Benefits of Tier 1 Instructional Strategies for High School Students

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Abstract

This mixed-methods capstone investigated high school students' academic, social-emotional, behavioral, and executive-functioning needs and examined how tier 1 instructional practices aligned with SEL, UDL, and MTSS may better address those students' needs. Prompted by a Section 504 prevalence nearly three times the New Hampshire state average, the study analyzed three years of 504 accommodation patterns and surveyed 60 educators regarding student needs and their familiarity with tier 1 frameworks. Quantitative findings showed substantial overlap between commonly assigned 504 accommodations and instructional strategies educators believed should be universal, particularly organizational tools, chunked tasks, flexible assessments, and regulation supports. Qualitative themes highlighted widespread attention and executive-function challenges across classrooms. Results indicated that inconsistent tier 1 design—not increased disability incidence—likely has contributed to elevated 504 referrals. Strengthening tier 1 through integrated SEL, UDL, MTSS implementation, professional learning, and fidelity structures may reduce unnecessary identification and improve equitable access to supports.

Keywords: tier 1 design, Section 504, social-emotional learning (SEL), universal design for learning (UDL), multi-tiered systems of support (MTSS)

The rapid expansion of Section 504 plans (accommodations for students with disabilities that do not alter curriculum) in schools in the United States has raised critical questions about equity, access, and identification practices. In New Hampshire—where rates are among the highest in the nation—these concerns are especially urgent (Zirkel & Gullo, 2024). At one comprehensive high school in southeastern New Hampshire, Section 504 rates have remained consistently and substantially above the state average. Nationally, Section 504 prevalence increased from 1.02% in 2009–2010 to 3.26% in 2020–2021 (Zirkel & Gullo, 2024, p. 934). In contrast, New Hampshire's rates have remained more than double the national average for over a decade, rising from 5.47% in 2013–2014 to 7.76% in 2021–2022 (Zirkel & Gullo, 2024, p. 934; Zirkel & Huang, 2018, p. 9). Locally, the school examined in this study reported Section 504 rates of 15.30% in 2022–2023, 15.48% in 2023–2024, 13.82% in 2024–2025, and 13.9% in 2025–2026 (Alma Technologies, 2025).

Though these figures have suggested a persistent higher than state average trend, they have not illuminated the systemic, instructional, or perceptual factors driving this growth. Existing research has underscored longstanding inconsistencies in evaluation, eligibility interpretation, and school-level implementation that contribute to state-level disparities (Holler & Zirkel, 2008; Zirkel & Gullo, 2024; Zirkel & Huang, 2018). Yet little is known about how teachers' perceptions of student needs, their understanding of evidence-based instructional frameworks, or the strength of tier 1 instruction may shape referral patterns. This gap has highlighted the need for local, context-specific inquiry.

An initial review of Section 504 plans at the study site revealed that many accommodations—such as check-ins for understanding, chunked assignments, organizational tools, and flexible workspaces—represent strategies that contemporary instructional frameworks

recommend for all learners (CAST, 2024). This observation redirected the investigation from a narrow analysis of 504 prevalence toward a broader examination of how universal design and whole-child models might support students more effectively. Three complementary frameworks—social and emotional learning (SEL, CASEL, 2020), universal design for learning (UDL, CAST, 2024), and multi-tiered systems of support (MTSS, Thurlow et al., 2020)—provide a coherent foundation for designing inclusive, accessible tier 1 instruction that anticipates rather than reacts to learner variability.

What began as a concern about high Section 504 identification thus evolved into a larger inquiry into educators' perceptions of student needs, their conceptual understanding of SEL (CASEL, 2020), UDL (CAST, 2024), and MTSS (Thurlow et al., 2020), and the tier 1 practices they view as essential for supporting diverse learners. By integrating these perspectives with Section 504 data and an analysis of common accommodations, this study seeks to understand whether strengthening tier 1 instruction may reduce unnecessary reliance on individualized plans and increase equitable access to supports (Tucker, 2025, January 15).

Accordingly, the purpose of this study is to examine how educators conceptualize student needs and how their understandings of SEL (CASEL, 2020), UDL (CAST, 2024), and MTSS (Thurlow et al., 2020) inform the instructional practices they employ. This inquiry aims to illuminate the systemic, pedagogical, and perceptual factors contributing to Section 504 identification patterns and to generate evidence that can guide professional learning, promote instructional coherence, and strengthen schoolwide capacity.

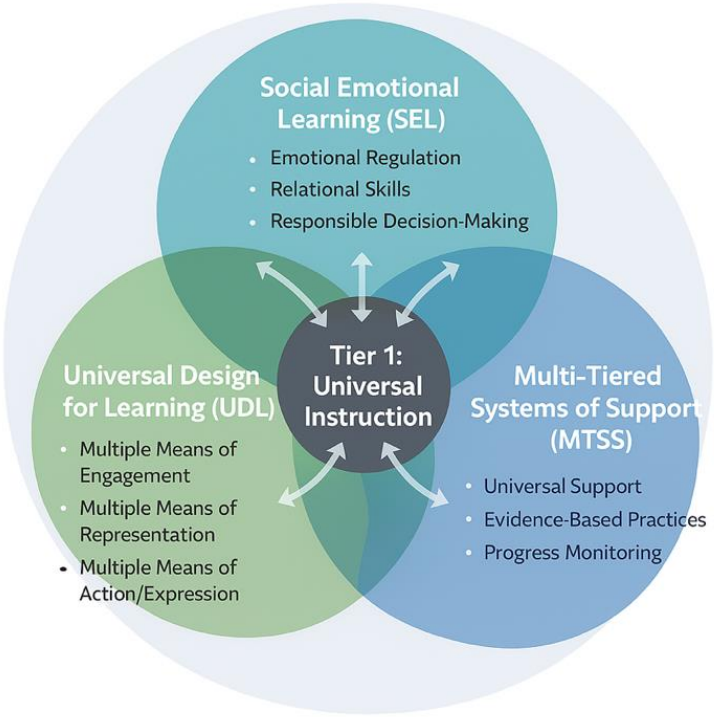
Literature Review

Contemporary students are developing under markedly different conditions than those experienced by previous generations. As opportunities for free play, independent exploration,

