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Teachers' Lesson Modifications for Students with Disabilities

Findings from the 2020 American Instructional Resources Survey

Students with disabilities (SWD) often face barriers that hinder their capacity to access general education curricula and demonstrate their learning.¹ Accommodations and modifications to curricula and lesson plans can help reduce these barriers. *Accommodations* are changes to *how* instruction is delivered, such as providing audio books for students with specific learning disabilities or more-frequent breaks for students with attention deficit/hyperactivity disorder. *Modifications* are changes to *what* instruction is delivered. Specifically, modifications (e.g., simpler math problems, a text at a lower reading level) alter expectations of which tasks students complete and what content they learn (IRIS Center, undated). Modifications are generally used when accommodations are insufficient for SWD.

Federal law makes clear that instruction for all students, regardless of disability, should be aligned with grade-level standards to ensure that all students have opportunities to access and progress toward grade-level content (Yudin and Musgrove, 2015). Therefore, teachers should use modifications, when necessary, to help students access and demonstrate learning at grade-level standards—without reducing rigor or scope to the point that lessons are no longer aligned to grade-level standards. Previous research indicates that general educators often have less training and confidence in their abilities to appropriately modify instruction for SWD than special educators do (Shin, Lee, and McKenna, 2016). However, little is known about how and the extent to which general and special educators modify their lessons to make them more appropriate for day-to-day use with SWD.

In this Data Note, we explore teachers' reports of how much and in what ways they modify their lessons to support SWD. For our analyses, we use nationally representative survey data from over 4,000 teachers who teach primarily English language arts (ELA) or math. Our sample was composed of 88 percent general

¹ We use the term *students with disabilities* throughout this report to refer to students who qualify for Individualized Education Programs (IEPs), as covered under the Individuals with Disabilities Education Act of 1990 (Pub L. 101-476, 1990), or students with 504 plans, as covered under Section 504 of the Rehabilitation Act of 1973 (Pub. L. 93-112, 1973). In the survey items reported in this Data Note, we specifically asked teachers about students with IEPs or 504 plans, but we use students with disabilities for increased readability.

educators and 12 percent special educators.^{2,3} These data were drawn from the American Instructional Resources Survey (AIRS), which was fielded in May and June 2020 to a nationally representative sample of teachers who are part of the RAND Corporation’s American Educator Panels.⁴ The 2020 AIRS contained questions about teachers’ uses of curriculum materials and lesson modifications in ELA and math, including the extent to which they modified typical ELA and math lessons. The survey did not provide teachers with a definition of modifying a lesson; therefore, survey respondents might have interpreted this term, more generally, to refer to any change made to their curriculum materials.

We explored patterns in teachers’ *substantial modifications of lessons* (which we define as modifying half or more of a typical lesson). We also analyzed survey responses by teacher role (general or special educator), content area taught (ELA or math), and school level (elementary, middle, and high school). Because this Data Note is intended to present a small and focused set of key findings, we omit some potentially valuable findings from the full range of survey questions asked and subgroup differences detected.⁵

² For the purposes of this Data Note, we define a teacher as a *special educator* if they indicated that special education was one of their main content areas taught in the 2019–2020 school year and if they were certified to teach special education in their state. We define *general educators* as all teachers who did not meet our criteria as special educators. We asked both general and special educators to estimate the percentage of the students they teach who have IEPs or 504 plans; choices included “10 percent or less,” “11 percent to 24 percent,” “25 percent to 49 percent,” “50 percent to 74 percent,” and “75 percent to 100 percent.” We do not know if any teachers in our sample did not have any students with an IEP or 504 plan. However, we do know that some 43 percent of general educators and 2 percent of special educators stated that “10 percent or less” of their students have an IEP or 504 plan.

³ The distribution of general versus special educators in our sample is similar to the distribution observed at the national level. According to data from the 2017–2018 National Teacher and Principal Survey, about 12 percent of public school teachers nationally had special education as their main teaching assignment (National Center for Education Statistics, 2019).

⁴ More information about the AIRS can be found at RAND Corporation, undated-b.

