Inclusion

Educational Placement and Goal Quality for Students with Complex Support Needs

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Abstract:	This study examined reading, math, writing, social, behavioral, and communication learning goals for a large, national sample of elementary students with complex support needs served in one of four types of educational placements. Each goal was coded for three quality characteristics: (1) strengths-focus, (2) inclusion of self-determination skills, and (3) description of the context and content of goals, and identification of needed supports. The findings suggest ongoing issues with the expectations in goals for students with complex support needs across placement types, consistent with past research. There was a general lack of focus on student-directed learning and activities as well as a lack of identification of student-initiated supports. Goal quality characteristics varied across goal domains and placements; descriptive findings suggest that goals aligned with academic standards and social-behavioral-communication competencies were more common for students in inclusive general education classrooms. Implications for research and practice are described.

Dr. Thoma (Colleen)

Thank you for the comments and feedback on our manuscript; we appreciate the chance to revise and resubmit and feel that the opportunity to address the reviewer comments significantly strengthened the manuscript. Below, we detail our responses to each reviewer comment, and we have highlighted major changes in the manuscript in track changes. We look forward to hearing back from you with regard to this revision.

The Authors

Reviewer 1 Recommendation	Response
More is needed to define a learning goal vs. IEP goal and how they would be developed and/or used. I expected the learning goals to be more lesson/unit specific; however, through the manuscript as examples were provided they were very specific; almost the same as IEP goals. Did all of the teachers have an IEP with different goals, than what they provided as 'learning goals?'	We clarified on page 1 that learning goals can also be drawn from curriculum (not necessarily a single unit or lesson), and that there is a dearth of research examining learning goals for students with complex support needs. We also acknowledge that many teachers mistakenly view the IEP as the student's curriculum, and therefore set learning goals that mirror (in some cases exactly) IEP goals.
P6 - while the table is referenced for placement across the manuscript, it may also be helpful here in same, separate special school.	We appreciated this feedback, and on p. 6 we added a description of the 4 placements given the importance of defining them throughout the manuscript.
P8 - the goal attainment scaling rubrics are mentioned, while they were also said to not be for this study - not sure why they are mentioned at all. Delete	We deleted this mention, as well as the mention on p. 6.
P15 - the data revealed that skills associated with SD were rarely present in goals within the academic goals. (Table 2 also) However, no examples are provided for example/non examples across the manuscript or within Table 2. Examples are provided across all other areas, this should be added to the definitions in Table 2, and within methods/results.	We added examples and non-examples to the results on pp. 15-18, as well as examples to Table 2.
P16 - No academic goals incorporated problem solving or goal setting. Again, examples of what would have been counted would be helpful.	We described examples of what would have been counted on p. 17-18.
Is it possible that teachers are using these strategies, goal setting, etc, but don't write it into the formal goal. For example, student is	On p. 28, we described in the limitations that we could not determine – based on the data – what strategies teachers were actually using during

participating in ELA lessons by answering WH questions and sets goals and self-monitors. However, as a teacher, I may not write this into the actual goal. Rather Student X will answer questions within ELA lesson . . .	instruction. We were only evaluating the goal. We noted that future research could further explore alignment between goals and actual instructional practices.
* Not sure about page limits, but an example/non example chart across goals coded would be helpful.	Because of page limits (as noted), we have not added another table, but we have added more examples and non-examples throughout the results, as recommended above. Should the editor feel additional information are needed, we would be happy to revise again per this request.
P17 - The context, content and supports section about Academics, seems to be based on some assumptions rather than data. For example, when discussing the math goals being practiced in context or isolation (a worksheet doesn't seem to be 'in context' and more than placing an item in a bucket - both could be part of a lesson or solely isolated without any connection to a 'real activity' in which the math skill is being practiced. This could be addressed within the discussion, as 'goals on a paper' without additional information doesn't allow a deeper understanding of how the goals were carried out.	We appreciate this feedback, and agree that coding features like being in context are challenging, with only the goal. We hope the high reliability of our codes suggests some level of agreement, but agree that it would be highly valuable in future research to better understand how instruction to support goal attainment occurred in the classroom. We added additional information about this limitation and identified this as a future direction for research on p. 28.
* P27 - The authors say their findings contribute to 'better learning goals in inclusive settings' - however, this not entirely what the data seems to be showing. Rather there is a lot of discrepancy across all settings (especially A and D). D is the most restrictive setting; and this is also where the data (Table 4) shows highest levels of active and student directed learning, sometimes even more than setting A. o The results talk about the discrepancies across settings (some where A are higher, some where D is higher) - yet the discussion is focused almost primarily on A having 'higher levels of academics, and social-behavioral-communication' alignment. o Rather - some of the very telling data is within B and C (with no goals at all in writing, math, reading). o Very interesting data with some of the major strengths found in the complete opposite	We appreciate this feedback, and agree that there were some discrepancies across settings, although when looking across all codes, we believe that there was more focus on academic and social-behavioral-communication competencies in the most inclusive setting. However, we attempted to better describe the nuance on p. 29 by highlighting some of the areas where there were discrepancies. We appreciate the identification of some areas that stand out in review the tables and data available.

settings (A and D) - what does that mean, and why might this be? -	

Educational Placement and Goal Quality for Students with Complex Support Needs

Abstract

This study examined reading, math, writing, social, behavioral, and communication learning goals for a large, national sample of elementary students with complex support needs served in one of four types of educational placements. Each goal was coded for three quality characteristics: (1) strengths-focus, (2) inclusion of self-determination skills, and (3) description of the context and content of goals, and identification of needed supports. The findings suggest ongoing issues with the expectations in goals for students with complex support needs across placement types, consistent with past research. There was a general lack of focus on student-directed learning and activities as well as a lack of identification of student-initiated supports. Goal quality characteristics varied across goal domains and placements; descriptive findings suggest that goals aligned with academic standards and social-behavioral-communication competencies were more common for students in inclusive general education classrooms. Implications for research and practice are described.

Keywords: students with complex support needs, goal quality, academics, social-behavioral-communication

Students with disabilities have goals that are developed as part of their individualized education program (IEP), as well as day-to-day learning goals from the classroom curriculum (i.e., learning goals). Learning goals are the intended purposes and desired outcomes of a curriculum, lesson, or unit of study, and identify the knowledge, skills, and capacities a student should achieve (Giamellaro et al., 2017). These goals are developed by classroom teachers to reflect the curriculum being taught, which in turn reflect state and local standards. On the other hand, IEP goals are constructed by IEP teams to define the academic and functional priorities for a student with disabilities across a full year and are intended to enable the student to be involved in and make progress in the general education curriculum. As such, learning and IEP goals are complementary, but serve somewhat different purposes. Current research has found that, despite clear guidance from the Individuals with Disabilities Education Act (IDEA, 2004), the nature and quality of IEP goals for students with disabilities remains problematic. No known studies have examined the learning goals of students with complex support needs, although considering the lack of access to grade-aligned curriculum for this population of students (Taub et al., 2019), there is reason to believe learning goals will also be problematic as well. Further, many special education teachers mistakenly view the IEP as the student's curriculum (Wehmeyer et al., 2001); as such, learning goals may mirror IEP goals in substantial ways. Students with disabilities' educational programs continue to be characterized by low expectations and poor learning outcomes (Turnbull et al., 2018). This is especially true for students with complex support needs. Students with complex support needs have extensive support needs that span multiple life domains (e.g., academic learning and participation, social-behavioral-communication), take alternate assessments to document their learning and progress in the general education curriculum, and are typically educationally classified as having intellectual disability, autism, or

multiple disabilities. IEP and learning goals that reflect students' strengths, build on their self-determination, and address their support needs can be a key part of advancing inclusive learning outcomes for students with complex support needs. However, Kurth et al. (2021) reviewed the IEP goals of elementary and high school students with complex support needs and found that goals tended to reflect curricular philosophies aligned with outdated special education research and practice (e.g., developmental and functional academics and life skills-focused goals) and not the current focus of law and research-based practice on inclusive supports, access to the general education curriculum, and student self-determination. No extant research analyzing learning goals was located, although we hypothesize learning goals also reflect low expectations given the relationship between learning and IEP goals.

