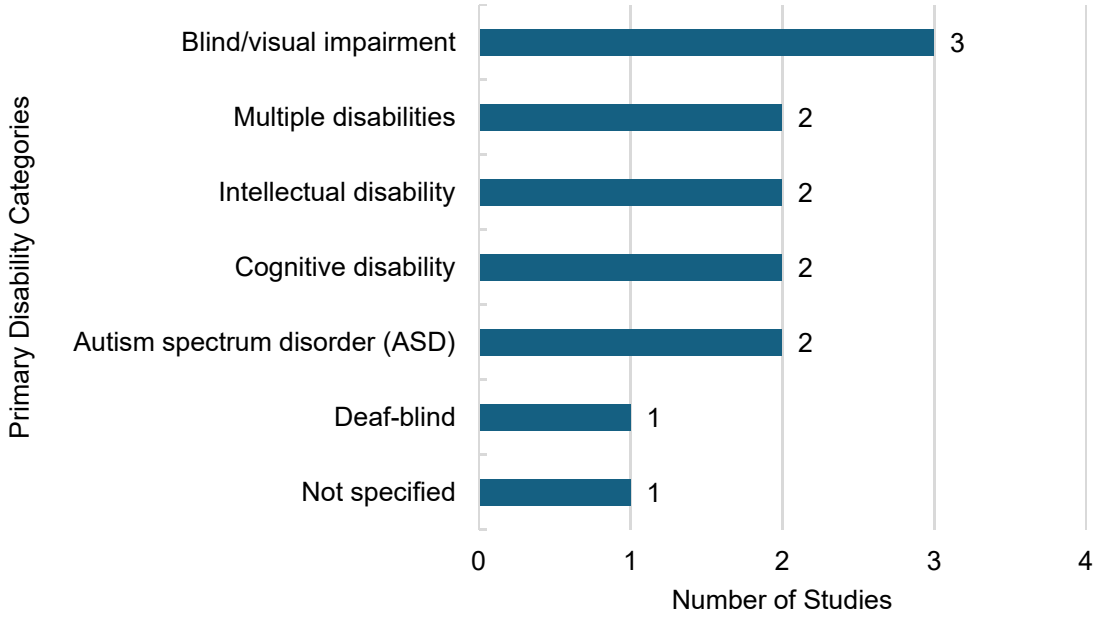
Figure 9. Sample Size



Disability Categories Studied

Because AA-AAAS are for students with the most significant cognitive disabilities, all studies that included students focused on students with a cognitive disability. Most studies also identified the primary disability categories (apart from cognitive disability) of participants (see Figure 10), with the most common disability category being blind/visual impairment (N=3). Multiple disabilities, intellectual disability, cognitive disability, and autism spectrum disorder (ASD) were identified as primary disabilities of participants in two studies. One study included students who were deaf-blind, and one study did not include student participants.

Figure 10. Primary Disability Categories of Student Participants



Note: Studies could include participants from more than one disability category.

Accommodations Addressed

The studies addressed a wide range of accommodations and accessibility features that were available or used on the AA-AAAS, with over 30 accommodations identified. Several categories of accommodations were addressed in multiple studies. These included read aloud (either via human reader or text to speech; N=3), alternate response formats (e.g., augmentative or alternative communication device; N=4), and changes in formatting of the assessment itself (e.g., color contrast, font size; N=5). Likely because three of the six studies examined students with visual impairments or blindness, accommodations related to the presentation and format of assessments were most common across studies. For example, accommodations related to contrast (e.g., color contrast, invert color, high-contrast background) were included in five studies, and accommodations related to tactile materials were included in four studies. A full list of accommodations addressed by the studies is provided in Appendix I.

Findings and Implications of Studies Reviewed

The six studies resulted in a variety of findings, as well as implications for research and practice. Brief summaries of major findings and implications of each study are provided here.

Bouck (2017) found that students with ASD were provided accommodations on the NLTS2 at a low rate, but there was consistency between which accommodations were allowed on assessments and which were allowed in daily use. There were no recommendations about accommodations based on the findings. However, Bouck indicated that future research should further examine the participation of students with ASD in the accountability system, including comparing participation of this group of students with students with other disabilities.

Davidson et al. (2021) found a concentration of references to UD in the test development processes. They had three major findings: (a) different item types offer different advantages, (b) hybrid approaches to administration allowed for more responsiveness to student needs, and (c) embedded accessibility features varied across programs. They suggested that considering accessibility at the construct development stage would demand changes to policy guidance and would support UD. They also indicated that a limited definition of fairness and a view that accessibility is only a consideration at the item level may contribute to the lack of connection to the UD elements in Peer Review guidance.

Karvonen and Clark (2019) found that accessibility supports across language groups tended to be similar on the DLM alternate assessment, indicating that teachers generally do not select different supports for English learners or likely-English learners than for non-English learners. They indicated that there is a need for better and more extensive language surveys to better screen students with the most significant cognitive disabilities who might be English learners. They also noted that future research should examine how students with the most significant cognitive disabilities are identified as English learners. Additionally, they argued that research should explore possible explanations for the use patterns of accessibility features and for academic outcomes.

McCarthy et al. (2023) found that on an AA-AAAS science assessment, besides the numbers of students provided accommodations, "no testing accommodations were significantly correlated with assessment scores." Slant board was significantly negatively correlated with student engagement. One-third of administrators did not provide students with any accommodations for the tactile science AA-AAAS. They suggested that test administrators must provide meaningful tactile accommodations and allow adequate time for students to interact with them. Ideally, these tactile accommodations should be the same as those used during instruction. McCarthy et al. noted that future research should look at the consistency of accommodations and communication methods used in instruction and assessment.

Zebehazy et al. (2012a) found that several items on the Pennsylvania Alternate System of Assessment (PASA) assessment were identified as having differential item functioning (DIF). The types of items most often identified involved money, matching, and selecting the smallest. DIF identified reasons were: (a) students needing a better orientation to test materials; (b) the influence of lucky guesses based on distractor characteristics; and (c) the influence of accommodations, such as the substitution of objects (some of which made the item more difficult). The researchers suggested that practitioners should consider what instruction will best assist students with significant disabilities who have visual impairments. Also, practitioners should advocate for states to better consider the feasibility of certain accommodations for students with visual impairments on the alternate assessment, as well as provide guidance on the effects of accommodations on interpreting test items. The authors also noted that to obtain a comprehensive picture of students' abilities, AA-AAAS results should be considered in conjunction with other measures.

Zebehazy et al. (2012b) found the most common accommodations provided during the PASA were layout and presentation accommodations. They found that accommodations generally matched students' functional vision levels. They argued that practitioners should advocate for guidance on the use of accommodations that mirror the intention of test items, as well as for consideration of how tasks that are adapted for students with visual impairments may reflect state standards. Item development and interpretation should take students with visual impairments into consideration.

Discussion

This policy analysis and literature review revealed several key insights about accommodations for AA-AAAS, with far-reaching implications for policy, practice, and future research. These findings underscore the need for a comprehensive and coordinated approach to improving assessment practices for students with the most significant cognitive disabilities.

Policy Analysis

Our examination of state policies showed considerable variation across states in how AA-AAAS accommodations are documented and described. The majority of states (36 out of 51) had at least two publicly available documents containing AA-AAAS accommodations information, with some having as many as six. This variation in documentation practices suggests that states may benefit from more standardized approaches to communicating their AA-AAAS accommodations policies. The terminology used to describe accessibility features also varied widely across states, with "Categories 1, 2, and 3" and "Universal features, Designated features, and Accommodations" being the most common. This lack of consistency in terminology could

potentially lead to confusion for educators, students, and families when interpreting and implementing accommodations across different contexts or states.

The most frequently identified accommodations across states included signed administration, magnification, assistive technology, human reader, scribe, manipulatives, and calculator. The wide range of less frequently identified accommodations highlights the diverse and individualized needs of students with the most significant cognitive disabilities.

Many states appear to be integrating aspects of universal design into their test development and administration processes. This shift toward built-in accessibility features, separate from the traditional tiers of accessibility, reflects a growing recognition of the importance of designing assessments that are inherently more accessible to all students. This trend represents a significant shift in policy approach and should be further encouraged in future policy decisions. As new technologies and accommodations continue to emerge, there is also a pressing need for timely policy guidance on their appropriate use in AA-AAAS, ensuring that students have access to the most effective and appropriate accommodations.

During our research we found that it was often difficult to find information on accommodations for AA-AAAS on states' websites and in states' guidance documents. This was in part because states have organized their websites very differently (i.e., by audience, by topic) and often have information on AA-AAAS in multiple documents (i.e., testing manuals, accommodations guides). Additionally, we occasionally identified inconsistencies across documents within a single state; for example, the accessibility features mentioned in the test administration manual might differ from those mentioned in the accessibility manual. These inconsistencies present challenges for educators who are looking for accessibility information and highlight the need for consistent information across documents and webpages.