and unstructured peer interaction have declined, digitally mediated and adult-managed activities have become dominant (Haidt, 2024). This shift—paired with early and persistent exposure to social media—has contributed to increases in anxiety, attentional difficulties, and other mental health concerns that directly affect students' readiness for learning (Haidt, 2024). These developmental patterns highlight the need for instructional systems that proactively address learner variability rather than relying on reactive, individualized responses (CAST, 2024). SEL (CASEL, 2020), UDL (CAST, 2024), and MTSS (Thurlow et al., 2020) provide complementary frameworks for understanding learning as the interaction between student readiness, instructional design, and systemic supports. Taken together, these models offer an integrated foundation for inclusive and adaptive schooling (see Figure 1).

Figure 1

Integration of SEL, MTSS, and UDL



Note. Figure 1 created using ChatGPT (Open AI, 2025) based on the author's framework.

A growing body of research on adolescent development has underscored the urgency of such frameworks. Adolescents today exhibit rising rates of anxiety, depression, diminished self-worth, and self-harming behaviors (Borg et al., 2025). Youth are negatively influenced by digital harassment, academic pressure, and constant exposure to global crises (Conti, 2025). Haidt (2024) identified early digital immersion, reduced autonomy, and limited opportunities for independent problem-solving as factors that disrupt executive functioning and emotional resilience. Hyperconnectivity often results in dysregulation and mental fatigue, diminishing students' capacity to engage with curriculum effectively (Haidt, 2024).

Scholars also noted shifts in how adolescents interpret their academic experiences. Many overattribute success or difficulty to external factors, particularly teacher relationships and instructional quality, rather than to personal agency or sustained effort (Horanicová et al., 2024). Longitudinal data has shown continued increases in adolescent anxiety and depressive symptoms, driven more by acute stressors than chronic disorders, with the COVID-19 pandemic and heightened digital exposure functioning as accelerants (Borg et al., 2025). Although debate persists regarding the magnitude of these generational changes, consensus holds that heightened emotional dysregulation, attention-related challenges, and motivation variability now substantially affect schooling. These trends highlight the necessity of school-based frameworks that strengthen emotional regulation, relational competence, and responsible decision-making. SEL (Haidt, 2024) addresses these needs by cultivating intrapersonal and interpersonal competencies foundational to student learning and productive participation in their community (see Figure 2). Evidence has demonstrated that SEL implementation improved academic performance, reduced behavioral challenges, and enhanced school climate (Durlak et al., 2025). CASEL's (2020) core competencies—self-awareness, self-management, social awareness,

relationship skills, and responsible decision-making—align with research on executive functioning and socio-cognitive development, positioning SEL as a structural framework for academic success (Durlak et al., 2022; Immordino-Yang et al., 2018). However, its effectiveness varies widely, conditioned by implementation fidelity, teacher preparation, and resource availability. These constraints underscore the importance of embedding SEL within broader, coordinated instructional systems (CASEL, 2020).

Figure 2

Interactive CASEL Wheel

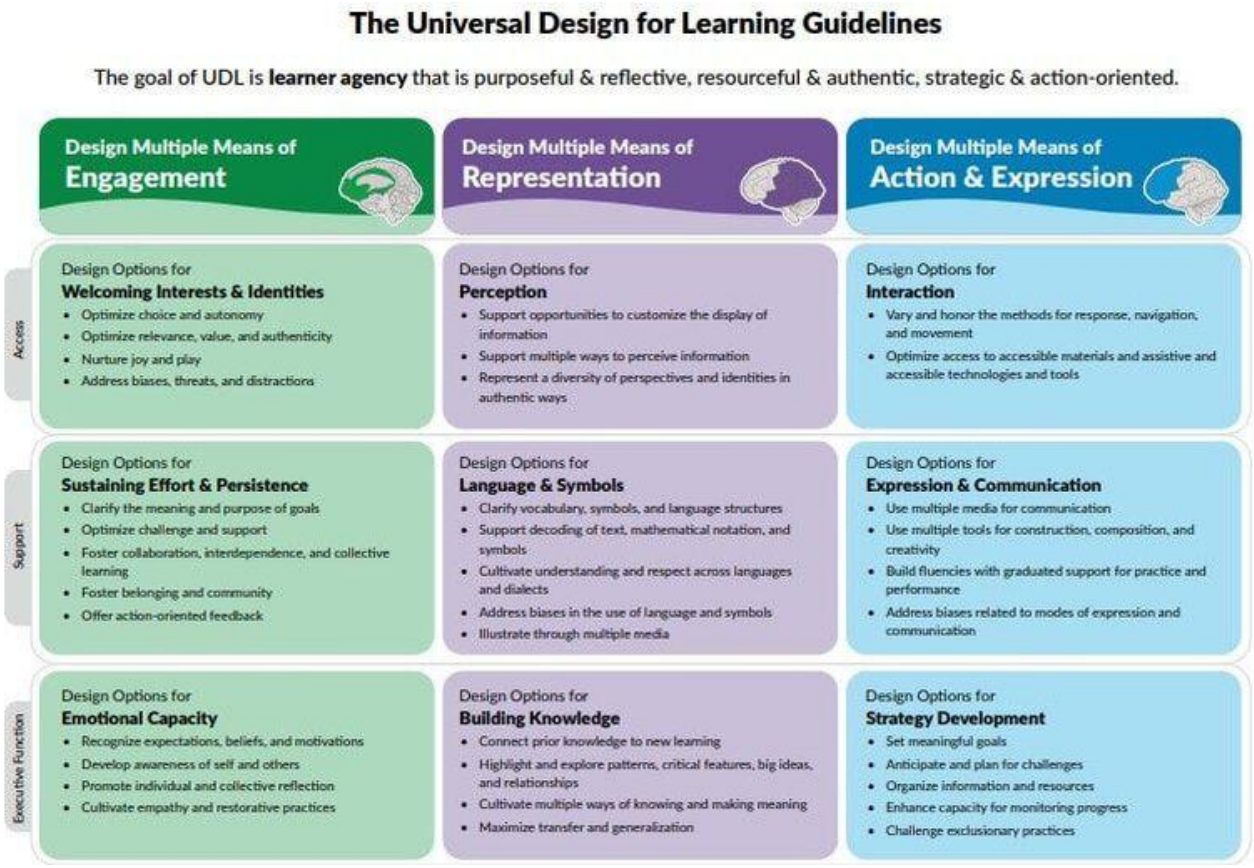
Note. Source—CASEL (2020)