Researchers have established that access to inclusive contexts (e.g., inclusive general education classroom vs. segregated classroom or school) impacts goal quality and expectations for learning reflected in goals. For example, students with complex support needs served in inclusive settings are more likely to have IEP goals supportive of accessing and progressing in the general education curriculum (Kurth et al., 2021). Disability label can also interact with placement and broadly impact goal quality and characteristics. Researchers have established that students with multiple disabilities are less likely to be served in inclusive contexts (Morningstar et al., 2017) and to have academic IEP goals (Kleinert et al., 2014). Similarly, students with intellectual disability are more likely to be served in segregated settings (Brock, 2018) and have compliance-focused learning goals that reflect low expectations for post-school outcomes (Burke et al., 2021). There has been limited examination of other factors that lead to systematic marginalization (e.g., race/ethnicity) on student goals; however, the limited research suggests students who are multiply marginalized may face even greater disparities in learning outcomes

(Shogren et al., 2021) and in accessing inclusive contexts (U.S. Department of Education, 2020).

The importance of a strengths-focus, contextualizing goals in ways that have relevance for students' support needs and cultural identities, and embedding student self-determination (e.g., opportunities to make choices, regulate one's own learning) in goal setting have received significant attention in the disability field (Shogren & Raley, 2022; Shogren et al., 2017). Inclusive contexts can advance self-determination and expectations for learning; however, opportunities for learning in inclusive contexts are limited for students with complex support needs. Even when teachers are supported to engage in self-determination instruction in inclusive contexts, they struggle to develop learning goals for students with complex support needs that reflect student agency and are not compliance driven. Goals tend to be decontextualized from students' values, preferences, and vision for their future (Burke et al., 2021). The ongoing lack of access to inclusive opportunities for students with complex support needs contributes to a lack of focus on identifying strengths and support needs as a part of goal development and attainment (Thompson et al., 2018). When IEP goals are focused on advancing access to the general education curriculum, there is not always a sufficient articulation of supports that enable goal attainment (LaSalle et al., 2013).

No studies have been located examining the learning goals of students with complex support needs. Although the IEP is widely recognized as a key indicator of what and how students will be taught (LaSalle et al., 2013), no current description of what learning goals teachers set for students to guide their routine instruction exists in the research. Further, our review of the literature suggests a need to examine how the learning goals of students with complex support needs reflect (or do not reflect) characteristics aligned with modern curricular philosophies and high expectations (Kurth et al., 2021; Shogren & Raley, 2022), including: (a)

strengths-focus, (2) inclusion of self-determination skills, and (3) description of the context and content of goals, and identification of needed supports. Additionally, examination of the impact of education placement on the presence or absence of these characteristics is needed to guide research, policy, and practice in inclusive school reform and implementation and evaluation of inclusive instruction and supports. However, existing research particularly that explores these factors across educational placements is characterized by small sample size. Further, such research rarely systematically examines the range of educational placements that students with complex support needs experience. Further, there has not been a coding framework to examine goals for the presence or absence of multiple characteristics of modern curricular philosophies and high expectations for students with complex support needs. The goal of this study, therefore, was to descriptively examine a large sample of learning goals for elementary students with complex support needs from across the United States served in one of four types of educational placements (see Table 1 for definitions) using a new coding framework. Our primary research question was: Are there patterns of differences in the strengths-focus, inclusion of self-determination skills, description of the context, content, and identification of needed supports in the reading, math, writing, social, behavioral, and communication learning goals identified for the academic year by teachers of students with complex support needs across four different educational placements? The goal of this initial, preliminary, descriptive analyses of the characteristics of learning goals for students with complex support needs across education placements was to inform ongoing research focused on goal identification and the relationship between goal quality and attainment for students with intellectual disability and complex support needs across educational placements.

Method

This study is part of a larger project focused on examining the academic, social, behavioral, and communication outcomes of a large, national sample of students with complex support needs across different placement settings during an academic year. This project collected data from multiple sources (students, teachers, families, administrators) and in multiple ways (observations, reviews of IEPs, surveys of teachers and students, assessments of student academic, social, and behavioral skills, and special education program and school level information) following approved institutional review board (IRB) protocols. One data source was student learning goals, identified by special education teachers, across six goal domains (reading, math, writing, social, behavioral, communication). Teachers identified learning goals that would be a target of instruction during the academic year.

Sample and Recruitment

Elementary students with complex support needs were recruited across the United States (per approved IRB protocols) in Fall 2019, with a focus on recruiting across four educational placement types. Elementary students with IEPs who had complex support needs, as defined in the introduction, were included. The sampling plan focused on recruiting equal numbers of students across the four education placements (Placements A – D; see Table 1), although there was variability in the final sample with fewer students in Placement D. Placement A reflected the most inclusive setting, with students with disabilities included in natural proportions and students with complex support needs in the sample spending 80% of the school day or more in the general education classroom. Placement D reflected the most segregated setting; that is, a separate school for students with disabilities. Placements B and C fell in between, with both having disproportionate representation of students with disabilities, and students with complex support needs in the sample being educated between 40 and 79% or less than 40% of the school day in

general education classrooms, respectively.

A total of 117 students across Placements A to D were recruited, consented, and met inclusion criteria for the overall study and contributed data for one or more measures in the Fall of 2019, with ongoing data collection interrupted by the COVID-19 pandemic. One student (from Placement D) did not have any available data on goals, leaving a total of 116 students in the present analyses. Students were from 59 schools across 36 local education agencies in 11 states in the West, Midwest, South, and Northeast United States. Supplemental Table 1 provides student demographic information. Students were spread across grades K-6, although more students were in upper elementary grades, particularly in Placement D. The sample included more males than females. Most students identified as White/European American and non-Hispanic, although other races and ethnicities were represented. The majority of the sample had disability labels of autism, intellectual disability or multiple disabilities, and some students had more than one disability label. Standard scores on the Supports Intensity Scale: Children's Version (Thompson et al., 2016) were available for the sample (overall mean standardized Support Needs Index of 85), and these scores ranged across placement settings with the highest support needs observed for students in Placement D and the lowest in Placement B.

Special education teachers (N = 82) taught the students in the sample and identify student goals. Over half of teachers (59.8%) taught only one student, 25 teachers (30.5%) taught two students, seven teachers (8.5%) taught three students, and one teacher (1.2%) taught four students. Supplemental Table 2 presents teacher demographic information. Teachers overwhelmingly identified as female, White/European American and non-Hispanic. Teachers were, on average, 37.8 years old (SD = 11.20), ranging from 22 to 70 years old. They had an average of 12.4 years of teaching experience (SD = 9.3), ranging from one to 37.

Data Collection

The research team met with teachers in Fall 2019 during on-site data collection for the larger study; during this meeting, teachers identified learning goals for each applicable domain (reading, writing, math, social, behavior, communication). Teachers were permitted to draw from existing IEP goals if the IEP goal reflected the learning experiences of the student. If a teacher drew from an existing IEP goal, the researchers asked them to adjust the goal to ensure it was appropriate for the academic year (e.g., potentially achievable by the end of the current school year) and reflected the learning experiences of the student in their classroom. For example, one student had the following IEP goal: "By December 13, 2020 [Student] will be able to read 30 words from a select list." The learning goal the teacher set for the study was: "[Student] will be able to read 30 words from a select list with 100% accuracy, use those words when reading passages/ stories, and comprehend those stories with 70% accuracy." If no IEP goal was developed for a domain (e.g., reading), the research team queried the teacher to determine if instruction was occurring in that domain. If students received instruction in this domain, the research team asked the teacher to develop a learning goal for that domain for study purposes using their knowledge of the student's curriculum. If there was no IEP goal and no instruction occurring, teachers could indicate that a learning goal in that domain was not applicable.