Literature Review

Our extensive search of journal articles from 2000 through 2024 for articles that addressed AA-AAAS accommodations revealed only six relevant articles. Four of the articles were relatively recent, published after 2016. The other two were published in 2012, still more than 10 years after states were first required to develop and implement state alternate assessments. This scarcity of research is concerning, especially given the importance of ensuring appropriate accessibility for students with the most significant cognitive disabilities. The relative recency of four of the six studies (published after 2016) suggests a growing interest in this area, possibly spurred by policy changes such as ESSA and its cap on AA-AAAS participation.

Although the six articles were diverse in their purposes and research questions, the majority documented AA-AAAS accommodations in some way. For example, Bouck (2017), McCarthy

et al. (2023), and Zebehazy et al. (2012b) included a research question that directly asked what accommodations were provided during the administration of the AA-AAAS. Karvonen and Clark (2019) compared the accommodations used by one group of students (English learners with the most significant cognitive disabilities) to those used by their peers. Zebehazy et al. (2012a) asked whether accommodations used might affect which items in an AA-AAAS were flagged because they functioned differently. One study (Davidson et al. (2021) asked about universal design elements in general influencing the accessibility of tests. This diversity in purposes and research questions makes it more difficult to summarize the characteristics and findings of research on AA-AAAS accommodations.

Overall, the research represented in the six articles was consistent with research on general assessments. Five of the six articles relied on secondary data; the data were from existing assessments from Pennsylvania (McCarthy et al., 2023; Zebehazy et al., 2012a, 2012b), Dynamic Learning Maps (DLM; Karvonen & Clark, 2019), and the National Longitudinal Transition Study-2 (NLST2; Bouck, 2017). Davidson et al. (2020) collected and analyzed test content in the MSAA and DLM. Most of the studies used mixed methods, combining test data with either observations or surveys. Science was included as a content area half as often as both reading/language arts and mathematics. Because the focus of our search was the AA-AAAS, all studies (except the one focused on analyzing test content) focused on students with disabilities, including one that focused on English learners with disabilities.

Considering the small population of students with the most significant cognitive disabilities, most studies had relatively large numbers of participants. The studies included students with disability category labels typically expected to participate in an AA-AAAS (e.g., intellectual disability, multiple disabilities, autism), although there were more students with the additional disability category of blind/visual impairment than reflected in the population of students. This makes sense because students with visual impairments are among the students for whom accessibility is more difficult to achieve.

Because of the diversity of the purposes and research questions in the six articles we reviewed, there are few generalizations that can be reached. Researchers were concerned about the preparation of students to use accommodations, either through their use in instruction or for specific preparation for their use. Some researchers also expressed concern about the assignment of students to take the AA-AAAS. Nearly all articles provided recommendations for future research, but they were varied, including studying the assignment of students to the AA-AAAS and looking at the connection between accommodations for instruction and assessment.

Limitations

The policy analysis and literature review conducted for this study had several limitations that should be considered when interpreting the findings. The analyses were restricted to publicly available documents, potentially missing internal or confidential information that could have provided additional insights. Furthermore, the searches were limited to a narrow time frame between April 1 and May 31, 2024, which may not capture the full scope of policies and practices implemented over a broader period.

One challenge in the policy analysis was the use of a standardized set of terms for accommodations across all states when coding, which may not have accurately reflected the specific terminology used in each state. It is possible that when states verified information, they did not recognize the term we used as being the accommodation they provided. Our approach of using a standardized set of terms could have led to oversight of an accommodation that a state did provide for its alternate assessment. Additionally, it was sometimes difficult to distinguish between accommodations or accessibility features and general test design or procedures, which may have led to the misclassification of some accessibility features. The organization of information within documents also varied considerably both across and within states, making it challenging to consistently locate and compare accommodation lists.

When conducting the title and abstract screening of studies for inclusion in the literature review, over half (N=80) of the potential studies needed to be reviewed by a third researcher to determine eligibility, indicating that studies' eligibility for inclusion was not always obvious and suggesting that the inclusion and exclusion criteria could have been clearer. As such, some studies may have been excluded erroneously.

Conclusions

Our findings emphasize the critical importance of comprehensive professional development for educators. The complexity and variability of AA-AAAS accommodations policies necessitate ongoing training to ensure that educators are equipped to understand, select, and implement appropriate accommodations for students with the most significant cognitive disabilities. This professional development should also address the crucial alignment between instructional and assessment accommodations. Educators should be encouraged to integrate assessment accommodations into daily instruction to ensure students are familiar and comfortable with their use.

Although we found consistency in commonly offered accommodations across states, the wide range of less frequently identified accommodations highlights the need for a highly individualized approach to accommodation selection. IEP teams should be trained to consider the full spectrum of available accommodations and match them carefully to individual student needs.

As states continue to integrate more universal design features into their assessments, educators will also need guidance on how to effectively use these built-in accessibility features alongside traditional accommodations. One state had information about accommodations on its AA-AAAS in a portal that only LEA staff could access. It is a concern that parents and others are not able to access the information.

The limited number of studies we identified on AA-AAAS accommodations points to a critical gap in our understanding of this important area. There is a clear need for more research focusing on the effectiveness of specific accommodations for different subgroups of students with the most significant cognitive disabilities, the impact of universal design elements on test accessibility and performance, and the process of selecting and implementing accommodations in real-world settings. Given the unique challenges of conducting research with this population, innovative methodological approaches may be needed, including more mixed-methods studies, single-case designs, or participatory research approaches that involve students, families, and educators in the research process.

The considerable gap between the development of state policies on AA-AAAS accommodations and the publication of research on this topic is noteworthy. Although states have developed detailed policies and are increasingly incorporating principles of universal design, the research base to support these practices remains limited. This gap underscores the need for more targeted research on AA-AAAS accommodations to ensure that policies and practices are evidence-based and effectively support the assessment needs of students with the most significant cognitive disabilities.

Addressing these implications will require a concerted effort from all stakeholders in the field of alternate assessment. By working toward more standardized policies, enhanced professional development, and a robust research agenda, we can ensure that AA-AAAS accommodations policies and practices are evidence-based, effectively implemented, and truly supportive of students with the most significant cognitive disabilities. This coordinated approach will contribute to more equitable and meaningful assessment experiences for this vulnerable student population, ultimately supporting their academic growth and life outcomes. As the field of alternate assessment continues to evolve, it is crucial that policy, practice, and research remain closely aligned to ensure that students with the most significant cognitive disabilities have equitable access to assessments that accurately measure their knowledge and skills.

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Appendix A

State Policy Search Coding Form

Coding Form Item	Response Options
State name	[Insert response]
Alternate assessment name	[Insert response]
Test vendor (if available)	[Insert response]
Document name	[Insert response]
Publication year	[Insert response]
Document link	[Insert response]
Is this a standalone (alternate assessment only) or combined (alternate and general assessment) document?	Standalone (alternate assessment only)
	Combined (alternate and general assessment)
	Other
What type of document is this?	Accessibility manual
	Test administration manual
	Test coordinator manual
	Other
Are there additional documents to be coded?	Yes
	No
What terms are used to describe the tiers of accessibility features? (E.g., universal features, designated features, accessibility features, administration considerations, accommodations, etc.)	[Insert response]
What accessibility features are included in the policies?	Assistive technology
	Audio description (of visual images)
	Audio recording device/software (response)
	Background music or white noise
	Braille
	Breaks during testing
	Calculation chart (static)
	Calculation device or software (interactive)
	Calculator
	Clarify/simplify/repeat directions
	Color contrast
	Dictionary/glossary

Coding Form Item	Response Options
	Electronic/online administration
	Extended time
	Extra blank or specialized paper
	Familiar test administrator/proctor
	Grammar checker
	Highlighter
	Human reader
	Individual administration
	Large print
	Electronic/online administration
	Extended time
	Extra blank or specialized paper
	Familiar test administrator/proctor
	Grammar checker
	Highlighter
	Human reader
	Individual administration
	Large print
	Layout/organization of test items
	Line reading device or software
	Magnification
	Manipulatives
	Multiple days
	Noise buffer
	Paper format
	Physical supports
	Recorded delivery (audio or video)
	Screen reader
	Scribe
	Seat location/proximity
	Signed administration
	Signed response
	Simplified language
	Small group administration
	Specialized lighting
	Specialized setting
	Speech to text

Coding Form Item	Response Options
	Spell checker
	Student reads aloud to self
	Tactile graphics
	Technological aid
	Templates or organizers
	Text to speech
	Visual cues
	Word prediction
Are the included accessibility features consistent across documents?	Yes
	No
Additional information about AA-AAAS accessibility features included in policies:	[Insert response]
Anomalies or inconsistencies to note:	[Insert response]

Note: Items 4-9 (“Document name” through “Are there additional documents to be coded?”) were repeated as needed to account for all identified documents.

Appendix B

State Verification Form

Please highlight or use a different color text for any information that you add!