UDL (CAST, 2024) complements SEL (CASEL, 2020), by addressing structural barriers to learning. Rather than designing instruction around a presumed "average" learner, UDL

promotes anticipatory planning that accommodates learner variability from the outset (Thomas et al., 2023). Grounded in cognitive neuroscience and disability studies, UDL frames learning challenges not as deficits within students but as mismatches between rigid instruction and diverse learner needs (Chen, 2008). Its three core principles—multiple means of engagement, representation, and action/expression—conceptualize accessibility as a design priority (see Figure 3).

Figure 3

The Universal Design for Learning Guidelines (CAST, 2024)

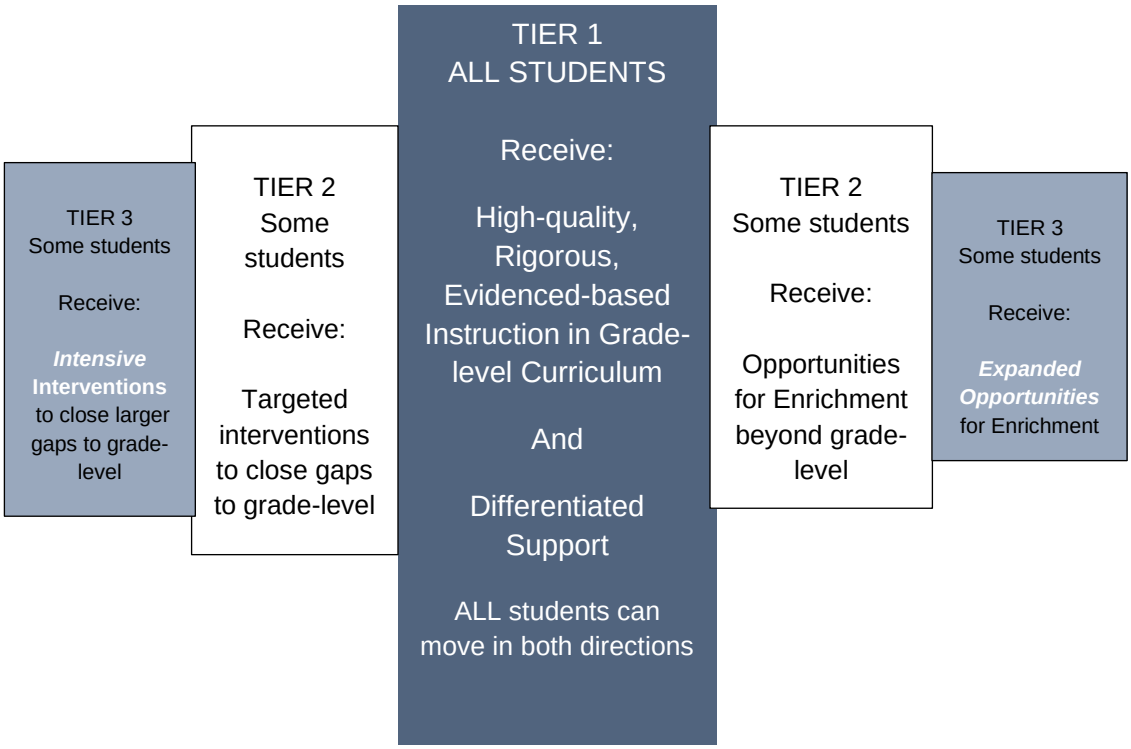


MTSS (Tucker, 2025, January 7) situates these instructional and relational components within a coherent organizational structure (see Figure 4). Though MTSS originated as a

framework for students whose academic needs did not meet criteria for special education, contemporary models position MTSS as a universal, prevention-oriented system designed to support all students (Thurlow et al., 2020). An effective tier 1 strategy must deliver high-quality, evidence-based instruction that meets the needs of roughly 80% of students; when this threshold is unmet, academic and behavioral interventions become overextended. Thus, both SEL and UDL meaningfully strengthen tier 1 by promoting relationally integrated, accessible, and flexible instruction (Thomas et al., 2023). MTSS provides the structural architecture needed to integrate these practices through early identification of needs, targeted interventions, and continuous progress monitoring (Tucker, 2025, January 15). Despite its promise, MTSS implementation remains inconsistent, particularly in under-resourced schools or those serving highly diverse populations (Thurlow et al., 2020).

Figure 4

MTSS Process



Together, SEL (CASEL, 2020), UDL (CAST, 2024), and MTSS (Thurlow et al., 2020) represent interdependent elements of a unified educational framework. SEL develops the emotional and social competencies that underpin learning readiness; UDL ensures that instruction is accessible and responsive to learner variability; and MTSS organizes these practices into a coherent systemwide model supported by evidence-based decision-making. As with academic interventions, SEL practices within an MTSS structure rely on clear, consistent expectations and relationally grounded communication to shape a positive school climate (Thurlow et al., 2020). When integrated, the three frameworks mutually reinforce one another, advancing both academic success and social-emotional well-being through coordinated attention to student needs, instructional design, and systemic organization (Immordino-Yang, et al., 2018; Thurlow et al., 2020).