Learning Goal Coding

As our primary research question related to the quality of learning goals across educational placements, we developed a new coding framework to descriptively characterize each goal based on the degree it reflected modern curricular philosophies and high expectations for students with complex support needs (Kurth et al., 2021; Shogren & Raley, 2022). The codebook is available on the Open Science Framework (OSF) website at

https://osf.io/3j92y/?view_only=b7b91c15c27642869a20437ab3bf7042. We examined three learning goal quality characteristics: (1) strengths-focus, (2) self-determined actions, and (3) context, content, and supports evident in the goal. All codes were dichotomous (e.g., absent/present, no/yes, passive/active, adult-/student-directed). Coders were naïve to the placement or grade level of the student associated with each goal.

Strengths-Focus

The strengths-focus code included three variables operationalized by the first three authors based on definitional frameworks for strengths-based approaches in disability (Shogren et al., 2017): (1) compliance-based, (2) student-directed activity, and (3) active behavior (see Table 2 for definitions of each variable).

Self-Determined Actions

The self-determination code included seven variables aligned with skills defined in the self-determination literature (Shogren et al., 2022): (1) student choice, (2) student preference, (3) decision-making, (4) problem solving, (5) goal setting, (6) advocacy, and (7) self-management (see Table 2 for definitions of each variable).

Context, Content, Supports

The context, content, and supports code included four variables derived from previous research on curricular philosophies and support needs (Kurth et al., 2021; Thompson et al., 2018): (1) context, (2) grade-level content (academic) or standards focused (social-behavioral-communication), (3) clear supports articulated, and (4) student-initiated supports. See Table 2 for definitions. Grade-level content codes, including domains and grade-level alignment, were directly taken from the Common Core State Standards (CCSS; Common Core State Standards Initiative, 2022). Reading goals were coded for: literature, informational text, foundational skills,

speaking and listening, language, literacy in history/social studies, and literacy in science and technical subjects (CCSS, 2022). Writing goals were coded for: text types and purposes, production and distribution of writing, research to build and present knowledge, and range of writing (CCSS, 2022). Coders read the goal, read the CCSS domain standards, identified the corresponding CCSS domain standard, and recorded the CCSS grade-level band of the matched standard: K-2 or 3-6. Math standards for K-6 were dichotomously coded if the goal met (1) or did not meet (0) the listed CCSS content standard, and then codes were collapsed to indicate the grade level band (K-2 or 3-6). Standards-focused codes for social, behavioral, and communication goals were from the Collaborative for Academic, Social, and Emotional Learning Core Competencies (CASEL; Aguilar & Bridges, 2022) and included self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. Definitions from CASEL and examples were provided for coders to determine alignment.

Training

After establishing the codebook, a lead coder for each domain trained a second coder. The lead presented and explained coding for all variables for two goals as examples, then each coder independently coded three goals for the domain, with a threshold of $\geq$90% agreement to move from training to coding and inter-rater reliability. Lead coders held terminal degrees (Ph.D.) in special education; secondary coders held either held terminal degrees (Ph.D.) or master's degrees in special education and were enrolled in a special education Ph.D. program.

Reliability

Two coders independently coded goals for each domain, with agreement reviewed and consensus established through discussion after each set of 10 goals. Point-by-point interobserver agreement (IOA) was calculated as follows: ([agreements/(agreements + disagreements)] x 100).

IOA was calculated for at least 33.3% of goals across domains (range 33.3-45.6%). Mean agreement was high across all domains: 95.8% (range 87.5-100%) reading, 99.3% (range 98.3-100%) math, 94.9% (range 70.6-100%) writing, 94.3% (range 83.8-100%) social, 98.2% (range 90.9-100%) behavioral, and 97.8% (range 90.0-100%) communication goals.

Data Analysis

Descriptive statistics were calculated by summing the presence or absence of each goal quality characteristic for each domain. Primary coders then were provided the placement and grade level associated with each goal. Academic goals were coded as aligning or not aligning with the student grade for each CCSS domain. Social-behavioral-communication goals were coded as aligning or not aligning with CASEL standards. Overall descriptives were broken down across the four educational placements for each goal domain.

The nature of the coding approach (e.g., multiple variables per quality characteristic), the number of comparisons across placements, and the research question did not lend itself to statistical analyses (Gelman & Loken, 2013). Descriptively exploring the data enabled us to identify trends in the quality of goals across placement types that can be used to guide future research. For example, future research may examine ways to reduce the number of codes based on descriptive findings and engage in statistical analysis of variables that are likely to differ either across placements or potentially predict goal attainment.

Results

A total of 116 students had available data. Table 3 provides data on the number of students whose teachers identified goals for each domain (“goal available”) as well as the numbers of students whose teachers selected “not applicable” for a goal domain. There was also a small amount of missing data. Reading goals were available for almost all students (n = 115),

with slightly lower numbers of writing and math goals, particularly in Placements B, C, and D. Social (n = 25) and behavioral (n = 40) goals were more frequently identified as "not applicable," particularly in Placements A, B, and C.

Learning Goal Characteristics

Strengths-Focus

Table 4 shows the percentage of learning goals for each variable across placements.

Academic (Reading-Writing-Math). Most learning goals were not compliance-based (range 0-10.3%) with minimal variability across placement type. Math (range 2.9-5.9%) and writing (range 2.9-6.3%) goals rarely focused on compliance to directives. Reading goals most commonly included compliance behaviors in Placement C (10.3%) compared to Placements A (2.9%), B (3.0%), and D (0.0%). An example of a compliance-based academic goal was "[Student] will complete directed drawings incorporating various pre-writing shapes (circle, diagonal lines, square) with 80% accuracy" (Placement C).

Although most academic learning goals were not compliance-focused, few included student-directed activities across placements (range 17.2-66.7%). Reading (range 17.2-51.4%) and writing goals (range 28.0-50.0%) included fewer student-directed activities compared to math (range 37.1-66.7%). Placements A (51.4%) and B (45.5%) included the most student-directed activities in reading goals, while Placements B (66.7%) and D (58.8%) included the most student-directed activities in math goals. Placements D (50.0%) and B (46.9%) included the most student-directed activities in writing goals. An example of a student-directed activity goal was "[Student] will be able to use sight words already learned when reading stories in [sic] with 80% accuracy in 4/5 trials" (Placement B). An example of a goal that did not include student-directed activity was "[Student] will answer 'what' questions with prompting with 70%

accuracy" (Placement C).

Conversely, most academic goals included active student behavior across content domains and placements (range 82.4-100%). All math and writing goals in Placement D included active student behavior; active student behavior decreased in the context of reading goals in Placement D (82.4%). Placement C had the fewest goals that included active student behavior across math (88.9%), reading (89.7%), and writing (88.0%) domains. A sample active behavior academic goal was "[Student] will be able to write his first name with 80% accuracy on 3 out of 4 trials" (Placement C). In contrast, an example of a goal targeting passive behavior was "copy a complete sentence with legibility with regular verbal prompting" (Placement B).

Social-Behavioral-Communication. Most social-behavioral-communication learning goals across placements were not compliance-based (range 0-27.8%). Social and behavioral goals included compliance-based behaviors slightly more often in Placements D (27.8% social; 27.8% behavioral) and C (13.3% social; 23.3% behavioral). Examples of compliance-based behavioral goals were "When given a directive to transition between environments or activities student will reduce the instances of physical aggression in response to that directive improving his ability to effective transition between environments without displaying problem behaviors" (Placement D) and "When presented with a familiar direction, [Student] will follow the direction without demonstrating undesirable behaviors such as spitting, throwing, hitting, using profanity, or undressing himself in 60% of trials" (Placement D). Conversely, Placements D (0%) and C (6.7%) were the least likely to include compliance-based communication goals.

Like academic goals, most social-behavioral-communication goals were not compliance-based, although fewer included student-directed activities. Social goals (range 40.0-71.4%) more commonly included student-directed activities than behavioral (range 38.2-66.7%) or

communication (range 22.2-57.1%). Placements A (71.4% social; 57.1% communication) and B (58.8% social; 47.1% communication) included the most social and communication goals reflecting student-directed activities. Placements D (66.7%) and A (42.9%) included the most behavioral goals with student-directed activities. An example of a student-directed activity goal in the behavioral domain was "[Student] will ask for assistance for tasks that she has difficulty with, with minimal verbal cues in 3 out of 4 opportunities" (Placement C). An example of a teacher-directed activity goal in the behavioral domain was "When given a non-preferred direction, will comply with the direction with no protest behavior (scream, hit, scratch) in 80% of opportunities with no more than 1 prompt" (Placement C).