Identified documents containing information about accommodations for the AA-AAAS:

Document Name	Document Link	Publication Year
[Insert response]	[Insert response]	[Insert response]
[Insert response]	[Insert response]	[Insert response]
[Insert response]	[Insert response]	[Insert response]
[Insert response]	[Insert response]	[Insert response]

If there are any documents containing information about accommodations for the AA-AAAS that are not listed above, please list them below.

Document Name	Document Link	Publication Year
[Insert response]	[Insert response]	[Insert response]
[Insert response]	[Insert response]	[Insert response]
[Insert response]	[Insert response]	[Insert response]
[Insert response]	[Insert response]	[Insert response]

Terms used to describe the tiers of accessibility features:

Accessibility features included in policies:
Note: The exact terminology used below may differ from the terminology used in the policies. All states' policies were coded to the same set of terms.

Accessibility Features	Response	[State name]
Alternate form-visual impairment	[Y/N]	
Alternate response method	[Y/N]	
Alternative text	[Y/N]	
Amplification/volume control	[Y/N]	

Accessibility Features	Response	[State name]
Assistive technology	[Y/N]	
Audio description (of visual images)	[Y/N]	
Audio recording device/software (Response)	[Y/N]	
Background music or white noise	[Y/N]	
Bilingual dictionary/glossary	[Y/N]	
Braille	[Y/N]	
Breaks during testing	[Y/N]	
Calculation chart (static)	[Y/N]	
Calculation device or software (interactive)	[Y/N]	
Calculator	[Y/N]	
Clarify/Simplify/Repeat Directions	[Y/N]	
Color choice/adjustment	[Y/N]	
Color contrast	[Y/N]	
Colored lenses/overlays	[Y/N]	
Dictionary/glossary	[Y/N]	
Electronic/online administration	[Y/N]	
Engagement supports - Focus student	[Y/N]	
Expandable passages/items	[Y/N]	
Extended time	[Y/N]	
Extra blank or specialized paper	[Y/N]	
Familiar test administrator/proctor	[Y/N]	
Grammar checker	[Y/N]	
Highlighter	[Y/N]	
Human reader	[Y/N]	
Individual administration	[Y/N]	
Invert color	[Y/N]	
Language translation of text	[Y/N]	
Large print	[Y/N]	
Layout/organization of test items	[Y/N]	
Line reading device or software	[Y/N]	
Magnification	[Y/N]	
Manipulatives	[Y/N]	
Mark for review	[Y/N]	
Masking	[Y/N]	
Math tools	[Y/N]	
Medical supports	[Y/N]	
Mouse pointer	[Y/N]	
Multiple days	[Y/N]	
Noise buffer	[Y/N]	
Object replacement	[Y/N]	

Accessibility Features	Response	[State name]
Paper format	[Y/N]	
Partner-assisted scanning	[Y/N]	
Permissive mode	[Y/N]	
Physical supports	[Y/N]	
Picture representation	[Y/N]	
Print on demand	[Y/N]	
Recorded delivery (audio or video)	[Y/N]	
Repeat	[Y/N]	
Screen reader	[Y/N]	
Scribe	[Y/N]	
Seat location/proximity	[Y/N]	
Signed administration	[Y/N]	
Signed response	[Y/N]	
Simplified language	[Y/N]	
Small group administration	[Y/N]	
Specialized lighting	[Y/N]	
Specialized setting	[Y/N]	
Specialized/adaptive furniture	[Y/N]	
Speech-to-text	[Y/N]	
Spell checker	[Y/N]	
Spoken audio	[Y/N]	
Streamlined mode	[Y/N]	
Strikethrough	[Y/N]	
Student reads aloud to self	[Y/N]	
Tactile graphics	[Y/N]	
Tactile symbols	[Y/N]	
Technological aid	[Y/N]	
Templates or organizers	[Y/N]	
Test administrator entering of student responses	[Y/N]	
Text-to-speech	[Y/N]	
Timing	[Y/N]	
Translation	[Y/N]	
Visual cues	[Y/N]	
Word prediction	[Y/N]	
Writing tools	[Y/N]	
Zoom	*[Y/N]*	
Unique accommodations	[Y/N]	

Additional comments or missing pieces:

Appendix C

Search Terms for Journal Articles

Our search began with a broad search whose results included content outside the scope of this review.

- (accessibility OR accommodation OR modification) AND (alternate assessment OR AA-AAAS OR AA-AAS)
- Test (severe or significant) disabilities
- AA-AAAS (assessment) or AA-AAS

Search terms were then narrowed.

- (access* OR accommodat* OR modif*) AND (alternate assessment OR AA-AAAS OR AA-AAS)

Appendix D

Criteria for Title and Abstract Screening

Inclusion criteria	Exclusion criteria
Published 2000–2023 Available in English US context Journals that relate to education or testing Addresses K–12 large-scale alternate assessments based on alternate academic achievement standards (AA-AAAS) Refers to accommodations or accessibility in relation to assessment	Only refers to AA-MAS

Appendix E

Criteria for Full Text Screening

Inclusion criteria	Exclusion criteria
Published 2000–2023 Available in English US context Journals that relate to education or testing Addresses K–12 large-scale alternate assessments Addresses accommodations or accessibility *in relation to* alternate assessments based on alternate academic achievement standards (AA-AAAS) Includes policies, student use, perceptions/preferences, etc. More than a passing reference	Refers to accommodations in instruction only Refers to accommodations on general assessments only

Appendix F

Literature Review Coding Form

Coding Form Item	Response Options
Article title	[Insert response]
Journal title	[Insert response]
Year of publication	[Insert response]
Full citation	[Insert response]
Describe the purpose of the study.	[Insert response]
What were the research questions?	[Insert response]
What type of research was this?	Mixed methods
	Qualitative
	Quantitative
	Other:
What were the data collection sources? *(Select all that apply)*	Primary
	Secondary
What were the data collection instruments and methods? *(Select all that apply.)*	Articles
	Focus groups
	Course grades
	Interview protocol
	Observations
	Surveys (including Delphi studies)
	Tests
	Other:
What content areas were assessed? *(Select all that apply.)*	Reading/writing/reading language arts (RLA)
	Mathematics
	Science
	Social studies
	Other:
Describe the disability (or disabilities) discussed, including the number of participants with each disability (if applicable).	[Insert response]
Describe the characteristics of the participants, including the total number of participants.	[Insert response]
Describe the accommodations that were discussed, including the number of students using each accommodation (if applicable).	[Insert response]
Briefly summarize the findings.	[Insert response]
Briefly summarize the implications or recommendations discussed.	[Insert response]
Any other notes or comments of importance?	[Insert response]

Appendix G

Table G1. States' Accommodations and Test Design/Procedures Policies

State	Alternate form-visual impairment	Alternate response method	Alternative text	Amplification/ volume control	Assistive technology	Audio description (of visual images)	Audio recording device/ software (response)
Alabama	N	*	N	N	Y	N	N
Alaska	Y	*	*	N	Y	N	N
Arizona	N	*	Y	Y	Y	Y	N
Arkansas	Y	*	*	N	Y*	N	N
California	N	Y	N	Y	Y	N	N
Colorado	Y*	Y*	N	Y	Y*	Y	N
Connecticut	N	Y*	N	Y	Y*	Y	N
DC	Y	*	Y	Y	Y*	Y	N
Delaware	N	N	N	N	N	N	N
Florida	N	N	Y	N	Y	N	N
Georgia	N	Y*	N	Y*	Y	Y	N
Hawaii	Y	Y	N	Y	Y	Y	N
Idaho	N	N	N	Y	Y	N	N
Illinois	Y*	*	N	N	Y*	N	N
Indiana	N	Y	N	Y	*	N	N
Iowa	Y*	*	N	N	Y*	N	N
Kansas	Y*	Y*	Y	N	Y*	Y	N
Kentucky	N	Y	N	N	Y	N	N
Louisiana	N	N	N	N	Y	Y	N
Maine	N	*	Y*	Y	Y*	Y	N
Maryland	Y*	Y*	Y*	Y	Y*	Y	N
Massachusetts	N	N	N	Y	Y	Y	N
Michigan	N	Y	N	N	Y	Y	Y
Minnesota	N	Y	N	N	Y*	N	Y
Mississippi	N	Y*	N	Y	Y*	Y	Y
Missouri	Y*	Y*	Y*	N	Y*	Y	Y
Montana	N	*	Y*	Y	Y*	Y	N
Nebraska	N	Y	N	Y	Y	Y	Y
Nevada	N	N	N	N	N	N	N
New Hampshire	Y*	Y*	Y*	Y	Y*	Y	Y
New Jersey	Y*	*	*	N	Y*	Y	N
New Mexico	Y*	*	*	N	Y*	Y	Y