Developing agreed-upon tier 1 practices within a school culture that strives to create a unified image and system of supports to create positive development of personal interactions and consistent expectations throughout the building has been shown to decrease disciplinary referrals and increase graduation rates (Bruhn, et al., 2022). In a 2019 study of 9th grade students, researchers found that students, who received explicit instruction in goal setting, decision making, problem solving, as well as study skills and test taking strategies, demonstrated statistically significant positive results in motivation and engagement, credits earned, and school attendance when compared with peers who did not receive this instruction (Flannery et al., 2020). These studies have demonstrated the positive implications of thoughtful, systemic tier 1 implementation.

For the present study, tier 1 implementation is of particular importance. As the universal instructional core, tier 1 must be simultaneously rigorous, inclusive, and accessible. Weak tier 1

systems lead higher tiers to operate reactively rather than proactively, overwhelming resources and exacerbating inequities. Strengthening tier 1 is therefore not merely procedural but theoretically essential for achieving comprehensive support for all learners. Understanding how tier 1 practices shape students' academic and social-emotional experiences provides critical insight into the intersection of emotional development, instructional design, and systemic organization—an intersection that increasingly defines contemporary schooling (CAST, 2024; Immordino-Yang et al., 2018; Thurlow et al., 2020).

Methodology

Purpose of the Study

This study investigated the academic, social, emotional, and behavioral needs of high school students as identified by educators, as well as educators' self-assessed familiarity with the complementary frameworks of SEL (CASEL, 2020), UDL (CAST, 2024), and MTSS (Thurlow et al., 2020). The work was prompted by the school's Section 504 prevalence, nearly three times the New Hampshire state average, which raised significant questions regarding whether tier 1 instruction adequately meets the needs of the general student population (Zirkel & Gullo, 2024). To address this concern, in this study, I analyzed Section 504 accommodations, compared them with educator-endorsed tier 1 instructional strategies, and identified areas where universal practices may reduce unnecessary reliance on disability-based supports.

In addition, I examined the professional learning structures, progress-monitoring systems, and organizational capacity required for sustained, high-fidelity implementation of tier 1 practices. An overarching aim was to determine whether strengthened tier 1 systems could improve instructional equity, enhance universal access to supports, and reduce the

disproportionate number of Section 504 referrals, consistent with whole-child and ecological models of learning (CAST, 2024; Darling-Hammond et al., 2020).

Hypothesis

In the study, I hypothesized that a substantial proportion of accommodations documented in Section 504 plans would overlap with educator-endorsed tier 1 instructional practices aligned with SEL (CASEL, 2020), UDL (CAST, 2024), and MTSS (Thurlow et al., 2020), suggesting that strengthening tier 1 coherence may reduce reliance on individualized accommodations over time. Additionally, there is potential to increase educator instructional capacity and consistency through collaboration.

Research Questions

The investigation was guided by four central research questions:

1. Student Needs: What student needs are most frequently diagnosed, perceived, or observed by educators?

2. Tier 1 Practices: Which tier 1 instructional strategies do educators consider most effective for addressing these needs, and how do these strategies align with SEL (CASEL, 2020), UDL (CAST, 2024), and MTSS (Thurlow et al., 2020)?

3. Professional Learning: What professional development and administrative supports are necessary to implement and sustain effective tier 1 instructional practices?

4. Data Use: How can meaningful quantitative and qualitative data be collected and assessed efficiently to inform instructional practice and systemic decision-making?

Research Goals

In this study I aimed to (a) develop a coherent set of tier 1 instructional strategies aligned with evidence-based SEL (CASEL, 2020), UDL (CAST, 2024), and MTSS (Thurlow et al.,

2020) principles; (b) enhance student readiness, engagement, and belonging through universally designed instruction; (c) articulate a professional learning plan to support consistent implementation; and (d) identify potential system-level benefits, including improved academic and behavioral outcomes, increased instructional coherence, and a reduction in unnecessary Section 504 referrals.

Design and Methods

This study employed a mixed-methods design (Creswell & Guetterman, 2025) to develop a comprehensive understanding of student needs and educator perspectives on tier 1 instruction. Quantitative data consisted of Section 504 prevalence rates and accommodation patterns extracted from the school's student information system for the 2022–2023 through 2025–2026 academic years. These data provided a descriptive profile of identification trends and the most frequently documented accommodations at a single, comprehensive high school in southeastern New Hampshire.

Qualitative data were collected through an anonymous electronic survey distributed to approximately 175 certified and non-certified educators, including classroom teachers, special educators, counselors, and instructional support staff (see Table 1). A total of 60 respondents completed the survey, yielding a response rate of 34.3%. The survey instrument was designed to capture educator perceptions of student academic, social-emotional, behavioral, and executive-functioning needs, as well as their familiarity with and use of tier 1 instructional practices aligned with SEL (CASEL, 2020), UDL (CAST, 2024), and MTSS (Thurlow et al., 2020). Survey items incorporated DSM-5 descriptors associated with anxiety and attention-related impairments—conditions frequently represented in Section 504 plans during the 2025–2026 school year (American Psychiatric Association, 2013). Additional items were adapted from

The Elements of Effective Instruction (Great Schools Partnership, 2025) and Reimagining MTSS Through UDL: A Practice Profile (McSheehan & Nelson, 2019), ensuring alignment with established frameworks for high-quality tier 1 practice. The instrument included a four-point Likert scale (ranging from "minimal" to "pervasive" or "never" to "frequent," depending on the item) and targeted open-ended prompts designed to elicit contextual detail about observed student needs and classroom supports.

Table 1

Respondents' Years in Education

Years of service	*n*
0–5 years	3
6–10 years	4
11–20 years	24
20+ years	29

Note. $n = 60$

Data analysis proceeded in parallel for quantitative and qualitative strands. Descriptive statistics were used to summarize Section 504 accommodation frequencies and survey response patterns, with particular attention to overlap between formal accommodations and teacher-endorsed tier 1 strategies. Qualitative responses were coded inductively to identify recurring themes related to attention, executive functioning, emotional regulation, instructional level differences, and perceived system gaps. Findings from both data sources were then triangulated and interpreted in relation to existing SEL, UDL, and MTSS structures at the school to identify points of alignment, areas of inconsistency, and opportunities for targeted professional learning.