Learning goals including active behavior were most common in communication (82.8-91.2%), followed by social (range 58.8-65.7%) and behavioral (range 20.0-45.7%). Placement A consistently included the highest number of active behavior goals across all domains. Placement C included the lowest number of active behavior goals across behavioral (20.0%) and communication (82.8%). An example of an active behavior goal in communication was "[Student] will when given the opportunity, independently use a communication device or pictures to request his wants and needs with 80% accuracy over 3 consecutive data days" (Placement D). A non-example (i.e., a passive behavior goal) in behavior was "[Student] will not feign helplessness" (Placement B).

Self-Determined Actions

We coded learning goals for seven skills associated with self-determined actions (see Table 5).

Academic (Reading-Writing-Math). Writing goals more frequently included student choice and preference in comparison to math and reading goals, although this was still a small

minority of goals. Placement did not relate to these variables; 11.4% of writing goals from Placement A, 8.0% from Placement C, 12.5% from Placement D, and 0% from Placement B incorporated student choice. An example of a writing goal that incorporated student choice was "During general education class writing exercises, in the activity of putting content on a page (i.e., writing composition), [Student] will activate a switch indicating agreement or making a content choice, with a response time of 10 seconds or less following the prompt, at least 75% of the time" (Placement A). An example of a goal that did not incorporate student choice was "Will complete directed drawings incorporating various pre-writing shapes (circle, diagonal lines, square) with 80% accuracy" (Placement C). Student preference was present in 25.0% of writing goals for students in Placement D and 5.7% in Placement A—no writing goals for Placements B and C included student preference. An example of a writing goal that incorporated student preference was "By May 2020, when given a writing assignment on a topic or event, [Student] may write, type, or use speech to text so that she can re-read what she writes in 3/4 data collection sessions" (Placement A). A non-example was "By January 21, 2021, [Student] will improve her writing as evidenced by being able to copy 24/26 upper case letters for 4/4 trials" (Placement D). In contrast to the writing domain, only 3.0% of math goals from Placement B, 3.7% from Placement C, 5.9% from Placement D, and 0% from Placement A incorporated student choice. An example of a math goal that incorporated student choice was "By December 2020, and given a field of three, [Student] will receptively identify 10 colors by pointing to it or picking up an object in that color in 80% of opportunities as measured by the special education teacher" (Placement D). An example of a math goal that did not incorporate student choice was "[Student] will participate in a variety of number-sense activities with numbers to 10 throughout his school day given cues on 4/5 opportunities" (Placement C). Student preference was not

included in any math goals across placements. Student choice was less common in reading goals than in writing or math, only reflected in 2.9% of goals for students in Placement A, and not incorporated in reading goals in the three other placement categories. An example of the reading goal that incorporated student choice was "[Student] will engage (eye gaze, head tracking, switch activation, choice making) in learning activities involving text and reading in his general education classes, intermittently over a ten minute period" (Placement A). An example of a reading goal that did not incorporate student choice was "[Student] will identify 10 out of 20 initial sounds of a word and the corresponding letter" (Placement A). Similarly, student preference was only included in 3.4% of reading goals for students in Placement C and was not evident in any other placements. The reading goal that incorporated student preference was "Given a modified text based on [Student's] interests, [Student] will read 10 target vocabulary words within text on 4 out of 5 opportunities" (Placement C).

Skills associated with self-determination (decision-making, problem solving, goal setting, advocacy, and self-management) were rarely present in goals within the academic domains, although were more common in writing goals than in math or reading (as with student choice and preference). Decision-making was minimally evident in math goals (2.9% Placement A; 3.7% Placement C), and slightly more evident in writing goals (2.9% Placement A; 4.0% Placement C; 18.8% Placement D). Goals incorporating decision-making in writing and math generally involved deciding on a writing topic or deciding how to solve a math problem (e.g., using manipulatives, drawing). An example of a writing goal that incorporated decision making was "[Student] will make a selection about writing topics choosing 4 things" (Placement D). A non-example was "Copy a complete sentence with legibility with regular verbal prompting" (Placement B). In contrast, no reading goals incorporated decision-making. Advocacy and self-

management were reflected in a small subset of goals; specifically, advocacy was included in 3.4% of reading goals for Placement C, and self-management was included in 2.9% (Placement A) and 3.1% (Placement B) of writing goals. An example of a self-management goal in writing was "In order to increase his writing ability, by date, [Student] will be able to write five sentences that directly correspond to a given topic and use an editor's checklist to develop his writing with no more than two prompts in four out of five recorded opportunities as measured by teacher collected data" (Placement A). Advocacy in reading included utilizing a voice output switch to comment on reading activities, while self-management in writing was addressed through strategies such as student-led editing checklists, as shown above. No academic goals incorporated problem solving (e.g., a student using a strategy to select the best option to solve a problem or complete an activity) or goal setting (e.g., a student setting their own goal related to content).

Social-Behavioral-Communication. Student choice and student preference were incorporated more frequently in social-behavioral-communication goals than in the academic domains. The presence of student choice and student preference varied within these domains and across placements as well. Social goals for students in Placement A had the highest percentage of student choice (40.0%) and preference (17.1%) compared to other placements; this was also the case for student choice for behavioral goals (28.6% in Placement A). Communication goals for students in Placements D (38.9%) and A (37.1%) had the highest percentage of student preference in comparison to other placements. An example of a goal incorporating student choice was "[Student] will approach a teacher for help, or implement a self-soothing strategy (e.g., pressure on neck, shirt over nose) when experiencing agitation in 70% of opportunities across 10 data probes" (Placement C). An example of a goal that did not incorporate student choice was

"Decrease banging on things or crying to get what he needs on every task" (Placement D).

Although low percentages of skills associated with self-determination were also evident in social-behavioral-communication goals, some differences emerged. Goals for these domains across placements all incorporated advocacy with some degree of frequency and variation across placement. For instance, advocacy goals were incorporated at the highest rate in behavioral (88.3%) and communication (76.1%) goals for students in Placement B, while advocacy goals for the social domain were most common in Placement A (14.3%). Advocacy goals in these domains often involved communicating wants or needs to others. An example of a social goal incorporating advocacy was "[Student] will use signs and/or words to express displeasure/refuse non-preferred activity with 70% accuracy." A small percentage of goals incorporated decision making (2.9% of social and communication goals in Placement A), problem solving (2.9% of social and behavioral goals in Placement A; 2.9% of behavioral goals in Placement B), and self-management (5.6% social goals in Placement D; 2.9% of behavioral goals in Placement A). An example communication goal using decision-making was, "[Student] makes choices and shows preferences by pointing, touching, grabbing, or eye gaze when (a) given choices offered through sets or materials or picture; (b) seeing known preferences that are visible at a distance; and/or (c) being part of an activity that can be repeated or continued, in 3/5 provided or monitored opportunities." No social, behavioral, or communication goals incorporated goal setting.

Context, Content, and Supports

See Table 6 for results of context, content, and supports variables.

Academic (Reading-Writing-Math). Across educational placements, academic learning goals varied in the extent to which they were written for the student to practice the skill in the context in which it is expected to be performed (e.g., identifying sight words in the context of a

book or text passage). Math goals were often written in a way that suggested the student would practice the skill in context, and this trend was evident in all four educational placements. An example of a math goal that identified a skill that could be practiced in context was "[Student] will complete addition and subtraction problems with re-grouping and with double digits across a set of worksheet problems with 80% accuracy" (Placement C). An example of a math goal that was coded as including a skill to be practiced in isolation (not in context) was "Will place one manipulative in a container" (Placement D). Approximately half of reading goals in Placements A, B, and C included skills that could be practiced in context; Placement D included a slightly larger percentage of in-context reading goals (70.6%). The number of in-context writing goals varied across placements: 68.6% (A), 71.9% (B), 48.0% (C), and 56.3% (D).