State	Alternate form-visual impairment	Alternate response method	Alternative text	Amplification/ volume control	Assistive technology	Audio description (of visual images)	Audio recording device/ software (response)
New York	Y*	*	*	N	Y*	Y	Y
North Carolina	N	Y	N	N	Y*	N	Y
North Dakota	Y*	*	*	N	Y*	N	N
Ohio	*	*	N	N	Y*	N	N
Oklahoma	Y	*	*	N	Y*	N	N
Oregon	N	Y*	N	Y	Y*	N	N
Pennsylvania	Y	Y*	*	N	Y*	N	N
Rhode Island	Y	*	*	N	Y*	N	N
South Carolina	*	Y*	N	N	Y*	N	N
South Dakota	N	*	Y*	Y	Y*	Y	N
Tennessee	N	*	N	N	*	N	N
Texas	N	*	N	N	*	N	N
Utah	N	*	*	Y	Y*	Y	N
Vermont	*	*	Y	Y	Y*	Y	N
Virginia	N	Y*	Y	Y*	Y	N	N
Washington	N	Y	N	N	Y	N	N
West Virginia	Y	*	*	N	Y*	N	N
Wisconsin	Y	*	*	N	Y*	N	N
Wyoming	N	Y	N	N	Y	N	N
Total (Accommodations)	**20**	**22**	**12**	**21**	**46**	**23**	**9**
Total (Test Design/ Procedures)	**14**	**35**	**18**	**2**	**33**	**0**	**0**
Grand Total	**23**	**45**	**24**	**21**	**49**	**23**	**9**

* = Part of test design and procedures

Y = Listed as an accessibility feature/accommodation

N = Not listed as part of test design and procedures or as an accessibility feature/accommodation

Table G2. States' Accommodations and Test Design/Procedures Policies (Cont.)

State	Background music or white noise	Bilingual dictionary/ glossary	Braille	Breaks during testing	Calculation chart (static)	Calculation device or software (interactive)	Calculator
Alabama	N	Y	Y	Y*	N	Y	Y
Alaska	N	N	Y	*	N	N	Y
Arizona	N	N	Y	*	N	N	Y
Arkansas	N	N	N	*	N	N	Y
California	Y	N	Y	Y*	Y	Y	N
Colorado	Y	N	Y	Y*	Y	Y	Y*
Connecticut	N	N	*	Y*	N	N	N
DC	N	N	Y	Y*	N	N	Y
Delaware	N	N	N	N	N	N	N
Florida	N	N	Y	N	Y	Y	Y
Georgia	Y	N	Y	Y*	Y	Y*	Y*
Hawaii	N	N	N	Y*	Y	N	Y
Idaho	N	N	N	*	N	N	N
Illinois	N	N	Y	N	N	N	Y*
Indiana	N	Y	Y	Y*	Y	Y	Y
Iowa	N	N	Y	N	N	N	Y*
Kansas	N	N	Y	Y	N	N	Y*
Kentucky	N	N	N	Y	N	N	Y
Louisiana	N	N	Y	Y	N	N	Y
Maine	N	N	Y	N	N	N	Y
Maryland	N	N	Y	Y*	N	N	Y*
Massachusetts	Y	Y	Y	Y	Y	Y	Y
Michigan	Y	Y	Y	Y	N	N	Y
Minnesota	Y	Y	Y	Y	Y	N	Y
Mississippi	Y	Y	Y	Y	N	N	Y
Missouri	Y	N	Y	Y*	N	N	Y*
Montana	Y	N	N	Y	N	N	Y
Nebraska	Y	Y	Y	Y	Y	N	Y
Nevada	N	N	N	N	N	N	N
New Hampshire	Y	Y	Y	Y*	Y	Y	Y*
New Jersey	Y	N	Y	Y*	N	N	Y*
New Mexico	N	N	Y	Y*	N	N	Y*
New York	N	N	Y	Y*	N	N	Y*
North Carolina	N	Y	Y	Y	N	N	Y
North Dakota	N	N	Y	*	N	N	Y*
Ohio	N	N	N	N	*	*	N

State	Background music or white noise	Bilingual dictionary/ glossary	Braille	Breaks during testing	Calculation chart (static)	Calculation device or software (interactive)	Calculator
Oklahoma	N	N	Y	*	N	N	Y
Oregon	Y	N	Y	Y*	Y	Y	Y
Pennsylvania	N	N	Y	Y*	N	N	Y
Rhode Island	N	N	Y	*	N	N	Y
South Carolina	N	N	Y*	Y*	N	N	Y
South Dakota	N	N	N	*	N	N	Y
Tennessee	N	N	N	*	N	N	N
Texas	N	N	Y	N	N	N	Y
Utah	N	N	Y	Y*	N	Y	N
Vermont	N	N	*	*	N	N	Y
Virginia	N	N	Y*	Y	N	N	Y
Washington	N	Y	Y	N	N	N	N
West Virginia	N	N	Y	*	N	N	Y
Wisconsin	N	N	Y	*	N	N	Y
Wyoming	N	Y	Y	Y	N	Y	Y
Total (Accom-modations)	**13**	**11**	**39**	**30**	**11**	**11**	**42**
Total (Test Design/ Procedures)	**0**	**0**	**4**	**30**	**1**	**2**	**12**
Grand Total	**13**	**11**	**41**	**42**	**12**	**12**	**42**

* = Part of test design and procedures

Y = Listed as an accessibility feature/accommodation

N = Not listed as part of test design and procedures or as an accessibility feature/accommodation

Table G3. States' Accommodations and Test Design/Procedures Policies (Cont.)

State	Clarify/ simplify/ repeat directions	Color choice/ adjustment	Color contrast	Colored lenses/ overlays	Dictionary/ glossary	Electronic/ online administration	Engagement/ focus supports
Alabama	N	N	N	N	N	N	Y*
Alaska	N	N	Y	Y	N	N	*
Arizona	Y	Y	Y	Y	N	N	*
Arkansas	N	N	Y	Y	N	*	*
California	Y	N	Y	Y	N	Y	N
Colorado	N	N	Y	Y	N	*	N
Connecticut	Y	N	Y	Y	N	Y	N
DC	Y	Y	Y	Y	Y	*	Y
Delaware	N	N	N	N	N	N	N
Florida	N	N	N	N	N	N	*
Georgia	Y	Y	Y	Y	N	N	N
Hawaii	N	N	Y	Y	N	Y*	Y*
Idaho	N	N	Y	N	N	N	*
Illinois	N	N	Y	Y	N	N	N
Indiana	N	N	Y	Y	Y	N	N
Iowa	N	N	Y	Y	N	N	N
Kansas	N	Y	Y	Y	N	Y	Y
Kentucky	Y	Y	Y	N	N	Y	*
Louisiana	N	N	Y	N	N	Y	N
Maine	Y	Y	Y	Y	N	N	N
Maryland	Y	N	Y	Y	N	Y	Y
Massachusetts	Y	N	Y	Y	Y	Y	N
Michigan	Y	Y	Y	N	Y	Y	Y
Minnesota	Y	N	Y	Y	N	N	Y*
Mississippi	N	Y	Y	Y	N	Y	Y
Missouri	Y	Y	Y	Y	N	Y	Y
Montana	Y	Y	Y	Y	N	N	N
Nebraska	Y	Y	Y	Y	Y	Y	Y
Nevada	N	N	N	N	N	N	N
New Hampshire	Y	Y	Y	Y	Y	Y	Y
New Jersey	Y	N	Y	Y	N	Y	N
New Mexico	Y	N	Y	Y	Y	Y	N
New York	Y	N	Y	Y	N	Y	N
North Carolina	Y	N	N	Y	N	Y	*
North Dakota	Y	N	Y	Y	N	N	N

State	Clarify/ simplify/ repeat directions	Color choice/ adjustment	Color contrast	Colored lenses/ overlays	Dictionary/ glossary	Electronic/ online administration	Engagement/ focus supports
Ohio	N	Y	Y	N	Y	N	*
Oklahoma	N	N	Y	Y	N	N	*
Oregon	N	*	N	Y	N	N	Y
Pennsylvania	N	N	Y	Y	N	N	Y
Rhode Island	N	N	Y	Y	N	N	N
South Carolina	N	Y	N	N	N	N	Y
South Dakota	Y	Y	Y	Y	N	N	*
Tennessee	N	N	N	N	N	N	N
Texas	N	N	N	Y	N	N	Y*
Utah	Y	Y	N	N	N	N	Y
Vermont	Y	Y	Y	Y	N	N	N
Virginia	N	*	N	Y	N	*	Y
Washington	Y	N	N	N	N	N	N
West Virginia	N	N	Y	Y	N	N	N
Wisconsin	N	N	Y	Y	N	N	N
Wyoming	N	N	N	Y	Y	N	N
Total (Accommodations)	**24**	**17**	**38**	**38**	**9**	**17**	**17**
Total (Test Design/ Procedures)	**0**	**2**	**0**	**0**	**0**	**5**	**14**
Grand Total	**24**	**19**	**38**	**38**	**9**	**21**	**27**

* = Part of test design and procedures

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Table G4. States' Accommodations and Test Design/Procedures Policies (Cont.)