Results

The purpose of this study was to identify high school students' academic, social-emotional, behavioral, and executive-functioning needs; determine which tier 1 instructional practices educators considered most effective in addressing those needs; and examine how these practices align with the complementary frameworks of SEL (CASEL, 2020), UDL (CAST, 2024), and MTSS (Thurlow et al., 2020). A further aim was to explore whether strengthening tier 1 instruction may help reduce the school's disproportionately high rate of Section 504 referrals and plans.

Table 2 presents educator self-ratings of their familiarity with SEL. Patterns in the quantitative data revealed a clear developmental relationship between years of experience and confidence in implementing SEL-, UDL-, and MTSS-aligned practices. Educators with 11–20 or 20+ years of experience were substantially more likely to report that they routinely utilize or feel prepared to implement all three frameworks (see Tables 2–4). In contrast, early-career educators (0–5 years) most frequently reported introductory exposure or unfamiliarity, particularly with UDL and MTSS. These findings aligned with research demonstrating that pedagogical expertise develops through iterative cycles of practice, reflection, and collaboration (Darling-Hammond et al., 2020).

Table 2

Educator Understanding of SEL by Years of Experience

Years of experience	Unfamiliar	Introduced	Ready to implement	Implementing	Routinely utilize
0–5 years	0	1	1	1	0
6–10 years	0	2	1	0	2

Years of experience	Unfamiliar	Introduced	Ready to implement	Implementing	Routinely utilize
11–20 years	0	5	7	8	11
20+ years	0	11	7	7	13

Note. SEL = social and emotional learning.

Across experience levels, UDL emerged as the least understood framework. Even veteran educators reported high frequencies of "introduced but need more training" or "unfamiliar" responses (see Table 3), reflecting national patterns in which UDL implementation often lacks coherence and sustained professional development (CAST, 2024). SEL demonstrated the strongest systemwide adoption, likely reflecting its accessibility for daily instructional use and the intensified focus on student well-being in the post-pandemic era (CASEL, 2020; Durlak et al., 2022; Domitrovich et al., 2008). MTSS fell between these two patterns (see Table 4)—more familiar than UDL but less consistently internalized than SEL—echoing national findings at the secondary level (Thurlow et al., 2020).

Table 3

Educator Understanding of UDL by Years of Experience

Years of experience	Unfamiliar	Introduced	Ready to implement	Implementing	Routinely utilize
0–5 years	1	1	1	0	0
6–10 years	0	1	2	0	2
11–20 years	1	4	7	4	14
20+ years	2	9	7	7	14

Table 4

Educator Understanding of MTSS by Years of Experience

Years of experience	Unfamiliar	Introduced	Ready to implement	Implementing	Routinely utilize
0–5 years	1	2	0	0	0
6–10 years	0	2	1	1	0
11–20 years	0	10	5	3	6
20+ years	0	10	6	7	6

Note. MTSS = multi-tiered system of supports

Beyond their own familiarity with frameworks, educators rated the frequency and instructional impact of a range of attention, executive-functioning, and behavioral regulation indicators. These patterns revealed that such challenges were not isolated to a small subset of students but were widespread across classrooms (see Table 5).

Table 5

Conclusions Derived From Attention and Executive-Functioning Ratings

Area of need	Evidence from ratings	Assumptions about student functioning	Tier 1 implications
Attention & focus	High Occasional and Frequent ratings across items (e.g., maintaining focus, distractibility, redirection)	Attention difficulties are widespread and interfere with instruction for many students.	Tier 1 needs built-in routines for attention, pacing, chunking, and active engagement.
Executive functioning	Several items show high frequent and notable pervasive ratings (planning, sequencing, task initiation, organization)	EF deficits significantly impact academic performance and are a major barrier to independence.	Universal EF supports such as organizers, modeling, checklists, and chunked tasks should be consistently embedded.

Area of need	Evidence from ratings	Assumptions about student functioning	Tier 1 implications
Processing speed & working memory	High occasional but low pervasive ratings for extended processing/response time	Most students benefit from more time and repetition, but do not show severe impairment.	Tier 1 should include predictable routines, wait time, repeated cues, and multi-modal instruction.
Task completion & work production	Frequent ratings for incomplete work, difficulty meeting deadlines, inconsistent performance	Work avoidance stems from cognitive load, not motivation; students need structured supports.	Tier 1 must incorporate scaffolding, guided practice, and clear expectations.
Behavioral regulation	Frequent impulsivity and distractibility noted across grade levels	Behavioral challenges reflect regulation deficits rather than intentional misconduct.	SEL-aligned routines for regulation, goal-setting, and self-monitoring should be universal.
Instructional variability impact	Needs occur across classrooms and groups, not just among students with 504s	Challenges are systemic, not isolated; Tier 1 inconsistency likely drives accommodation requests.	Schoolwide coherence in SEL–UDL–MTSS implementation is essential.
Section 504 patterns	Overlap between rated needs and common 504 accommodations	Many needs currently treated as disability-related could be addressed universally.	Strengthening tier 1 can reduce unnecessary Section 504 referrals.

Note. Information derived from survey respondents.

Most indicators clustered within the occasional and frequent ranges, suggesting regular interference with learning. Executive functioning deficits—particularly task initiation, sequencing, planning, and organization—received the highest number of pervasive ratings, indicating that these needs substantially disrupt classroom functioning. In contrast, items involving processing speed, working memory, and response time showed high occasional but

low “Pervasive” ratings, implying that many students benefitted from predictable pacing, scaffolded tasks, and repeated cues rather than disability-based interventions.