Academic learning goals were aligned with Common Core Standards most often for students in Placement A. More than half of math (57.1%) and reading (57.1%) goals in Placement A were aligned with Common Core Standards. Only 8.6% of writing goals in Placement A were focused on Common Core Standards, and no writing goals in Placements C and D were focused on standards. An example of a writing goal aligned with Common Core Standards was "Using technology as needed, [Student] will legibly write at least 3 details events of stories [sic] read or experienced in sequential order 3 out of 4 given opportunities" (Placement A). An example of a writing goal that was not aligned was "Will trace 20/20 upper case letters" (Placement D).

We also examined goals for supports the student could receive while working toward the goal and the extent to which supports were initiated by the student. Across placements, 30.3-51.4% of math goals included supports; Placement A included the greatest percentage (51.4%). In contrast, 64.7% of reading goals in Placement D included supports. Twenty percent of reading

goals in Placement A and 15.2% of reading goals in Placement B included supports. Although supports were named in reading goals, the range of supports was very limited, and no goals included assistive technology (e.g., text-to-speech software). Instead, examples of reading supports included "switch," "physical prompts," "visual supports," and "prompting." Across all placements, more than half of student writing goals included the specific mention of supports. Writing goals in Placement A frequently included supports (82.9%). Examples of clear supports articulated in writing goals across placements included "prompts," "modeling," and "pictures;" very few included augmentative and alternative communication (AAC) devices (n =4) or speech-to text software (n =2). Very few academic goals included supports that were intended to be initiated by the student and not dependent on someone else to access the support (0-17.1%).

Social-Behavioral-Communication. Most students in Placement A had social (71.4%) and communication (88.6%) goals that included skills that could be practiced in context. The extent to which behavior goals were in-context varied across placements; 54.3% of goals in Placement A and 61.1% in Placement D included skills that could be practiced in context. Placements C (36.7%) and B (35.3%) had fewer in-context behavioral goals. An example of a behavior goal designed to be practiced in context was "Given a visual support/reminder, [Student] will be able to follow 3/4 classroom expectations (follow directions quickly, listen when someone is speaking, raise your hand to speak, be a caring friend) with at least 1 verbal prompt from the teacher" (Placement A). An example of a behavior goal for a skill that would be practiced in isolation was "When [Student] is presented with a non-preferred task, he will refrain from yelling on 7/10 data sessions" (Placement C).

Compared to the other educational placements, goals in Placement A were most often aligned with CASEL Core Competencies in social, behavioral, and communication skills.

Almost half (45.7%) of social skills goals in Placement A were aligned. For example, one such goal was "[Student] will ask the teacher for help in the classroom, every time when needed with one verbal prompt from the instructional aide" (Placement A). Far fewer social skills goals were aligned in Placements B (23.5%), C (23.3%), and D (16.7%), although one such example was "Given differing social scenarios, [Student] will be able to identify what emotional zone (red, green, yellow, blue) she would be in 4/5 times" (Placement C). Across placements, very few behavioral goals were aligned with CASEL. The lack of integration of CASEL Core Competencies was apparent in many behavioral goals given the focus on compliance and the lack of integration of skills associated with self-management and decision-making. A sample goal that was not aligned with any CASEL Core Competencies was "Decrease banging on things or crying to get what he needs on every task" (Placement D). An additional goal that was not aligned with CASEL Core Competencies was "[Student] will only pinch, bite, or scratch when staff put on leg braces no more than 50% of the time" (Placement D). Supports for social skills were specifically named in goals across placements; Placement A included the most supports (51.4%). A similar trend was noted for supports mentioned in behavioral goals for students in Placement A (40.0%). In contrast, supports were specifically mentioned in communication goals most often in Placement D (61.1%). Supports in behavioral goals were commonly visual supports and prompts. Supports in communication goals included, but were not limited to prompts, AAC devices, and visual supports. Like the academic goals, very few goals in social-behavioral-communication included the mention of supports that would be initiated by the student and not controlled by someone else.

Discussion

The purpose of this study was to descriptively examine the quality of academic and

social-behavioral-communication learning goals for a large and geographically diverse sample of students with complex support needs across four educational placement types (see Table 1). Gathering more information on the quality of learning goals that guide the education of students with complex support needs is an area of critical need, as goals that reflect high expectations, student strengths, and alignment with the general education curriculum as well as individualized learning needs are essential to advance equity and improve education outcomes (Kurth et al., 2021). Overall, the findings suggest ongoing issues with the expectations reflected in learning goals for students with complex support needs across placement types, consistent with past research examining learning and IEP goals (Burke et al., 2021; Kleinert et al., 2014; Kurth et al., 2021). This suggests a need for additional research, training, and supports for educators and IEP teams focused on developing strengths-based IEP and learning goals, aligned with the general education curriculum and the context where targeted skills are to be applied. These findings also have implications for policies and practices related to how learning goals and lesson plans are constructed, and how goals are identified and written in IEPs. While there were areas where we did find high levels of integration of strengths-based approaches across placement types (e.g., a limited focus on compliance-based goals in academic and social-behavioral-communication goals), there were often issues in other quality characteristics. For example, learning goals tended to be decontextualized, reflected low expectations, or provided minimal supports for the student. Goals were also often only focused on student self-direction in one area (e.g., part of a self-directed activity) without a concurrent focus on other areas (e.g., a self-directed behavior), such as, “When given a directive to transition between environments or activities student will reduce the instances of physical aggression in response to that directive improving his ability to effective transition between environments without displaying problem behaviors” (Placement D).

These findings also suggest the need for ongoing work that refines coding procedures to capture the most robust elements of goal quality characteristics related to our three areas: (1) strengths-focus, (2) self-determined actions, and (3) context, content, and supports. Such work, building on the findings of this paper, is critically needed to develop shared methods for coding and evaluating goal quality.

Across goal domains and placement types, we found general trends that merit further consideration in research and practice. First, there were differences in the availability of learning goals across domains and settings for students with complex support needs (see Table 3). Arguably reading, writing, and math as well as social, behavioral, and communication goals are important for all students, including students with complex support needs. However, special education teachers varied in the degree to which they identified learning goals across all areas. Almost all students, across placements, had identified reading goals, but a handful (n = 7) of teachers did not identify writing goals, particularly in Placements B, C, and D. Further, more teachers identified that social and behavioral goals were not applicable for students in Placements A, B, and C. Almost all students in Placement D (segregated special education schools) had identified social, behavioral, and communication goals. While it could be argued this may reflect more complex support needs of students in segregated schools as reflected in higher SIS-C scores in this group of students (see Supplemental Table 1), we would argue that social, behavioral, and communication goals are valuable irrespective of setting, particularly as social-emotional competencies are relevant for all students (Aguilar & Bridges, 2022). As such, more research is needed to replicate these findings and explore why special education teachers may be more likely to decide social and behavioral learning goals are not applicable in Placements A, B, and C, and to ensure there is a balance of academic and social-emotional

instruction and supports for all students, including students with complex support needs in inclusive settings.