⁵ A full set of survey results and technical documentation is provided in Doan et al., 2020; the data files are available to download from the AEP data portal (RAND Corporation, undated-a) to enable others to conduct analyses.

We explored the following research questions:

1. For what purposes do teachers most commonly report substantially modifying their math and ELA lessons?
2. What proportion of teachers substantially modify their ELA and math lessons to make those lessons more appropriate for SWD?
3. How common is it for teachers to create materials from scratch when modifying their lessons for SWD, compared with altering their main materials or bringing in additional materials?

Half of General Education Teachers and More Than Three-Quarters of Special Education Teachers Reported Substantially Modifying Lessons for SWD

A significant majority of all ELA and math teachers (80 percent) indicated that they made at least some modifications to their typical lessons. Similar percentages of general and special educators reported making at least some modifications to their typical lessons.

Those teachers who reported making at least some modifications to typical lessons were given a list of purposes for modifying lessons. They were asked to select whether they substantially modify their lessons (i.e., whether they modify *half or more* of a typical lesson) for each purpose.

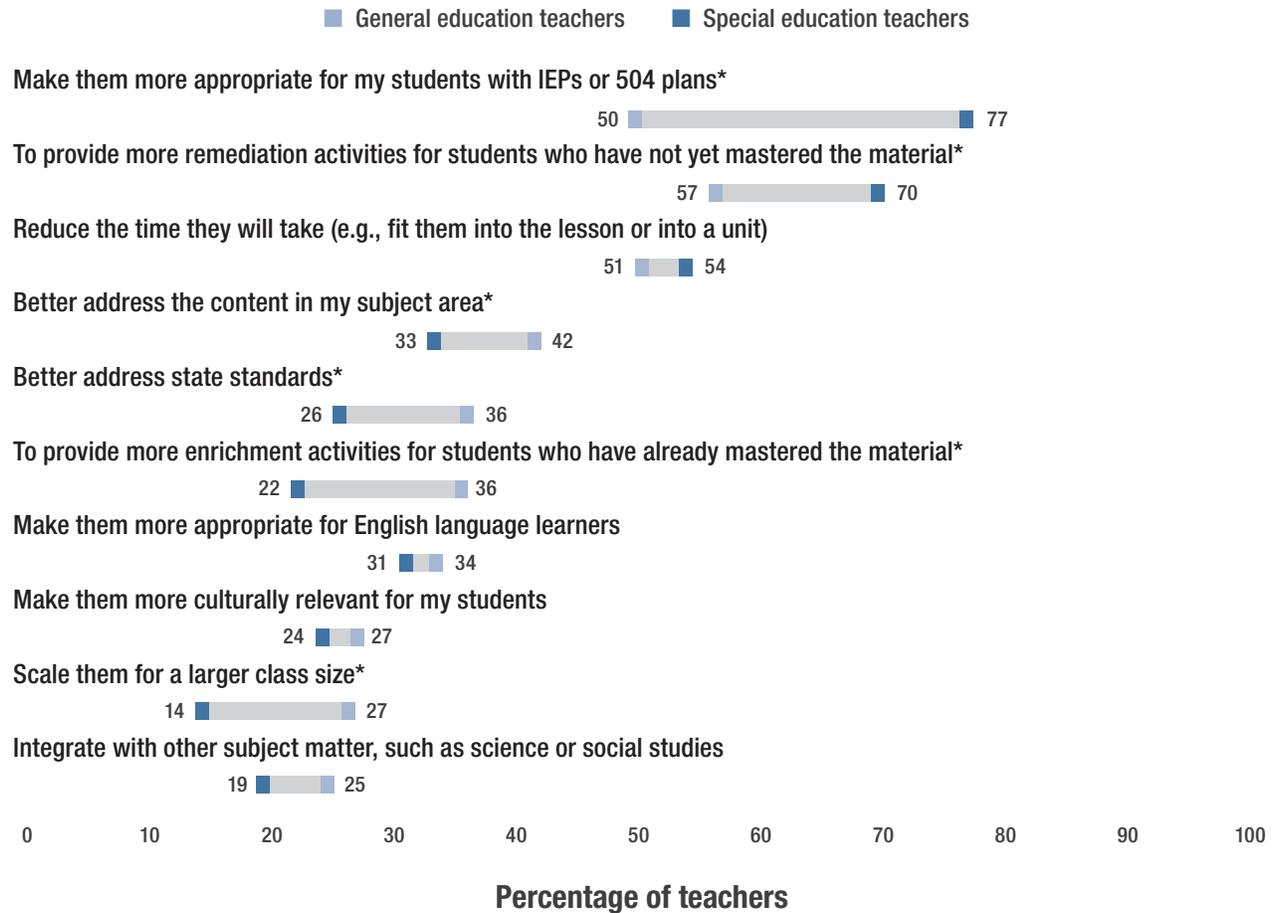
Modifying lessons to make them more appropriate for SWD was one of the most commonly reported purposes for substantially modifying lessons (Figure 1).⁶ This was true for both general and special educators, but 77 percent of special educators reported making substantial modifications for this purpose, compared with only 50 percent of general