State	Expandable passages/ items	Extended time	Extra blank or specialized paper	Familiar test adminis-trator or proctor	Grammar checker	High-lighter	Human reader	Individual adminis-tration
Alabama	N	N	Y	N	N	N	*	N
Alaska	N	N	*	N	N	N	Y	N
Arizona	N	*	*	*	N	N	Y	*
Arkansas	N	*	*	N	N	N	Y	*
California	Y	Y	Y	Y	N	Y	Y	Y
Colorado	N	N	N	N	N	N	Y*	N
Connecticut	N	Y	N	Y	N	Y	Y	Y
DC	N	N	N	N	N	N	Y	Y
Delaware	N	N	N	N	N	N	N	N
Florida	N	N	N	N	N	N	N	N
Georgia	N	Y	Y	Y*	N	Y	Y*	Y*
Hawaii	Y	Y	Y	N	N	Y	Y	Y
Idaho	N	N	N	N	N	Y	Y	*
Illinois	N	N	N	N	N	N	Y*	N
Indiana	Y	N	Y	N	N	Y	Y	Y*
Iowa	N	N	N	N	N	N	Y*	N
Kansas	N	Y	N	Y	N	N	Y*	Y
Kentucky	N	Y	N	Y	N	Y	Y*	Y*
Louisiana	N	Y	Y	N	N	Y	Y	Y
Maine	N	N	N	N	N	N	Y	N
Maryland	N	Y	Y	Y	N	Y	Y*	Y*
Massachusetts	Y	N	Y	Y	N	Y	Y	Y
Michigan	N	Y	Y	Y	Y	Y	Y	Y
Minnesota	N	Y	Y	Y	N	Y	Y*	Y
Mississippi	N	Y	Y	Y	N	Y	Y	Y
Missouri	N	Y	Y	Y	N	Y	Y*	Y*
Montana	N	N	N	N	N	N	Y	N
Nebraska	N	Y	Y	Y	N	Y	Y	Y
Nevada	N	N	N	N	N	N	N	N
New Hamp-shire	N	Y	Y	Y	N	Y	Y*	Y*
New Jersey	N	Y	Y	Y	N	Y	Y*	Y*
New Mexico	N	Y	Y	Y	N	Y	Y*	Y*
New York	N	Y	Y	Y	N	Y	Y*	Y*
North Carolina	N	Y	Y	Y	N	N	Y	Y*

State	Expandable passages/ items	Extended time	Extra blank or specialized paper	Familiar test adminis-trator or proctor	Grammar checker	High-lighter	Human reader	Individual adminis-tration
North Dakota	N	N	N	N	N	N	Y*	*
Ohio	N	N	Y	N	N	Y	Y	N
Oklahoma	N	N	*	N	N	N	Y	*
Oregon	N	N	Y*	Y	N	Y	Y*	N
Pennsylvania	N	N	N	N	N	N	Y	*
Rhode Island	N	N	N	N	N	N	Y	*
South Carolina	Y	Y	N	N	N	Y	N	Y*
South Dakota	N	N	*	N	N	N	Y	N
Tennessee	N	N	N	N	N	N	*	N
Texas	N	N	N	N	N	Y	N	*
Utah	N	N	Y	N	N	Y	Y	*
Vermont	N	N	N	N	N	N	Y	*
Virginia	N	N	N	N	N	Y	Y*	Y*
Washington	N	N	N	N	N	N	Y	N
West Virginia	N	N	N	N	N	N	Y	*
Wisconsin	N	N	N	N	N	N	Y	*
Wyoming	Y	Y	Y	N	N	Y	Y	N
Total (Accom-modations)	**6**	**20**	**22**	**18**	**1**	**26**	**44**	**23**
Total (Test Design/ Procedures)	**0**	**2**	**6**	**2**	**0**	**0**	**18**	**24**
Grand Total	**6**	**22**	**27**	**19**	**1**	**26**	**46**	**35**

* = Part of test design and procedures

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Table G5. States' Accommodations and Test Design/Procedures Policies (Cont.)

State	Invert color	Language translation of text	Large print	Layout/ organization of test items	Line reading device or software	Magnifi-cation	Manipula-tives	Mark for review
Alabama	N	N	N	N	N	N	Y	N
Alaska	Y	Y	N	N	N	Y	Y	N
Arizona	N	N	*	N	Y	Y	Y	N
Arkansas	Y	Y	N	N	N	Y	Y	N
California	Y	Y	Y	Y	Y	Y	Y	Y
Colorado	Y	Y*	Y	N	Y	Y	Y*	Y
Connecticut	N	N	N	N	Y	Y*	N	Y
DC	Y	Y	N	N	Y	Y	Y	N
Delaware	N	N	N	N	N	N	N	N
Florida	N	N	N	N	N	Y	Y	N
Georgia	N	N	Y*	N	Y	Y	Y	Y
Hawaii	N	Y	N	N	N	Y	Y	N
Idaho	N	Y	Y	N	N	N	Y	Y*
Illinois	Y	Y*	N	N	N	Y	Y*	N
Indiana	N	N	Y	N	Y	Y	N	N
Iowa	Y	Y*	N	N	N	Y	Y*	N
Kansas	Y	Y*	N	Y	N	Y	Y*	N
Kentucky	N	N	Y	Y	N	Y	Y	N
Louisiana	N	N	Y	N	Y	Y	Y	N
Maine	N	N	N	N	Y	Y	Y*	N
Maryland	Y	Y	Y	N	Y	Y	Y*	N
Massachusetts	N	N	Y	Y	Y	Y	Y	Y
Michigan	N	Y	Y	Y	Y	Y	Y	Y
Minnesota	N	N	Y	Y	Y	Y*	Y*	N
Mississippi	Y	N	Y	N	Y	Y	Y*	Y
Missouri	Y	Y	Y	Y	N	Y	Y*	N
Montana	N	N	N	N	Y	Y	Y*	N
Nebraska	N	Y	Y	Y	Y	Y	Y	N
Nevada	N	N	N	N	N	N	N	N
New Hamp-shire	Y	Y	Y	Y	Y	Y	Y*	N
New Jersey	Y	Y	Y	Y	Y	Y	Y*	N
New Mexico	Y	Y	Y	Y	Y	Y	Y*	N
New York	Y	Y	Y	Y	Y	Y	Y*	N
North Carolina	N	N	Y	Y	N	Y	Y	N
North Dakota	Y	Y	N	N	N	Y	Y*	N

State	Invert color	Language translation of text	Large print	Layout/ organization of test items	Line reading device or software	Magnifi-cation	Manipula-tives	Mark for review
Ohio	N	Y*	Y	N	Y	Y	N	N
Oklahoma	Y	Y	N	N	N	Y	Y	N
Oregon	N	Y	Y	N	N	Y	Y*	N
Pennsylvania	Y	Y	N	N	N	Y	Y	N
Rhode Island	Y	Y	N	N	N	Y	Y	N
South Carolina	N	N	Y*	N	Y	Y	N	N
South Dakota	N	N	N	N	Y	Y	Y*	N
Tennessee	N	N	N	N	N	N	N	N
Texas	N	*	Y	Y	N	Y	Y	N
Utah	N	Y	Y	Y	Y	Y	Y	N
Vermont	N	N	*	N	Y	Y	Y	N
Virginia	N	N	*	N	N	Y*	Y	N
Washington	N	Y	N	N	N	Y	Y	N
West Virginia	Y	Y	N	N	N	Y	Y	N
Wisconsin	Y	Y	N	N	N	Y	Y	N
Wyoming	Y	Y	N	N	Y	Y	N	Y
Total (Accom-modations)	**22**	**29**	**24**	**15**	**26**	**46**	**43**	**9**
Total (Test Design/ Procedures)	**0**	**6**	**5**	**0**	**0**	**3**	**17**	**1**
Grand Total	**22**	**30**	**27**	**15**	**26**	**46**	**43**	**9**

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Y = Listed as an accessibility feature/accommodation

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Table G6. States' Accommodations and Test Design/Procedures Policies (Cont.)