Taken together, these findings indicated that many student struggles reflect systemic instructional mismatches, not disability-specific needs. When tier 1 structures are inconsistent or underdeveloped, predictable needs related to attention, organization, and regulation are more likely to be externalized into Section 504 accommodation requests. This dynamic contributed to inflated identification rates even when the underlying needs could be addressed universally through strengthened tier 1 designs.

A comparison of Section 504 accommodations with educator-endorsed tier 1 strategies (see Table 6) revealed substantial overlap. Common 504 accommodations (e.g., check-ins for understanding, chunked assignments, organizational supports, and flexible assessment options) were also identified by educators as essential daily instructional practices. This alignment suggested that many supports formalized through 504 plans represent strategies that should exist universally within tier 1 instruction.

Yet the analysis also revealed gaps. Organizational tools, written directions, and checklists appeared in 14–25% of Section 504 plans, despite 60–88% of educators identifying them as essential student needs. Emotional regulation supports showed similar discrepancies. These disparities indicated that core executive-functioning and SEL-related needs extended far beyond students with formal plans, reinforcing the argument that tier 1 inconsistencies—not disability prevalence—drive elevated 504 rates.

Table 6

Comparison of Section 504 and Educator-Endorsed Tier 1 Instructional Strategies

Section 504 accommodation	% Plans	Parallel tier 1 strategy	% Educators endorsing	Tier 1 implication
Check-ins for understanding	62.33% (96)	Checks for understanding	85%	Should be embedded as Tier 1 routine.
Short breaks	43.5% (67)	Opportunities for breaks/movement	50%	Supports regulation; can reduce 504 requests.
Extended time	53.24% (82)	Flexible timing	48.3%	Need universally flexible assessment windows.
Chunking assignments	34.41% (53)	Task chunking	70%	Should be standard tier 1 practice.
Access to counselor/nurse	24.67% (38)	Help-seeking routines	63.3%	Supports SEL and destigmatizing support.
Preferential seating	34.41% (53)	Strategic seating	60%	Attention-supportive seating should be proactive.
Alternate workspace	25.32% (39)	Flexible workspaces	30%	Tier 1 may need environmental redesign.
Graphic organizers/checklists	24.67% (38)	Organizers and checklists	88.3%	Strong case for universal EF supports.
Cues to stay on task	13.63% (21)	Prompting, reminders	40%	Embed self-monitoring strategies.
Alternative assessments	12.34% (19)	Flexible assessment pathways	60%	Strong support for UDL-aligned assessments.
Written instructions	14.28% (22)	Written directions/notes	60%	Predictable, accessible materials needed.

Note. Percentages reflect survey comparisons between Section 504 accommodations and educator-endorsed tier 1 practices.

The findings also displayed notable variability in educators' perceived readiness to implement SEL (CASEL, 2020), UDL (CAST, 2024), and MTSS (Thurlow et al., 2020). While experienced educators reported greater confidence, early-career teachers frequently indicated unfamiliarity or limited training. Because new teachers play a central role in delivering tier 1 instruction, and experience high turnover rates, these gaps highlighted the need for structured onboarding and sustained professional learning.

Ultimately, the data across all sources pointed to a consistent conclusion: the school's elevated Section 504 identification rate reflected systemic inconsistencies in tier 1 instructional design rather than an increase in disability prevalence. Educators valued tier 1 practices and recognized their importance, but uneven training, variable experience levels, and limited understanding of UDL contributed to fragmented implementation. Strengthening tier 1 through coherent, schoolwide professional learning in SEL (CASEL, 2020), UDL (CAST, 2024), and MTSS (Thurlow et al., 2020) is therefore essential to ensuring equitable instructional access and reducing unnecessary reliance on individualized accommodations. Taken together, the findings indicated that the school's elevated Section 504 rate was less a reflection of increased disability prevalence and more a symptom of inconsistent tier 1 instructional design.

Integration of Qualitative Findings by Research Question

RQ1: Student Needs

Analysis of both quantitative ratings and qualitative comments revealed that academic, behavioral, and executive-functioning needs were widespread across the student population, not confined to those with documented disabilities. Educators reported frequent challenges with attention, task initiation, organization, persistence, and emotional regulation—patterns consistent with national research on post-pandemic adolescent development. These findings suggested that

many classroom barriers stemmed from predictable developmental needs and instructional mismatches rather than disability-specific conditions, reinforcing the necessity of strong universal tier 1 supports.

RQ2: Effective Tier 1 Strategies

Educators identified a consistent set of tier 1 practices (e.g., check-ins for understanding, chunking of assignments, organizational supports, written instructions, flexible seating, and alternative assessments) as most effective in addressing student needs. Notably, these practices closely mirrored the accommodations most frequently included in Section 504 plans. The strong overlap indicated that many formally documented accommodations reflect strategies that educators believe should be available to all students as part of high-quality tier 1 instruction.

RQ3: Alignment With SEL, UDL, and MTSS

The tier 1 strategies endorsed by educators aligned closely with the core components of SEL (CASEL, 2020), UDL (CAST, 2024), and MTSS (Thurlow et al., 2020). Organizational and scaffolding supports reflect UDL's principles of engagement, representation, and action/expression. Strategies related to regulation, relationships, and help-seeking paralleled CASEL's social-emotional competencies. Predictable routines, differentiated supports, and progress-monitoring elements aligned with MTSS tier 1 expectations. These intersections demonstrated that teachers intuitively gravitated toward SEL–UDL–MTSS-aligned practices, even when their formal knowledge of the frameworks varied.

RQ4: Potential to Reduce Section 504 Plans

Given the substantial overlap between Section 504 accommodations and universally endorsed tier 1 practices, strengthening tier 1 instruction holds clear potential to reduce unnecessary referrals. The most striking example—organizers and checklists appeared in only

14–25% of 504 plans but were endorsed by 88.3% of educators as essential, illustrating how gaps in universal instruction may be misinterpreted as disability-related needs. Improved tier 1 coherence, consistency, and professional learning could therefore mitigate inflated 504 identification and promote equitable access to support.