⁶ All teachers in our sample were asked this question. We do not know if any teachers in our sample teach no students with an IEP or 504 plan; therefore, some teachers might indicate that they do not modify their lessons to make them more appropriate for SWD simply because they do not teach this student population.

FIGURE 1

Why Do Teachers Substantially Modify Their Lessons?

Percentages of Teachers Who Alter Their Lessons, by Purpose



NOTE: * indicates a significant difference ($p < 0.05$) in the percentage of special and general education teachers who indicate that they modify a half or more of a typical ELA or math lesson.

educators. This difference might be driven by the fact that special education teachers are more likely to teach greater percentages of SWD than general educators. This is reflected in our sample; 76 percent of special educators reported that a majority of their SWD. In contrast, only 4 percent of general educators said that they taught mostly SWD.

Higher percentages of general educators than special educators reported substantially modifying

their lessons for purposes other than serving SWD, including better addressing the content in their content area and providing more enrichment activities (Figure 1). However, supporting SWD and students in need of remediation was among the most common reasons for modifying lessons for both general and special educators.

Teachers Were More Likely to Report Substantially Modifying ELA Lessons Than Math Lessons for SWD—Particularly in Middle Schools

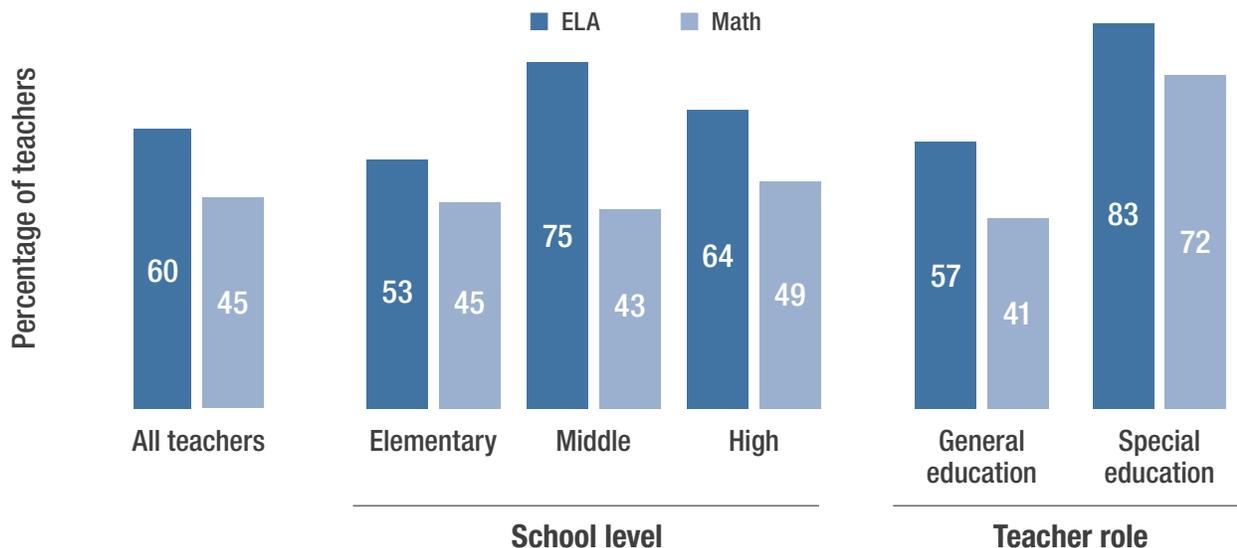
We examined how the percentage of teachers reporting that they substantially modify their typical lessons for SWD differs according to teacher role, school level, and content area taught. As described earlier, special educators in both ELA and math were more likely than general educators to report substantially modifying their lessons for SWD. Special educators of ELA and math were 26 and 31 percentage points more likely, respectively, than general educators to substantially modify a typical lesson to meet the needs of students with an IEP or 504 plan (see