State	Masking	Math tools	Medical supports	Mouse pointer	Multiple days	Noise buffer	Object replacement	Paper format
Alabama	N	N	N	N	Y*	N	N	N
Alaska	N	N	N	N	*	N	N	N
Arizona	Y	Y	N	N	*	N	Y	Y*
Arkansas	N	N	N	N	*	N	N	N
California	Y	N	Y	Y	Y	Y	N	N
Colorado	*	N	Y*	Y	N	Y*	Y	Y
Connecticut	Y	N	Y	Y	*	Y	Y*	Y
DC	Y	Y	N	N	N	Y	Y	Y*
Delaware	N	N	N	N	N	N	N	N
Florida	N	N	N	N	N	N	Y	N
Georgia	Y	N	N	Y	Y*	Y*	N	N
Hawaii	Y	Y	N	N	Y*	Y	N	Y
Idaho	Y	N	N	N	*	N	N	Y
Illinois	*	N	N	N	N	N	N	N
Indiana	Y	N	N	Y	*	Y	N	Y
Iowa	*	N	N	N	N	N	N	N
Kansas	*	Y	N	N	Y	N	Y	N
Kentucky	Y	Y	N	N	Y	N	N	Y
Louisiana	N	N	N	N	Y	N	N	Y
Maine	Y	Y	N	N	N	N	Y	Y
Maryland	N	N	N	N	Y	N	Y*	Y
Massachusetts	Y	N	N	Y	N	Y	N	Y
Michigan	Y	N	N	N	Y	Y	N	Y
Minnesota	Y	Y	N	N	Y	Y	N	Y
Mississippi	Y	Y	Y	Y	Y	Y	N	Y
Missouri	Y	N	N	N	Y	N	Y*	Y
Montana	Y	Y	N	N	N	N	Y	Y
Nebraska	N	N	Y	N	Y	Y	N	Y
Nevada	N	N	N	N	N	N	N	N
New Hampshire	Y	Y	Y	N	Y	Y	*	Y
New Jersey	N	N	N	N	Y	N	*	Y
New Mexico	N	N	N	N	Y	N	*	Y
New York	N	N	N	N	Y	N	*	Y
North Carolina	N	N	N	N	Y	N	N	Y
North Dakota	N	N	N	N	N	N	*	N
Ohio	Y	Y*	N	Y	N	N	*	Y*
Oklahoma	N	N	N	N	N	N	*	N

State	Masking	Math tools	Medical supports	Mouse pointer	Multiple days	Noise buffer	Object replacement	Paper format
Oregon	Y	*	Y	N	N	Y	N	Y
Pennsylvania	N	N	N	N	N	N	Y*	N
Rhode Island	N	N	N	N	N	N	*	N
South Carolina	Y	N	N	Y	Y*	N	N	Y*
South Dakota	Y	Y	N	N	N	N	Y*	Y
Tennessee	N	N	N	N	*	N	N	Y
Texas	Y*	Y	N	N	*	N	Y	Y
Utah	N	N	Y	N	N	N	*	Y
Vermont	Y	Y	N	N	*	N	Y	Y*
Virginia	Y	Y	N	N	Y	Y	N	*
Washington	N	Y	N	N	N	N	N	N
West Virginia	N	N	N	N	N	N	*	N
Wisconsin	N	N	N	N	N	N	*	N
Wyoming	Y	Y	N	Y	N	Y	N	Y
Total (Accommodations)	**25**	**17**	**8**	**10**	**20**	**16**	**14**	**32**
Total (Test Design/ Procedures)	**5**	**2**	**1**	**0**	**13**	**2**	**16**	**6**
Grand Total	**29**	**18**	**8**	**10**	**29**	**16**	**25**	**33**

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Table G7. States' Accommodations and Test Design/Procedures Policies (Cont.)

State	Partner-assisted scanning	Permissive mode	Physical supports	Picture representation	Print on demand	Recorded delivery (audio or video)	Repeat	Screen reader
Alabama	N	N	N	Y	N	N	*	N
Alaska	Y	N	N	N	N	Y	N	N
Arizona	N	*	N	N	*	Y	Y	N
Arkansas	Y	N	N	N	N	Y	N	N
California	N	N	Y	Y	Y	N	N	N
Colorado	Y*	N	Y	Y	Y	Y	Y	N
Connecticut	N	Y	N	Y	Y	N	Y	Y
DC	Y	N	N	N	N	Y	Y	N
Delaware	N	N	N	N	N	N	N	N
Florida	N	N	N	N	N	N	N	N
Georgia	Y	N	N	N	N	N	N	N
Hawaii	N	N	N	N	N	Y*	Y*	N
Idaho	N	Y	N	N	Y	Y*	*	N
Illinois	Y*	N	N	N	N	Y	N	N
Indiana	N	Y	N	N	N	N	N	N
Iowa	Y*	N	N	N	N	Y	N	N
Kansas	Y*	N	N	N	N	Y	Y	N
Kentucky	Y	N	Y	Y	N	N	N	N
Louisiana	N	N	N	N	N	N	N	Y
Maine	N	N	N	N	N	Y	Y	N
Maryland	Y*	N	Y	Y*	Y	Y	N	Y
Massachusetts	N	N	N	N	N	Y	N	Y
Michigan	N	N	Y	N	N	Y	N	Y
Minnesota	N	N	N	N	N	N	Y	N
Mississippi	N	N	Y	*	N	Y	Y	Y
Missouri	Y*	N	N	Y*	N	Y	Y	Y
Montana	N	N	N	N	N	Y	Y	N
Nebraska	N	N	N	N	Y	Y	N	Y
Nevada	N	N	N	N	N	N	N	N
New Hampshire	Y*	Y	Y	*	Y	Y	N	Y
New Jersey	Y*	N	Y	*	N	Y	N	Y
New Mexico	Y*	N	Y	*	N	Y	N	Y
New York	Y*	N	Y	*	N	Y	N	Y
North Carolina	N	N	Y	N	N	N	N	N
North Dakota	Y*	N	N	*	N	Y	N	N

State	Partner-assisted scanning	Permissive mode	Physical supports	Picture representation	Print on demand	Recorded delivery (audio or video)	Repeat	Screen reader
Ohio	N	Y	N	Y*	N	N	N	N
Oklahoma	Y*	N	N	*	N	Y	N	N
Oregon	N	N	Y	N	N	Y	N	N
Pennsylvania	Y*	N	N	*	N	Y	N	N
Rhode Island	Y*	N	N	*	N	Y	N	N
South Carolina	N	Y	N	N	N	N	N	N
South Dakota	N	N	*	N	N	Y	Y	N
Tennessee	N	N	N	N	N	N	N	N
Texas	N	N	N	Y*	N	N	Y*	N
Utah	*	N	N	*	N	N	N	Y
Vermont	N	N	N	N	N	Y	Y	N
Virginia	N	N	N	Y	N	N	N	N
Washington	N	N	Y	Y	N	N	Y	N
West Virginia	Y*	N	N	*	N	Y	N	N
Wisconsin	Y	N	N	*	N	Y	N	N
Wyoming	N	Y	N	N	Y	N	N	N
Total (Accommodations)	**21**	**7**	**13**	**11**	**8**	**31**	**15**	**13**
Total (Test Design/ Procedures)	**16**	**1**	**1**	**16**	**1**	**2**	**4**	**0**
Grand Total	**22**	**8**	**14**	**23**	**9**	**31**	**17**	**13**

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Table G8. States' Accommodations and Test Design/Procedures Policies (Cont.)

State	Scribe	Seat location/ proximity	Signed adminis-tration	Signed response	Simplified language	Small group administra-tion	Special-ized lighting	Special-ized setting
Alabama	N	N	Y	N	N	N	N	N
Alaska	N	N	Y	N	N	N	N	N
Arizona	Y	*	Y	*	N	N	N	*
Arkansas	N	N	Y*	Y*	N	N	N	*
California	Y	N	Y	Y	Y	N	N	Y
Colorado	Y	Y*	Y*	*	N	*	Y	Y*
Connecticut	Y	Y	Y*	Y*	N	N	Y*	Y*
DC	Y	Y	Y	N	N	Y	Y	Y
Delaware	N	N	N	N	N	N	N	N
Florida	N	N	Y	Y	N	N	N	N
Georgia	Y*	Y*	Y	Y	N	Y*	Y*	Y*
Hawaii	Y	N	Y	N	N	N	N	Y*
Idaho	Y	N	Y	N	N	N	N	*
Illinois	Y	N	Y*	N	N	N	N	N
Indiana	Y	Y	Y	N	N	N	Y	Y
Iowa	Y	N	Y*	N	N	N	N	N
Kansas	N	Y	Y*	Y	N	N	N	N
Kentucky	Y	N	Y	N	N	N	N	Y
Louisiana	Y	N	Y	Y	N	N	N	Y
Maine	Y	N	Y	N	N	N	N	N
Maryland	Y	Y	Y*	Y	Y	N	N	Y
Massachusetts	Y	Y	Y	Y	N	Y	Y	Y
Michigan	Y	Y	Y	Y	Y	Y	Y	Y
Minnesota	Y	Y	Y	Y	N	N	Y	Y
Mississippi	Y	Y	Y	Y	N	Y	Y	Y
Missouri	Y	Y	Y*	Y	N	Y	Y	Y*
Montana	Y	N	Y	N	N	N	N	N
Nebraska	Y	Y	Y	Y	Y	Y	Y	Y
Nevada	N	N	N	N	N	N	N	N
New Hampshire	Y	Y	Y*	Y	Y	N	Y	Y*
New Jersey	Y	Y	Y*	Y	Y	N	Y	Y*
New Mexico	Y	Y	Y*	Y	Y	N	Y	Y*
New York	Y	Y	Y*	Y	Y	N	Y	Y*
North Carolina	Y	Y	Y	Y	N	N	Y	Y
North Dakota	Y	N	Y*	N	N	N	N	*
Ohio	Y	N	Y*	Y	N	N	Y	N