In terms of the specific characteristics of goal quality coded in this study (see Tables 4-6), we found that almost all learning goals incorporated a focus on student-directed behaviors rather than compliance; however, this focus was infrequently aligned with a concurrent focus on behaviors targeted in student-directed activities. This was particularly true in segregated settings for social-behavioral-communication goals. This suggests that in inclusive settings there may be a greater focus on enabling students to use social-behavioral-communication skills in activities that they are involved in choosing (Kurth et al., 2015). Additionally, active behaviors were less likely to be reflected in social-behavioral-communication goals in segregated settings, further suggesting passivity and overreliance on teacher-direction and student compliance in segregated settings. For example, "When presented with a familiar direction, [Student] will follow the direction without demonstrating undesirable behaviors such as spitting, throwing, hitting, using profanity, or undressing himself in 60% of trials" (Placement D). Furthermore, academic learning goals were more likely to include active behavior and less likely to include a focus on compliance as compared to social and behavioral goals, suggesting access to the general education curriculum and classroom can advance a greater focus on leveraging student strengths and engagement in learning (Agran et al., 2020; Kurth et al., 2015; Soukup et al., 2007). However, compliance was seen more often in communication goals in inclusive compared to segregated contexts. This may suggest a greater focus on teaching initiation in segregated settings and responding in inclusive settings, indicating a need to consider the different demands and related implications for learning and supporting students in inclusive settings across different placement types (Kurth et al., 2020). This is particularly true for separate classrooms (Placement

C), as there tended to be less focus on integrating a strengths-focus across multiple domains. Notably, this finding differs from other research that suggests more focus on initiation in inclusive settings (Kleinert et al., 2015) and responding in segregated settings (Ruppar, 2015). Thus, ongoing research is necessary to better understand the factors that influence how communication learning goals are developed across placement types. It also continues to suggest the need to further examine the factors that best represent these goal quality characteristics to allow for more systematic examination of learning goal quality across research and practice.

Relatedly, we looked at the degree to which specific self-determined actions were embedded in goals. We found that choice and preference was a primary area of focus, although more often in social-behavioral-communication goals as compared to academic goals. Choice and preference were also more likely to be embedded in social-behavioral-communication goals for students in inclusive classrooms. These findings are consistent with other literature that suggests that choice and preference are most commonly associated with self-determination for students with complex support needs and that there is a greater focus on these skills in inclusive contexts (Burke et al., 2020). Other self-determination skills, such as decision making, were very rarely a focus, despite the growing push in the field to consider how to embed these skills into early learning opportunities for all students (Shogren & Raley, 2022). The findings suggest more work is needed to support elementary educators to meaningfully incorporate self-determination skills beyond choice and preference for young students with complex support needs (Shogren et al., 2022).

Finally, we looked at how learning goals were aligned with the context where skills would be used, the grade-level standards and CASEL competencies, and the articulation of needed supports. Generally, math and communication goals were most often situated in a context

where they would be applied, with reading and behavior goals less likely. Consistent with past research examining IEP goals (Kurth et al., 2021), all academic learning goals were often aligned with grade-level Common Core Standards in inclusive settings, particularly in math and reading. This was similar for alignment with CASEL competencies in social-behavioral-communication goals in inclusive settings. These findings provide additional data to support the assertion that access to the general education curriculum is most likely to occur in inclusive, general education classes (Kurth et al., 2016; Zagona et al., 2021). It is important to note that behavioral goals across placement types tended to reflect low alignment with CASEL Core Competencies. The low alignment with CASEL competencies reflects the often surface-level focus of social, communication, and behavioral goals for students in this study; complex interactions and diverse communicative functions were entirely absent in the goals. Social goals often focused on basic interaction skills, very few goals focused on social-emotional skills, and when goals did include a focus on emotions, the depth was minimal. For example, “Given differing social scenarios, [Student] will be able to identify what emotional zone (red, green, yellow, blue) she would be in 4/5 times”; Placement C.

Lastly, supports were rarely included in learning goals across domains, although there was variability with writing goals being the most likely to have clear supports articulated, particularly in inclusive settings (Placement A). However, across all goal domains, supports were primarily adult-delivered prompts. This suggests the importance of supporting pre- and in-service teachers (both general and special education) to learn both the range of individualized supports that can be used by students and how to incorporate that knowledge into goal development and subsequent instruction. This is critical to ensure students with complex support needs have the opportunity and supports needed to work toward goals that target grade-aligned

skills and standards. Very few goals named supports that were student-initiated, which raises questions and concerns about the extent to which students with complex support needs have the opportunity to self-direct their use of supports. Overall, the lack of clear articulation of supports across goals and settings suggests the need for additional strategies that enable teachers to embed supports into instruction and support students to initiate access and use of supports rather than rely on others (LaSalle et al., 2013). Additional research is also needed that explores the varying types of prompts that used by teachers, how aligned these prompts are with student support needs, and ways to reflect different types of prompts and supports in both learning and IEP goals.

Limitations

While our sample size is relatively large compared to other studies of students with complex support needs, it is still small, particularly in the context of statistically testing for differences on the array of quality dimensions we were interested in exploring. This led to us focusing on descriptive analyses of the multiple goal quality dimensions we identified. However, future research can and should refine the coding framework we developed and explore ways to aggregate information about quality dimensions and create indices of quality that are more amenable to statistical analyses. Further, although we coded goals for the degree to which they reflected accepted academic and social-behavioral-communication standards and competencies, these standards reflect broad domains (e.g., relationship skills) and thus made it difficult to fully explore the degree to which the goals reflected the intent of the standard or competency. The limited alignment of goals to accepted standards could also be a reflection of the absence of consideration of accepted, grade-aligned standards by educators, or the fact that we did not ask teachers for information about if and how they used standards in identifying the goals. Although we established high agreement, oftentimes it was unclear if goals were directly targeting grade

level standards or were just noting specific terms with limited embodiment of the standards. This was also influenced by the lack of specificity and detail in many of the goals. In all coding we gave credit if the variable was reflected; however, there was a range in the degree to which the goal reflected the high expectations that should guide all instruction for students with complex support needs. For example, goals may have allowed students to access pre-requisite literacy skills associated with story retelling (e.g., picture sequencing), but failed to teach students to summarize a text to synthesize learning or make a book recommendation to a peer. Additionally, it could be that teachers are delivering instruction in some of the areas coded for (e.g., goal setting) into their interactions with students but not reflecting it in the learning goals, as written. Future research is needed that explores the alignment between learning goals and actual instructional practices to support goal attainment. Finally, future research is needed to look at goal attainment in this population of students, alone and in combination with information on goal quality. This work on goal quality provides initial information that can provide direction for understanding factors that may influence goal attainment, and we encourage further research in this area.

Implications for Research and Practice

This study investigated the learning goals of students with complex support needs and was the first to investigate learning, rather than IEP, goals. Consistent with analyses of IEP goals, we found high variability in goal quality characteristics across goal domains and placements, as well as a general lack of focus on student-directed learning and activities. These findings suggest the ongoing need for systemic changes that raise expectations for students with complex support needs and advance greater access to inclusive settings. Ongoing work is also needed to further explore how instruction to support goal attainment is carried out in the

classroom, and how this is shaped by goal quality. Our findings contribute to the body of research that inclusive settings are where learning goals aligned with academic standards and social-behavioral-communication competencies are more likely to be targeted, generally. However, there was high variability across settings for some variables; our data suggest some discrepancies across settings that need additional research. For example, in Placements A, B and C (compared to D) there were fewer writing goals that were student-directed and focused on active behavior. Similarly, Placements A and D tended to have greater focus on student choice and preference in writing as well as in behavioral goals. However, in other goal areas (e.g., reading, math), there were limited goals reflecting self-determined actions, and relatively equal or greater focus in other goals areas, such as communication and social. And, yet for other variables such as being in context or having clearly articulated supports, Placement D had the highest rates in reading goals, while the opposite was true for math goals with the highest rates in Placement A. Clearly, a range of factors are impacting goal content and goal quality. However, when looking across all domains coded, inclusive settings are where learning goals aligned with academic standards and social-behavioral-communication competencies are more likely to be targeted – although the quality of these goals continues to need improvement.

Systemic changes and ongoing research must target planning for and delivering supports in inclusive general education classrooms, as well as ongoing teacher training, professional development, and support for moving towards contemporary understandings of how to develop goals that support strength-based, self-directed actions in inclusive settings. Identifying ways to quickly and meaningfully evaluate goal quality, using coding approaches introduced in this study, can be a direction in future research to guide the evaluation of goals in practice. This is particularly important given that many of the goals coded in this study, as has been found by

other researchers (Burke et al., 2021; Kurth et al., 2021), met minimum standards of goal quality but still did not fully reflect the expectations that advocates call for to advance educational equity for students with complex support needs. Some goals, particularly in segregated settings, were particularly egregious in failing to incorporate the personhood and inherent dignity that students with complex support needs are entitled to as members of our school communities (Ruppar et al., 2022).