Discussion

Recommendations for Future Research and Practice

The study's findings indicated several areas for continued investigation and practical action. The following recommendations provide direction for researchers, practitioners, and school leaders seeking to strengthen tier 1 systems and address disproportionate Section 504 identification.

1. Strengthen Tier 1 Instruction Through Integrated SEL, UDL, MTSS Design

Future efforts should prioritize universally designed tier 1 practices that proactively address attention, executive-functioning, and regulation needs. Professional learning should focus on UDL-aligned scaffolds for engagement, action and expression, and representation; SEL routines for regulation and belonging; and MTSS decision rules for consistent implementation. High-frequency strategies such as chunking, organizational supports, and flexible assessment pathways should be explicitly embedded in daily instruction.

2. Establish Professional Learning Communities as the Core of Tier 1 Improvement

Professional learning communities (PLCs) should engage in shared inquiry, analysis of student work, calibration of expectations, and collaborative UDL lesson design. These structures can reduce instructional variability, promote coherence, and build collective efficacy. PLCs also provide an ongoing forum for aligning tier 1 practices with MTSS and SEL frameworks.

3. Expand Co-Teaching and Collaborative Planning Structures

Purposeful co-teaching assignments, supported by dedicated planning time and training in evidence-based instructional models, can increase access to tiered supports and reduce reliance on formal accommodations. Co-teaching offers an effective mechanism for embedding UDL and SEL strategies into the general education environment.

4. Provide Instructional Coaching to Improve Fidelity

Instructional coaching offers sustained, job-embedded guidance that bridges the gap between knowledge and implementation. Coaching can support differentiation, UDL-aligned design, SEL routines, and MTSS progress monitoring, ensuring more consistent tier 1 delivery across classrooms.

5. Develop Tier 1 Fidelity Tools and Progress Monitoring Systems

Schools should establish clear expectations for what tier 1 instruction should look like, supported by checklists, observation tools, and common formative assessments. These structures can create transparency, guide professional learning, and help educators to self-reflect and leaders and teams to monitor implementation without adding unnecessary burden. To facilitate and assess fidelity to the initiatives, a self-reflection tool and student check-in survey are offered in Appendix B and Appendix C.

6. Offer Training on Section 504 Eligibility and Legal Standards

Educators should receive training on distinguishing universal supports from disability-based accommodations, interpreting documentation, and documenting tier 1 interventions prior to initiating referrals. Clarifying these distinctions strengthens equity and reduces inappropriate identification.

7. Conduct Future Research on Tier 1 Strengthening and 504 Patterns

Longitudinal and multi-site studies should explore how tier 1 improvements affect academic, behavioral, and SEL outcomes; whether executive function supports reduce referrals; how educator beliefs influence accommodation decisions; and how universal practices impact students without formal plans. These lines of inquiry will further illuminate the system-level factors driving 504 identification patterns.

Limitations

As with any mixed-methods design, several limitations should be noted when interpreting the results. Because the study relied on educator self-report measures, responses may reflect subjective perceptions or individual interpretation of survey items rather than objective indicators of practice. The brevity of many qualitative comments also constrained the depth of thematic analysis, limiting the extent to which nuanced perspectives could be explored. In addition, practical factors such as time, workload, and resource availability within the school context may influence the feasibility of implementing identified tier 1 practices. Due to the relatively small sample size, it would be inappropriate to generalize results. While the findings are specific to a single comprehensive high school, the methodological approach—combining Section 504 pattern analysis with educator perceptions of SEL (CASEL, 2020), UDL (CAST, 2024), and MTSS (Thurlow et al., 2020)—offers a transferable model for other schools seeking to examine and strengthen their tier 1 instructional systems.

Conclusion

This study examined high school educators' perceptions of student needs, the tier 1 practices they considered most effective, and the degree to which these practices aligned with SEL (CASEL, 2020), UDL (CAST, 2024), and MTSS (Thurlow et al., 2020) frameworks. The

analysis was motivated by the school's disproportionately high Section 504 prevalence and the broader national increase in 504 identifications.

Across all data sources, a consistent narrative emerged. Many accommodations formalized through Section 504 plans, such as check-ins, chunked assignments, organizational supports, flexible seating, and alternative assessments, are strategies that educators in this study overwhelmingly indicated should exist universally within tier 1 instruction. This convergence suggested that the school's elevated 504 rate reflects gaps in tier 1 instructional design rather than an increase in disability prevalence.

Educators also described widespread attention, executive-functioning, and self-regulation challenges, particularly in ninth grade and academic-level courses. These patterns mirrored current research on adolescent development in a digitally saturated, post-pandemic context (Haidt, 2024). When tier 1 instruction does not proactively support these predictable needs, formal accommodations become a reactive mechanism for accessing supports that should be available to all students.

The study affirms the importance of integrating SEL (CASEL, 2020), UDL (CAST, 2024), and MTSS (Thurlow et al., 2020) as the conceptual and practical foundation for coherent tier 1 instruction. SEL provides competencies essential for readiness and regulation, UDL offers a blueprint for designing accessible learning experiences, and MTSS supplies the systemic structures necessary for early intervention and consistency. Together, these frameworks offer a powerful model for strengthening tier 1 and reducing unnecessary reliance on individualized accommodations.

Ultimately, this study underscored that effective tier 1 instruction is not a collection of isolated strategies but a systemwide commitment to equitable, universally designed teaching. By

prioritizing shared instructional norms, coherent professional learning, and consistent implementation, schools can better meet the diverse needs of contemporary learners and create environments where all students can thrive without requiring formal identification to access appropriate supports (Friziellie et al., 2025).

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Appendix A

Ratings for Attention, Executive Functioning, and Behavioral Regulation Indicators

1- Minimal: Rarely observed; Little to no impact; May or may not occur in daily class.