State	Scribe	Seat location/ proximity	Signed adminis-tration	Signed response	Simplified language	Small group administra-tion	Special-ized lighting	Special-ized setting
Oklahoma	Y	N	Y	N	N	N	N	*
Oregon	Y	Y	Y	Y	N	Y	Y	Y
Pennsylvania	Y	N	Y	Y	N	N	N	*
Rhode Island	Y	N	Y	N	N	N	N	*
South Carolina	Y	*	Y*	N	N	N	Y*	Y*
South Dakota	Y	N	Y	N	N	N	N	N
Tennessee	Y	N	Y	N	N	N	N	N
Texas	N	N	*	N	N	N	N	*
Utah	Y	Y	Y	N	N	N	N	*
Vermont	Y	*	Y*	N	N	N	*	*
Virginia	Y	Y	Y	Y	N	N	Y	N
Washington	Y	N	Y	N	Y	N	N	N
West Virginia	Y	N	Y	N	N	N	N	*
Wisconsin	Y	N	Y	N	N	N	N	*
Wyoming	Y	N	Y	N	N	N	N	Y
Total (Accom-modations)	**43**	**21**	**48**	**23**	**9**	**8**	**20**	**24**
Total (Test Design/ Procedures)	**1**	**5**	**17**	**4**	**0**	**2**	**4**	**22**
Grand Total	**43**	**24**	**49**	**25**	**9**	**9**	**21**	**36**

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Table G9. States' Accommodations and Test Design/Procedures Policies (Cont.)

State	Specialized/ adaptive furniture	Speech-to-text	Spell checker	Spoken audio	Streamlined mode	Strikethrough	Student reads aloud to self
Alabama	N	N	N	N	N	N	N
Alaska	*	N	N	Y	N	N	N
Arizona	*	*	N	N	N	N	*
Arkansas	N	N	N	Y	N	N	N
California	N	Y	N	N	Y	Y	N
Colorado	Y*	N	N	Y	N	N	N
Connecticut	Y*	N	N	Y	Y	Y	Y
DC	Y	N	N	Y	N	N	N
Delaware	N	N	N	N	N	N	N
Florida	N	N	N	N	N	N	N
Georgia	Y*	N	N	N	N	Y	N
Hawaii	N	N	N	N	N	N	N
Idaho	N	N	N	N	Y	Y	N
Illinois	N	N	N	Y	N	N	N
Indiana	Y	N	N	N	Y	Y	Y
Iowa	N	N	N	Y	N	N	N
Kansas	N	N	N	Y	N	N	Y
Kentucky	N	N	N	N	N	N	N
Louisiana	N	Y	N	N	N	N	N
Maine	N	N	N	N	N	N	N
Maryland	Y	Y	N	Y	N	N	Y
Massachusetts	N	Y	Y	N	N	N	Y
Michigan	N	Y	Y	N	N	Y	Y
Minnesota	N	N	N	N	N	N	Y
Mississippi	Y	Y	N	Y	N	Y	Y
Missouri	N	N	N	Y	N	N	Y
Montana	N	N	N	N	N	N	N
Nebraska	N	Y	Y	Y	N	N	Y
Nevada	N	N	N	N	N	N	N
New Hampshire	N	Y	N	Y	N	N	Y
New Jersey	N	Y	N	Y	N	N	Y
New Mexico	N	Y	N	Y	N	N	Y
New York	N	Y	N	Y	N	N	Y
North Carolina	Y	N	N	N	N	N	Y
North Dakota	N	N	N	Y	N	N	N

State	Specialized/ adaptive furniture	Speech-to-text	Spell checker	Spoken audio	Streamlined mode	Strikethrough	Student reads aloud to self
Ohio	N	N	N	N	N	Y	N
Oklahoma	N	N	N	Y	N	N	N
Oregon	Y	Y	N	Y	N	N	Y
Pennsylvania	N	N	N	Y	N	N	N
Rhode Island	N	N	N	Y	N	N	N
South Carolina	Y*	N	N	N	N	Y	N
South Dakota	N	N	N	N	N	N	N
Tennessee	N	N	N	N	N	N	N
Texas	*	N	N	N	N	N	N
Utah	Y	N	N	N	N	Y	N
Vermont	*	N	N	N	N	N	N
Virginia	Y	N	N	N	N	N	Y
Washington	N	Y	N	N	N	N	N
West Virginia	N	N	N	Y	N	N	N
Wisconsin	N	N	N	Y	N	N	N
Wyoming	N	Y	Y	N	Y	Y	Y
Total (Accommodations)	**12**	**14**	**4**	**23**	**5**	**11**	**18**
Total (Test Design/ Procedures)	**8**	**1**	**0**	**0**	**0**	**0**	**1**
Grand Total	**16**	**15**	**4**	**23**	**5**	**11**	**19**

* = Part of test design and procedures

Y = Listed as an accessibility feature/accommodation

N = Not listed as part of test design and procedures or as an accessibility feature/accommodation

Table G10. States' Accommodations and Test Design/Procedures Policies (Cont.)

State	Tactile graphics	Tactile symbols	Technological aid	Templates or organizers	Test administrator entering of student responses	Text-to-speech	Timing
Alabama	**N**	N	N	N	*	N	*
Alaska	N	N	N	*	Y*	N	N
Arizona	Y	Y	N	*	N	N	*
Arkansas	*	Y	N	*	Y*	N	*
California	N	N	N	N	Y	N	N
Colorado	Y*	Y	Y	N	Y*	Y	*
Connecticut	Y*	Y	Y	N	Y	Y	Y*
DC	Y	Y	N	N	Y	N	Y*
Delaware	N	N	N	N	N	N	N
Florida	Y	N	N	N	N	N	N
Georgia	N	N	Y	Y	Y	N	Y*
Hawaii	Y	Y	N	Y	N	Y	Y*
Idaho	N	N	N	N	N	N	*
Illinois	N	N	N	N	Y*	N	N
Indiana	N	N	N	N	N	Y	Y*
Iowa	N	N	N	N	Y*	N	N
Kansas	N	N	Y	N	Y*	Y	N
Kentucky	Y	Y	Y	N	Y*	N	N
Louisiana	Y	N	Y	N	N	Y	N
Maine	Y	Y	N	*	N	N	N
Maryland	Y*	Y	Y	N	Y	Y	*
Massachusetts	Y	N	N	N	Y	Y	N
Michigan	Y	N	Y	Y	Y	Y	N
Minnesota	Y	Y	Y	N	Y	N	Y
Mississippi	Y	Y*	Y	Y	Y	Y	Y
Missouri	Y*	N	Y	Y	Y	Y	*
Montana	Y	Y	N	*	N	N	N
Nebraska	Y	Y	Y	Y	Y	Y	Y
Nevada	N	N	N	N	N	N	N
New Hampshire	Y*	Y	Y	Y	Y	Y	*
New Jersey	Y*	N	Y	Y	Y	Y	*
New Mexico	Y*	N	Y	Y	Y	Y	*
New York	Y*	N	Y	Y	Y	Y	*
North Carolina	Y	N	Y	N	Y	N	N

State	Tactile graphics	Tactile symbols	Technological aid	Templates or organizers	Test administrator entering of student responses	Text-to-speech	Timing
North Dakota	*	N	N	N	Y	N	*
Ohio	Y*	N	N	N	*	Y	N
Oklahoma	*	N	N	*	Y*	Y	*
Oregon	N	N	N	N	Y	N	N
Pennsylvania	*	N	N	Y	Y*	N	*
Rhode Island	*	N	N	N	Y*	N	*
South Carolina	Y*	N	N	N	*	N	Y*
South Dakota	Y	Y*	N	*	N	N	N
Tennessee	N	N	N	N	*	N	N
Texas	N	*	N	N	N	N	*
Utah	*	N	N	Y	*	N	*
Vermont	Y*	Y	N	N	*	N	*
Virginia	N	N	N	N	Y*	*	Y
Washington	Y	N	N	N	N	N	N
West Virginia	*	N	N	N	Y*	Y	*
Wisconsin	*	N	N	N	Y*	N	*
Wyoming	N	N	N	N	N	Y	N
Total (Accommodations)	**27**	**16**	**17**	**12**	**31**	**20**	**10**
Total (Test Design/ Procedures)	**19**	**3**	**0**	**7**	**19**	**1**	**26**
Grand Total	**35**	**17**	**17**	**19**	**37**	**21**	**30**

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Table G11. States' Accommodations and Test Design/Procedures Policies (Cont.)