Figure 2). Content area and school level also affected the likelihood that teachers would modify lessons for SWD. A higher percentage of teachers reported substantially modifying their ELA lessons compared with teachers reporting substantial modifications to their math lessons (Figure 2), particularly for ELA lessons at the middle school level. For ELA, teachers' responses significantly varied by school level, with 75 percent of middle school teachers reporting substantially modifying their lessons to make them more appropriate for their SWD, followed by 64 percent of high school teachers and 53 percent of elementary teachers. In math, teachers' responses did not vary significantly by school level, remaining at approximately 45 percent across all school levels.

FIGURE 2

Which Types of Teachers Substantially Modify Their Lessons for SWD?

Percentages of Teachers Indicating That They Modify Half or More of a Typical Lesson for Their SWD



NOTES: Testing was performed among teachers who were teaching lessons in the same content areas to identify significant differences ($p < 0.05$) by school level and teacher role. Among those teaching ELA lessons, significant differences were identified by school level (for all three school level comparisons) and teacher role. For those teaching math lessons, significant differences were identified only by teacher role.

Special Educators Were More Likely Than General Educators to Create Materials from Scratch When Modifying Lessons for SWD

Teachers who indicated that they modified a typical lesson to make it more appropriate for SWD were asked specifically what they did to modify the lesson.⁷ Choices included “alter or adapt my main materials,” “bring in additional instructional materials,” and “create my own materials from scratch”; respondents could select more than one. General

⁷ As noted previously, we do not know definitively whether any teachers in our sample do not teach any students with disabilities. However, teachers were able to indicate that they do not modify lessons to make them appropriate for students with disabilities either because they just do not modify for this purpose or because it is not applicable to their students. Therefore, we presume that teachers who do not teach any SWD did not select modifying for this purpose and are not included in this specific analysis.

and special educators were relatively similar in the extent to which they reported altering or adapting their main ELA and math materials and bringing in additional instructional materials. However, special educators were 20 percentage points more likely to modify their lessons by creating their own materials from scratch. Figure 3 reports findings with ELA and math teachers combined because there were no substantive differences by content area.