2- Occasional: Sometimes interferes; Manageable; May occur daily with little to no impact on learning

3- Frequent: Regularly interferes with academic functioning; Inhibits classroom environment

4- Pervasive: Severely limits instruction; Behavior management significantly impedes learning

Students	**1**	**2**	**3**	**4**
demonstrate difficulty maintaining focus during instruction.	6	28	26	0
require frequent redirection to stay on task.	6	28	24	2
appear easily distracted by peers, sounds, or internal thoughts.	3	29	27	1
avoid tasks requiring sustained mental effort.	2	36	17	5
struggle to complete independent tasks without support.	7	29	23	1
have difficulty organizing thoughts to begin tasks.	10	31	18	1
struggle with planning or sequencing steps	10	31	18	1
frequently act impulsively or answer without thinking.	10	26	21	3
require extended time to process information.	9	37	14	0
require extended time to respond to questions.	10	39	11	0
need repeated cues to recall or apply concepts.	4	33	23	0
demonstrate inconsistent academic performance.	8	34	18	0
forget instructions or misplace work/materials.	8	39	11	2
require frequent reteaching or clarification.	5	37	17	1
have difficulty completing assignments on time.	7	34	17	2
perform below cognitive ability due to lack of focus.	7	37	15	1

Appendix B

Tier 1 Self-Reflection Fidelity Tool

Aligned with SEL • UDL • MTSS

Section A: Classroom Environment & Culture (SEL-Aligned

Indicator	Fully Implemented	Partially Implemented	Not Yet Implemented
Clear, predictable routines are in place for transitions, work time, and group tasks.	☐	☐	☐
Classroom expectations are explicitly taught, modeled, and reinforced.	☐	☐	☐
Teacher uses relationship-building practices (greetings, check-ins, positive narration).	☐	☐	☐
Students have access to regulation strategies (movement, breaks, breathing, tools).	☐	☐	☐

Evidence/Notes:

Section B: Instructional Design & Delivery (UDL-Aligned)

Indicator	Fully Implemented	Partially Implemented	Not Yet Implemented
Lessons include **multiple means of engagement** (choice, relevance, collaboration).	☐	☐	☐
Lessons include **multiple means of representation** (visuals, modeling, scaffolds).	☐	☐	☐
Lessons include **multiple means of action & expression** (flexible assessment options).	☐	☐	☐
Instructions and expectations are provided in **both verbal and written** formats.	☐	☐	☐
Tasks are chunked and supported with clear steps, models, or organizers.	☐	☐	☐

Evidence/Notes:

Section C: Executive Function Supports

Indicator	Fully Implemented	Partially Implemented	Not Yet Implemented
Students use checklists, organizers, or planners to manage tasks.	☐	☐	☐
Time-management supports are embedded (timers, countdowns, posted agenda).	☐	☐	☐
Teacher provides chunked deadlines and monitors progress.	☐	☐	☐
Frequent verbal and nonverbal check-ins are used to maintain engagement.	☐	☐	☐

Evidence/Notes:

Section D: Assessment & Feedback Practices

Indicator	Fully Implemented	Partially Implemented	Not Yet Implemented
Formative assessments are used routinely to adjust instruction.	☐	☐	☐
Students receive clear, actionable feedback.	☐	☐	☐
Flexible assessment pathways are available when appropriate.	☐	☐	☐
Misunderstandings are addressed through reteaching or flexible grouping.	☐	☐	☐

Evidence/Notes:

Section E: MTSS Tier 1 Systems & Data Practices

Indicator	Fully Implemented	Partially Implemented	Not Yet Implemented
Teacher monitors attendance, behavior, and work completion patterns.	☐	☐	☐
Classroom-level interventions are attempted **before** referring for Tier 2 or 504.	☐	☐	☐
Data is brought to PLCs for collaborative analysis and action planning.	☐	☐	☐
Instruction is adjusted in response to data.	☐	☐	☐

Evidence/Notes:

Areas of strength:

Areas for improvement:

Next steps (team or teacher action plan):

Appendix C

Student Check-In Survey

Note to Educator,

These questions are intended to give you, the educator, feedback regarding how students are receiving the instruction you provide. Responses to these questions may help individual educators to better meet the needs of their students.

Student Check-In Survey

About Your Learning Experience

Student Note:
This survey helps your teacher understand what helps students learn best in this class. There are no right or wrong answers. Your honest feedback will be used to improve instruction and support student learning.

Please choose the response that best matches your experience with the teacher.

Classroom Environment & Routines

1. **My teacher has clear routines and expectations for how class runs and how we treat each other.**
   ☐ Not yet ☐ Sometimes ☐ Usually ☐ Always

2. **My teacher treats mistakes as part of learning and encourages us to keep trying.**
   ☐ Not yet ☐ Sometimes ☐ Usually ☐ Always

3. **The classroom setup works for different ways of learning (working alone, in groups, or getting extra support).**
   ☐ Not yet ☐ Sometimes ☐ Usually ☐ Always

Instruction & Learning Supports

4. **My teacher changes lessons or materials to help different students understand.**
   ☐ Not yet ☐ Sometimes ☐ Usually ☐ Always

5. **My teacher uses different teaching strategies to help all students learn, even if we start with different levels of understanding.**
   ☐ Not yet ☐ Sometimes ☐ Usually ☐ Always

6. **My teacher encourages us to think about different viewpoints and ideas.**
   ☐ Not yet ☐ Sometimes ☐ Usually ☐ Always

7. **My teacher provides tools or supports (examples, organizers, technology, checklists, etc.) that help me learn in ways that work for me.**
   ☐ Not yet ☐ Sometimes ☐ Usually ☐ Always

Time, Support, & Assessment

8. **My teacher is flexible with timelines when students need more time or support to succeed.**
   ☐ Not yet ☐ Sometimes ☐ Usually ☐ Always

9. **My teacher gives us different ways to show what we know (for example: projects, tests, presentations, or written work).**
   ☐ Not yet ☐ Sometimes ☐ Usually ☐ Always

Optional

10. **One thing my teacher does that really helps me learn is:**
    (short response)

11. **One thing that could help me learn better in this class is:**
    (short response)