For example, when looking at behavioral goals, the quality tended to be low and focused on compliance (e.g., "[Student] will not feign helplessness," Placement B; "Decrease banging on things or crying to get what he needs on every task," Placement D). Many behavior goals were designed to be practiced in isolation and very few behavior goals were aligned with CASEL competencies. This may reflect, in part, the greater targeting of behavioral goals in segregated settings, as teachers identified fewer students as having behavioral learning goals in inclusive classrooms. Given the complexities of navigating various learning and social opportunities, one would expect social and behavioral goals to teach strategies and decision-making skills to navigate various social and behavioral expectations with peers and adults across environments—the absence of social and behavioral goals in these placements is problematic. There is also a need for future research to investigate ways to improve teacher and IEP team training and expectations for student behaviors to shift from a focus on "complying" to focusing on the student gaining communication skills and acting in ways aligned with self-determination. Further, the lack of stated communication supports across goal domains leaves a question about the extent to which teachers are considering and integrating communication supports such as AAC devices into grade-aligned instruction for students with complex support needs. This finding, considered together with the low frequency of stated assistive technology supports in

goals (e.g., text-to-speech, speech-to-text), suggests a need for future research focused on effective strategies for planning for supports for students with complex support needs to access and progress in grade-level instruction.

In summary, there is an ongoing need for systemic changes that enable access to the supports needed to participate and learn in inclusive contexts for students with complex support needs. Learning goals must reflect the student, their values and vision, and their right to be involved in directing their goals, their supports, and their learning. There remains an overall lack of high expectations for the degree to which students with complex support needs can engage in self-directed learning and activities that advance their self-determination, particularly as they are also engaged with grade-level academic and social-emotional learning activities and goals, alongside their peers. The systemic barriers and biases that lead to low expectations and deficit-based approaches to instruction must be dismantled to advance equity for this population.

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Table 1

Educational Placement Types, Definitions, and Percentage of Sample

Placement Type	**Definition**	**Student Sample Size (*N* = 116)**	**Teacher Sample Size (*N* = 82)***
Placement A	Students in schools where they were represented in natural proportions (i.e., approximately 1% of total school enrollees) and educated 80% or more of the school day within the general education classroom.	35 (30.2%)	27 (30.7%)
Placement B	Students in schools where they were represented disproportionately (i.e., 2% or greater of total school enrollees) and were educated 40% to 79% of the school day inside the general education classroom.	34 (29.3%)	28 (31.8%)
Placement C	Students in schools where they were represented disproportionately (i.e., 2% or greater of total school enrollees) and educated less than 40% of the school day inside the general education classroom.	30 (25.9%)	19 (21.6%)
Placement D	A special school for students with IEPs where access to the general education classroom was not possible.	17 (14.7%)	14 (15.9%)

Note. $N = 82$ is the number of unique teachers. Six teachers taught in two placements, meaning when summing the number of teachers across placements, the total is 88. For that reason, the percentage of teacher assignments is computed out of 88.

Table 2

Learning Goal Quality Characteristic Variables and Definitions

Goal Quality Characteristics	Variable	Definition
Strengths-Focus	Compliance-based	A skill performed in response to a directive or behavior of another (e.g., follow adult direction to stay in seat)
	Student-directed activity	A skill performed in a context where the student directs how, when, or how often to engage in the skill during the activity if it does or does not occur (e.g., applying a comprehension strategy during independent reading task)
	Active behavior	The student interacts with the environment (people, materials) rather than tolerating, watching, waiting, sitting, or existing in a space without participating
Self-Determined Actions	Student choice	The student has an opportunity to choose behaviors, skills, materials, social partners, or when to engage in the skill (e.g., student creates response by choosing to interact with letters, pictures, or speech generating device)
	Student preference	The student accesses preferred materials, peers, skills, topic areas, or response options as part of the goal (e.g., modified text based on student's interest made available)
	Decision-making	The student is taught to make a decision, and/or the student makes a decision to complete the skill targeted in the goal (e.g., use pictures, manipulatives, quick draw to read and solve math problems)
	Problem solving	The student is taught a strategy to identify options and select a solution to a problem, and/or the student selects from a series of strategies in the context of the goal (e.g., strategies to seek assistance when device is not working; select calm down strategy that matches emotion)
	Goal setting	The student sets their own goal(s) in the classroom or community to achieve new skills targeted in the teacher-identified goal (e.g., sets goal for number of social partners across day; sets goal for accuracy in mathematics facts)
	Advocacy	The student is taught to advocate for their preferences, choices, or interests, and/or student controls the direction of their actions with instruction, materials, or social partners (e.g., student controls the direction of their actions with materials such as voice output switches)
	Self-management	The student is taught a strategy to monitor, record, evaluate, or reinforce their own performance or behavior (e.g., writing checklist; monitor off-topic social interactions with peers)
Context and Supports	Context	Goal focuses on mastery in the situation in which the targeted skill was to be applied (e.g., letter identified in context of reading materials)
	Clear supports articulated	Prompts, self-regulatory strategies, models, visual supports, or assistive technology contextualized in the goal (e.g., Given a choice board, the student will…)

Student-initiated supports	The student initiates using the support and has access to the support without another person controlling its availability (e.g., assistive technology); coded only if supports were named

Table 3

Learning Goal Availability Across Domains and Placements

Goal Availability	Total		Placement A		Placement B		Placement C		Placement D	
	N	%	*N*	%	*N*	%	*N*	%	*N*	%
Reading										
Goal Available	114	98.3	35	100.0	33	97.1	29	96.7	17	100.0
Goal N/A	1	0.9	0	0.0	1	2.9	0	0.0	0	0.0
Missing	1	0.9	0	0.0	0	0.0	1	3.3	0	0.0
Writing										
Goal Available	108	93.1	35	100.0	32	94.1	25	83.3	17	100.0
Goal N/A	7	6.0	0	0.00	2	5.9	4	13.3	0	0.0
Missing	1	0.9	0	0.00	0	0.0	1	3.3	0	0.0
Math										
Goal Available	112	96.6	35	100.0	33	97.1	27	90.0	17	100.0
Goal N/A	3	2.6	0	0.0	1	2.9	2	6.7	0	0.0
Missing	1	0.9	0	0.0	0	0.0	1	3.3	0	0.0
Social										
Goal Available	90	77.6	30	85.7	24	70.6	21	70.0	15	88.2
Goal N/A	25	21.6	5	14.3	9	26.5	9	30.0	2	11.8
Missing	1	0.9	0	0.0	1	2.9	0	0.0	0	0.0
Behavior										
Goal Available	74	63.8	25	71.4	17	50.0	16	53.3	16	94.1
Goal N/A	40	34.5	10	28.6	16	47.1	13	43.3	1	5.9
Missing	2	1.7	0	0.0	1	2.9	1	3.3	0	0.0
Communication										
Goal Available	109	94.0	32	91.4	32	94.1	28	93.3	17	100.0
Goal N/A	5	4.3	3	8.6	2	5.9	0	0.0	0	0.0
Missing	2	1.7	0	0.0	0	0.0	2	6.7	0	0.0

Note. N/A = not available.

Table 4

Percentage of Learning Goals Across Placement and Domains by Strengths-Focus

Variable	Placement	Academic			Social-Behavioral-Comm.		
		Reading	Math	Writing	Social	Behavioral	Comm.
Compliance-Based	A	2.9	2.9	2.9	11.4	20.0	11.4
	B	3.0	3.0	6.3	5.9	11.8	17.6
	C	10.3	3.7	4.0	13.3	23.3	6.7
	D	0.0	5.9	6.3	27.8	27.8	0.0
Student-Directed Activity	A	51.4	37.1	37.1	71.4	42.9	57.1
	B	45.5	66.7	46.9	58.8	38.2	47.1
	C	17.2	51.9	28.0	40.0	40.0	46.7
	D	29.4	58.8	50.0	50.0	66.7	22.2
Active Behavior	A	97.1	100.0	97.1	65.7	45.7	91.2
	B	97.0	93.9	96.9	58.8	32.4	87.8
	C	89.7	88.9	88.0	63.3	20.0	82.8
	D	82.4	100.0	100.0	61.1	27.8	88.9

Note. Comm. = Communication. See definitions for Placements A-D in Table 1.