Implications

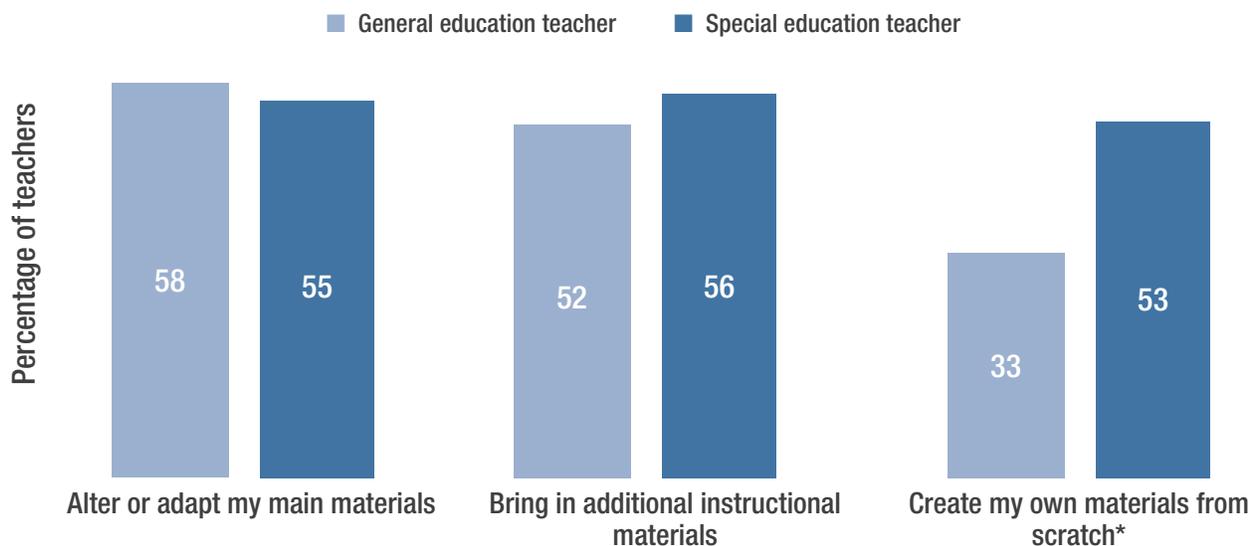
These results suggest the following implications for school and district leaders, policymakers, and curriculum developers:

- **District and school leaders should take stock of their teachers’ proficiencies with modifying their lessons to serve SWD.** Majorities of teachers reported substantially modifying

FIGURE 3

Do Special and General Educators Differ in How They Modify Lessons for SWD?

Percentages of Teachers Who Alter, Add, and Create Lesson Materials, by Teacher Role



NOTE: * indicates a significant difference ($p < 0.05$) in the percentage of general versus special educators stating that they modify a typical lesson to make it more appropriate for SWD by using the specified approach.

their lessons to make them more appropriate for SWD. Substantial lesson modifications are not inherently positive or negative. Rather, the implications of substantial lesson modification depend on the initial quality of the curricula and students' unique learning needs. Teachers could heavily modify a poor curriculum to make it more engaging or accessible. Alternatively, teachers could modify a good curriculum in ways that make lessons too easy, inadvertently limiting SWD access to grade-level standards. School and district leaders should take stock of teachers' proficiencies related to modifying their lessons to serve SWD to get a better sense of potential training needs.

- **Teachers might require specialized training and additional support for the intensive modifications that they make to their lessons for SWD.** General educators might be in particular need of specialized training in this area because recent research shows they generally feel less adequately trained and supported to serve SWD (Stelitano, Perera, and Johnston, 2019). Special educators typically have access to specialized training in this area, but they might require other types of support in the form of additional planning time or access to appropriately leveled materials—particularly in ELA, given the extent to which special educators reported making substantial modifications and creating materials from scratch. General and special educators teachers also could benefit from more opportunities for collaboration, including common planning and professional learning communities.
- **Curriculum materials might need more built-in supports for SWD.** The extent to which teachers modified their lessons for SWD suggests that existing materials were perceived as having inadequate supports. Special educators—who are perhaps more inclined to prioritize SWD—often resorted to creating their own materials from scratch, suggesting that they might be unable to locate appropriate existing

materials to make grade-level content accessible for their SWD. Other findings suggest that curricula in some areas could be perceived as more inadequate for SWD than others. Teachers were more likely to report making substantial modifications to their ELA lessons compared with math—especially in middle schools. One potential explanation for this difference is the challenge that middle and high school-level texts pose to students who are reading below grade level. Searching for texts that are standards-aligned yet readable might be time-consuming or yield few results. Curriculum materials with more built-in leveled texts and scaffolds could help maintain the alignment of lessons while expanding accessibility and reducing the burden on teachers. There also might be a general lack of access to high-quality ELA curriculum, as reported by teachers in a previous administration of the AIRS (Kaufman, Tosh, and Mattox, 2020).