State	Translation	Visual cues	Word prediction	Writing tools	Zoom
Alabama	N	N	N	N	N
Alaska	N	N	N	N	N
Arizona	N	*	N	N	Y
Arkansas	N	Y	Y*	*	N
California	N	N	N	Y	Y
Colorado	Y	N	*	Y*	Y
Connecticut	N	Y	Y	N	Y
DC	Y	N	Y*	*	Y
Delaware	N	N	N	N	N
Florida	N	N	N	N	N
Georgia	N	N	N	Y*	N
Hawaii	Y	Y	N	N	Y
Idaho	N	N	N	N	Y
Illinois	N	N	*	*	N
Indiana	N	N	N	N	Y
Iowa	N	N	*	*	N
Kansas	N	N	*	*	N
Kentucky	N	Y*	N	N	Y
Louisiana	N	Y	N	N	N
Maine	N	N	N	N	Y
Maryland	N	Y	Y*	Y*	Y
Massachusetts	Y	Y	Y	N	Y
Michigan	Y	Y	Y	N	N
Minnesota	N	Y	N	N	N
Mississippi	N	Y	N	Y	N
Missouri	Y	Y	Y*	Y*	Y
Montana	Y	N	Y	N	Y
Nebraska	Y	Y	N	N	Y
Nevada	N	N	N	N	N
New Hampshire	N	Y	Y*	Y*	Y
New Jersey	N	Y	Y*	*	N
New Mexico	N	Y	Y*	*	N
New York	N	Y	Y*	*	N
North Carolina	N	Y*	N	N	Y
North Dakota	Y	N	*	*	N
Ohio	Y	N	N	*	*
Oklahoma	Y	N	*	*	N

State	Translation	Visual cues	Word prediction	Writing tools	Zoom
Oregon	Y	N	N	N	Y
Pennsylvania	Y	N	*	*	N
Rhode Island	N	N	*	*	N
South Carolina	N	N	N	N	Y
South Dakota	N	N	N	*	Y
Tennessee	N	N	N	N	N
Texas	N	N	N	N	N
Utah	N	N	*	*	N
Vermont	N	N	N	N	Y
Virginia	N	Y	N	N	*
Washington	N	N	N	N	N
West Virginia	Y	N	*	*	N
Wisconsin	Y	N	*	*	N
Wyoming	N	N	Y	Y	Y
Total (Accommodations)	**15**	**18**	**13**	**8**	**22**
Total (Test Design/ Procedures)	**0**	**3**	**19**	**22**	**2**
Grand Total	**15**	**19**	**24**	**25**	**24**

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Appendix H

Purpose and Research Questions of Studies Reviewed

Citation	Purpose	Research Questions
Bouck, E. C. (2017). Understanding participation: Secondary students with autism spectrum disorder and the accountability system. *Education and Training in Autism and Developmental Disabilities, 52*(2), 132-143.	To understand the assessment practices as well as school and individual characteristics associated with the different assessment participation options for secondary students identified with autism spectrum disorder.	1. With what frequency do secondary students with autism spectrum disorder participate in mandated assessments? 2. What are the relationships between participation in the accountability system and educational and individual factors? 3. What factors predict the participation of a secondary student with autism spectrum disorder from taking an alternate assessment versus the general large-scale assessment with accommodations? 4. What accommodations are provided to students with autism spectrum disorder on assessments?
Davidson, A. H., David, K., & Christmus, J. (2021). Connecting claims and outcomes: Applying accessibility criteria to alternate assessments. *Journal of Higher Education Theory and Practice, 21*(9), pp. 238-252.	To evaluate how accessibility is forwarded through technical test specification and how specifications are influenced by policy guidance.	1. How do UD elements relate to influential policy guidance (i.e., Peer Review Critical Elements) intended to make assessments accessible?
Karvonen, M., & Clark, A. K. (2019). Students with the most significant cognitive disabilities who are also English learners. *Research and Practice for Persons with Severe Disabilities, 44*(2), pp. 71-86.	To identify characteristics of the small subpopulation of students with significant cognitive disabilities who are ELs.	1. Approximately what proportion of students with significant cognitive disabilities are also ELs? 2.What are the characteristics of students with significant cognitive disabilities who are ELs, and how do those characteristics differ from students with significant cognitive disabilities who are not identified as ELs? 3. Do students with significant cognitive disabilities who are ELs use different accessibility supports or have different alternate assessment outcomes than their peers?

Citation	Purpose	Research Questions
McCarthy, T., Schles, R. A., & Moore, D. W. (2023). Administration and results of a state alternate assessment based on alternate academic standards in science for students who are blind and have low vision. *Journal of Visual Impairment & Blindness, 117*(1), 50-61.	To evaluate the performance and engagement of students with visual impairments on a tactile science AA-AAAS, including identifying the accommodations that were used in administering the test.	1. What were the demographic characteristics of students who took the tactile AA-AAS-science? 2. How did students who took the tactile AA-AAS-science perform? 3. What accommodations, accessibility options, and communication strategies were employed in the administration of the tactile AA-AAS-science? 4. Was there a correlation between any administration practices of the tactile AA-AAS-science and improved student results?
Zebehazy, K. T., Zigmond, N., & Zimmerman, G. J. (2012). Ability or access-ability: Differential item functioning of items on alternate performance-based assessment tests for students with visual impairments. *Journal of Visual Impairment & Blindness, 106*(6), 325-338.	To investigate differential item functioning (DIF) of items on Pennsylvania's Alternate System of Assessment (PASA) for students with visual impairments and severe cognitive disabilities and what the reasons for the differences may be.	1. Were there significant differences in the performance on individual items of the 2005 Level A PASA math and reading tests at Grades 3-4 and 7-8 of the students with visual impairments and severe cognitive abilities compared to the sighted students with severe cognitive abilities who had similar ability profiles on the constructs of interest? 2. Considering the accommodations that were used and the students' performance on different types of test items, what are the potential reasons that the "flagged" items functioned differently?
Zebehazy, K. T., Zigmond, N., & Zimmerman, G. J. (2012). Performance measurement and accommodation: Students with visual impairments on Pennsylvania's alternate assessment. *Journal of Visual Impairment & Blindness, 106*(1), 17-30.	To explore the performance of students with visual impairments and significant cognitive disabilities (referred to as students with visual impairments in the research questions and hereafter) and the assessment accommodations used when taking the Level A Grade 3-4 or 7-8 Pennsylvania Alternate System of Assessment (PASA).	1. Were there significant differences in the scores of the students with visual impairments at different levels of functional vision? 2. What accommodations did teachers make to adapt the PASA for the students with visual impairments? 3. Were there relationships between the types of accommodations made and the student's level of functional vision or the type of test item?

Appendix I

Accommodations Addressed in Journal Articles

Citation	**Accommodations Addressed**
Bouck, E. C. (2017). Understanding participation: Secondary students with autism spectrum disorder and the accountability system. *Education and Training in Autism and Developmental Disabilities, 52*(2), 132-143.	• Reader for instructions, clarification and test items • Student dictates responses, another records/writes • Shortened test • Different form of the test • Alternative setting • Additional time • Alternative format for responding
Davidson, A. H., David, K., & Christmus, J. (2021). Connecting claims and outcomes: Applying accessibility criteria to alternate assessments. *Journal of Higher Education Theory and Practice, 21*(9), pp. 238-252.	• Formatting (color, font size, image size) • Text-to-speech • Masking/guides
Karvonen, M., & Clark, A. K. (2019). Students with the most significant cognitive disabilities who are also English learners. *Research and Practice for Persons with Severe Disabilities, 44*(2), pp. 71-86.	• Audio read aloud (TTS) • Magnification • Color contrast • Color overlay • Invert color choice • Individualized manipulatives • Calculator • Single-switch system • Alternate form–visual impairment • Two-switch system • Uncontracted braille • Human read aloud • Test administrator enters responses • Partner assisted scanning • Sign interpretation • Language translation
McCarthy, T., Schles, R. A., & Moore, D. W. (2023). Administration and results of a state alternate assessment based on alternate academic standards in science for students who are blind and have low vision. *Journal of Visual Impairment & Blindness, 117*(1), 50-61.	• Presentation of materials on a black background • Divided work tray • Braille • Slant board • Physical prompting • Tactile materials

Citation	Accommodations Addressed
Zebehazy, K. T., Zigmond, N., & Zimmerman, G. J. (2012). Ability or access-ability: Differential item functioning of items on alternate performance-based assessment tests for students with visual impairments. *Journal of Visual Impairment & Blindness, 106*(6), 325-338.	• Substitution accommodations (such as replacing objects with pictures) • Picture- or object-enhancement accommodations (like making a picture tactile) • Layout or setup accommodations (providing a defined space, for example) • Instruction accommodations (alternate wording, for instance) • Response accommodations (such as the use of an augmentative communication device)
Zebehazy, K. T., Zigmond, N., & Zimmerman, G. J. (2012). Performance measurement and accommodation: Students with visual impairments on Pennsylvania's alternate assessment. *Journal of Visual Impairment & Blindness, 106*(1), 17-30.	• Held each object or picture in the student's field of view • Used a high-contrast background • Used a slant board • Used eye gaze • Allowed the student to feel each object or picture • Created a defined space to find objects or pictures • Specifically reoriented the student to the location of each of the choices • Colored the pictures • Used objects in place of pictures • Anchored pictures or objects

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