Table 5

Percentage of Learning Goals Across Placement and Domains by Self-Determined Actions

Variable	Placement	Academic			Social-Behavioral-Comm.		
		Reading	Math	Writing	Social	Behavioral	Comm.
Student Choice	A	2.9	0.0	11.4	40.0	28.6	37.1
	B	0.0	3.0	0.0	11.8	2.9	23.5
	C	0.0	3.7	8.0	6.7	3.3	33.3
	D	0.0	5.9	12.5	0.0	5.6	38.9
Student Pref.	A	0.0	0.0	5.7	17.1	2.9	37.1
	B	0.0	0.0	0.0	8.8	0.0	14.7
	C	3.4	0.0	0.0	13.3	0.0	23.3
	D	0.0	0.0	25.0	0.0	11.1	22.2
Decision-Making	A	0.0	2.9	2.9	2.9	0.0	2.9
	B	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	3.7	4.0	0.0	0.0	0.0
	D	0.0	0.0	18.8	0.0	0.0	0.0
Problem Solving	A	0.0	0.0	0.0	2.9	2.9	0.0
	B	0.0	0.0	0.0	0.0	2.9	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0
Goal Setting	A	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0	0.0	0.0
Advocacy	A	0.0	0.0	0.0	14.3	11.4	28.6
	B	0.0	0.0	0.0	2.9	88.3	76.1
	C	3.4	0.0	0.0	6.7	6.7	23.3
	D	0.0	0.0	0.0	5.6	5.6	38.9
Self-Manage.	A	0.0	0.0	2.9	0.0	2.9	0.0
	B	0.0	0.0	3.1	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	5.6	0.0	0.0

Note. Comm. = Communication. Pref. = Preference. Self-Manage. = Self-Management. See definitions for Placements A-D in Table 1.

Table 6

Percentage of Learning Goals Across Placement and Domains by Context, Content, and Supports

Variable	Placement	Academic			Social-Behavioral-Comm.		
		Reading	Math	Writing	Social	Behavioral	Comm.
In Context	A	54.3	88.6	68.6	71.4	54.3	88.6
	B	45.5	75.8	71.9	55.9	35.3	85.3
	C	44.8	74.1	48.0	50.0	36.7	80.0
	D	70.6	88.2	56.3	55.6	61.1	66.7
Common Core Standards Grade Band Alignment	A	57.1	57.1	8.6	-	-	-
	B	33,3	39.4	6.3	-	-	-
	C	27.6	25.9	0.0	-	-	-
	D	17.6	5.9	0.0	-	-	-
CASEL Core Competencies Alignment	A	-	-	-	45.7	11.4	22.9
	B	-	-	-	23.5	2.9	2.9
	C	-	-	-	23.3	3.3	13.3
	D	-	-	-	16.7	5.6	22.2
Clear Supports Articulated	A	20.0	51.4	82.9	51.4	40.0	45.7
	B	15.2	30.3	53.1	26.5	20.6	38.2
	C	34.5	37.0	60.0	20.0	23.3	43.3
	D	64.7	41.2	56.3	33.4	27.8	61.1
Student-Initiated Supports	A	2.9	0.0	17.1	11.4	14.3	14.3
	B	3.0	0.0	9.4	2.9	5.9	14.7
	C	10.3	3.7	4.0	10.0	3.3	16.7
	D	11.8	5.9	0.0	11.1	0.0	27.8

Note. Comm. = Communication. See definitions for Placements A-D in Table 1.

Dr. Thoma (Colleen)

Thank you for the comments and feedback on our manuscript; we appreciate the chance to revise and resubmit and feel that the opportunity to address the reviewer comments significantly strengthened the manuscript. Below, we detail our responses to each reviewer comment, and we have highlighted major changes in the manuscript in track changes. We look forward to hearing back from you with regard to this revision.

The Authors

Reviewer 1 Recommendation	Response
More is needed to define a learning goal vs. IEP goal and how they would be developed and/or used. I expected the learning goals to be more lesson/unit specific; however, through the manuscript as examples were provided they were very specific; almost the same as IEP goals. Did all of the teachers have an IEP with different goals, than what they provided as 'learning goals?'	We clarified on page 1 that learning goals can also be drawn from curriculum (not necessarily a single unit or lesson), and that there is a dearth of research examining learning goals for students with complex support needs. We also acknowledge that many teachers mistakenly view the IEP as the student's curriculum, and therefore set learning goals that mirror (in some cases exactly) IEP goals.
P6 - while the table is referenced for placement across the manuscript, it may also be helpful here in same, separate special school.	We appreciated this feedback, and on p. 6 we added a description of the 4 placements given the importance of defining them throughout the manuscript.
P8 - the goal attainment scaling rubrics are mentioned, while they were also said to not be for this study - not sure why they are mentioned at all. Delete	We deleted this mention, as well as the mention on p. 6.
P15 - the data revealed that skills associated with SD were rarely present in goals within the academic goals. (Table 2 also) However, no examples are provided for example/non examples across the manuscript or within Table 2. Examples are provided across all other areas, this should be added to the definitions in Table 2, and within methods/results.	We added examples and non-examples to the results on pp. 15-18, as well as examples to Table 2.
P16 - No academic goals incorporated problem solving or goal setting. Again, examples of what would have been counted would be helpful.	We described examples of what would have been counted on p. 17-18.
Is it possible that teachers are using these strategies, goal setting, etc, but don't write it into the formal goal. For example, student is	On p. 28, we described in the limitations that we could not determine – based on the data – what strategies teachers were actually using during

participating in ELA lessons by answering WH questions and sets goals and self-monitors. However, as a teacher, I may not write this into the actual goal. Rather Student X will answer questions within ELA lesson . . .	instruction. We were only evaluating the goal. We noted that future research could further explore alignment between goals and actual instructional practices.
* Not sure about page limits, but an example/non example chart across goals coded would be helpful.	Because of page limits (as noted), we have not added another table, but we have added more examples and non-examples throughout the results, as recommended above. Should the editor feel additional information are needed, we would be happy to revise again per this request.
P17 - The context, content and supports section about Academics, seems to be based on some assumptions rather than data. For example, when discussing the math goals being practiced in context or isolation (a worksheet doesn't seem to be 'in context' and more than placing an item in a bucket - both could be part of a lesson or solely isolated without any connection to a 'real activity' in which the math skill is being practiced. This could be addressed within the discussion, as 'goals on a paper' without additional information doesn't allow a deeper understanding of how the goals were carried out.	We appreciate this feedback, and agree that coding features like being in context are challenging, with only the goal. We hope the high reliability of our codes suggests some level of agreement, but agree that it would be highly valuable in future research to better understand how instruction to support goal attainment occurred in the classroom. We added additional information about this limitation and identified this as a future direction for research on p. 28.
* P27 - The authors say their findings contribute to 'better learning goals in inclusive settings' - however, this not entirely what the data seems to be showing. Rather there is a lot of discrepancy across all settings (especially A and D). D is the most restrictive setting; and this is also where the data (Table 4) shows highest levels of active and student directed learning, sometimes even more than setting A. o The results talk about the discrepancies across settings (some where A are higher, some where D is higher) - yet the discussion is focused almost primarily on A having 'higher levels of academics, and social-behavioral-communication' alignment. o Rather - some of the very telling data is within B and C (with no goals at all in writing, math, reading). o Very interesting data with some of the major strengths found in the complete opposite	We appreciate this feedback, and agree that there were some discrepancies across settings, although when looking across all codes, we believe that there was more focus on academic and social-behavioral-communication competencies in the most inclusive setting. However, we attempted to better describe the nuance on p. 29 by highlighting some of the areas where there were discrepancies. We appreciate the identification of some areas that stand out in review the tables and data available.

settings (A and D) - what does that mean, and why might this be? -	