Limitations

This Data Note provides some results about the extent to which and how teachers modify their lessons for their SWD. However, it is important to note a number of limitations. First, students' disabilities are varied (e.g., learning disabilities, speech impairments, deafness/blindness). Teachers likely make different modifications for students with different types of disabilities, but these nuances are beyond the scope of this report. Second, our analyses rely on teachers' self-reports, which are prone to bias and might not reflect the extent to which teachers actually modify their lessons in practice. However, teachers' reports could provide important insight into the extent to which they believe that they need to modify lessons to make them appropriate for SWD. Third, although we report on relationships between several different factors (e.g., teachers' roles and the extent to which they modify lessons), we cannot prove causality in these relationships; they are likely confounded

by other school and contextual factors. Fourth, survey data provide a limited picture of the lesson modifications that teachers make to support SWD. For the sake of brevity, we only examined modifications made to ELA and math lessons. Finally, the survey from which these data are reported did not define modifications for respondents, creating the possibility that teachers had different concepts of what constitutes a modification when responding to

these survey questions. School system leaders should consider other sources of data, including qualitative data (e.g., teacher interviews, focus groups) and lesson plans or instructional artifacts, to achieve a more in-depth understanding of how teachers in their systems are modifying lessons to support SWD and the extent to which these modifications are appropriate and effective.

How This Analysis Was Conducted

In this Data Note, we use responses from 4,414 teachers to the 2020 AIRS to examine the extent to which teachers make modifications for their SWD. Specifically, we examine responses to the following items from the 2020 AIRS:

1. “For each purpose below, I modify a typical lesson within my [ELA/math] materials to the following extent . . .”
2. “For each reason you modify a typical lesson within your [ELA/math] main materials, please provide more information on how you modify.”

ELA and math teachers were first asked whether they typically use lessons from their main [ELA/math] materials with modifications. Those who responded that they typically modify their lessons to some extent received follow-up questions about the specific purposes for which they might modify and the extent to which they modify lessons for that purpose. For example, teachers were asked whether they modify a typical ELA or math lesson to make it more appropriate for students with IEPs or 504 plans, and if so, whether they modify less than half, about half, or more than half of a typical lesson. Teachers that indicated they modified less than half, about half, or more than half of a typical lesson for a specific purpose were then asked to provide more information about their modification. Specifically, teachers were asked whether they alter or adapt their main materials, bring in additional instructional materials, create their own materials from scratch in pursuit of a specific purpose, or do some combination thereof.

Throughout this Data Note, we report samplewide and subgroup-specific proportions for variables of interest. All statistics are weighted using a set of nationally representative weights. To assess whether differences were statistically significant at the $p < 0.05$ level, we performed a series of Wald tests for each survey item that compared the weighted means of two subgroups at a time (e.g., elementary school math teachers versus middle school math teachers, elementary school math teachers versus high school math teachers, middle school math teachers versus high school math teachers). Because the intent of this Data Note was to provide descriptive information rather than to test specific hypotheses, no adjustments were made for multiple comparisons.

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About the AEP Data Note Series

The AEP Data Note series is intended to provide brief analyses of survey results of immediate interest to policymakers, practitioners, and researchers. If you would like to know more about the dataset, please see the Survey Technical Documentation for the American Instructional Resources Survey (AIRS) (RR-A134-4, https://www.rand.org/pubs/research_reports/RR134-4.html) for more information on survey recruitment, administration, and sample weighting. If you are interested in using AEP data for your own surveys or analysis or reading other AEP-related publications, please email aep@rand.org or see www.rand.org/aep.

About This Report

The American Educator Panels (AEP) are a nationally representative sample of teachers and school leaders across the country. We are extremely grateful to the U.S. public school teachers and leaders who have agreed to participate in the panels. Their time and willingness to share their experiences are invaluable for this effort and for helping us to understand more about how to better support their hard work in schools. We also thank our reviewers, Fatih Unlu, Elaine Wang, and Christopher Doss, for helpful feedback that improved this report.

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