



FORWARD TOGETHER

Helping Educators Unlock
the Power of Students
Who Learn Differently

ACKNOWLEDGMENTS

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NCLD’s mission is to improve the lives of the 1 in 5 children and adults nationwide with learning and attention issues—by empowering parents and young adults, transforming schools, and advocating for equal rights and opportunities. We’re working to create a society in which every individual possesses the academic, social, and emotional skills needed to succeed in school, at work, and in life.

For more information, visit: nclد.org
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Understood

Understood’s mission is to help the 1 in 5 individuals who learn and think differently to thrive in life. As a leading digital resource and nonprofit organization, Understood empowers millions of families and educators through personalized resources, access to experts, interactive tools, and a supportive online community.

For more information, visit: understood.org
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INTRODUCTION

Forward Together: Helping Educators Unlock the Power of Students Who Learn Differently

In the United States, 1 in 5 students have learning and attention issues. This includes those with identified specific learning disabilities, diagnosed ADHD, or related disorders that impact learning. Despite often having above average or average intelligence, the majority of these students are achieving below grade level. This equates to millions of students across the nation whose strengths and potential are going untapped.

Our education system is systemically failing the 1 in 5.

This systemic failure has a devastating ripple effect. Individuals with learning and attention issues often face lifelong challenges, frustration, and failure. Compared to their peers, they are less likely to graduate from high school, enroll in and complete college, and hold a job. Schools and districts set goals for student achievement and development that are beyond reach unless the learning needs of the 1 in 5 are met. And our workplaces, communities, and greater society lose out on valuable talent that hasn't been recognized or nurtured.

At NCLD and Understood, we set out to unpack and address this problem. We partnered with teachers—often the most consistent touchpoint for students after their caregivers—to understand their experiences and insights. We rooted these experiences in rigorous research conducted by Lake Research Partners and SRI Education to frame the challenges in evidence, identify critical mindsets and essential practices, and map a way forward. In collaboration with EducationCounsel, we also reviewed the teacher certification policies and requirements in all 50 states. This research focused on general education classrooms, where the majority of the 1 in 5 spend most of their time.¹

It is no secret that our nation is facing a critical shortage of teachers and specialized instructional support personnel in schools.² With fewer candidates enrolling in teacher preparation programs, schools are hard-pressed to find enough teachers to fill their classrooms. And while the types of training and preparation they've received may vary, the vast majority of teachers we surveyed expressed that they feel underprepared and unsupported in teaching the 1 in 5. Most states do not articulate the specific skills, knowledge,

Our approach in brief

-  **1,350** teachers surveyed
-  **13** teacher focus groups conducted
-  **150** academic, empirically driven articles reviewed
-  **50** states researched for teacher certification requirements

With input and pressure testing by Understood's Educator Advisory Council, NCLD's Professional Advisory Board, and other experts

This report shares our findings on **four key questions:**

-  **Who** are the 1 in 5 and what is their experience in the classroom?
-  **What** do general education teachers currently know and believe about teaching the 1 in 5?
-  **What** do general education teachers need to know and believe about teaching the 1 in 5?
-  **How** can teachers build the effective mindsets, knowledge, and skills to positively impact the 1 in 5?

1: Our research focused on students who struggle with brain-based difficulties in reading, writing, math, organization, attention, social skills, motor skills, or a combination of these. It included students identified or unidentified with dyslexia, dysgraphia, dyscalculia, ADD/ADHD, processing disorders, or other language-based learning disabilities. It did not include students with autism spectrum disorders, oppositional defiant disorders, or unrelated emotional issues; English language learners; or students with poverty- and trauma-related issues that are not brain-based.

2: Resources: Teacher shortages in the United States. (2018, August 17). Retrieved from <https://learningpolicy-institute.org/news/resources-teacher-shortages-united-states>

INTRODUCTION

or training general educators should have for working with students who have learning disabilities, ADHD, or related disorders. Many general educators reported that they did not take courses in teaching students with mild to moderate learning disabilities. Or, if they did, they didn't find these courses beneficial or relevant once in the classroom. While teachers reported feeling responsible for the learning of all students, *only half* strongly believed that students with learning and attention issues can meet grade-level expectations. Some teachers continue to hold misperceptions about these students.

Yet, research shows that teachers can be successful with the 1 in 5. There is evidence of specific critical teacher mindsets and key practices that can improve outcomes for students with learning and attention issues. In fact, these practices can improve learning for all students.

They are based on emerging findings from learning science, which recognizes neurodiversity across all individuals and supports the creation of improved and equitable environments for all 21st-century learners.

Our research revealed that the majority of teachers are highly interested in learning how to reach struggling learners. It also suggested that when teachers develop the knowledge and skills required and have a sense of self-efficacy—or belief in their own teaching abilities—they are more likely to believe they can effectively teach the 1 in 5 and that the 1 in 5 can learn at high levels.

But to truly move the needle on student achievement, teachers can't do it alone. We need to consider how teachers can gain more experience, preparation, and self-confidence in working with the 1 in 5 before they are in the classroom full-time. And we need to provide better supports once they are there. Policymakers; teacher preparation leaders; district, network, and school administrators; general and special educators; related service personnel; and caregivers need to break the silos that are ultimately hindering student learning and development.

It will take all of us, working together, to create an education system that better prepares and supports teachers as professionals—so they can better support the 1 in 5 and all students.

Because we're not yet effectively reaching and teaching the 1 in 5:

Outcomes for students with learning disabilities are poor

 **1 in 3** are held back at least once

 **2x** more suspended than peers

 **3x** more drop out than peers

 They enroll in college at **half** the rate as peers

 **4 in 10** who attend college complete it

 **50%** are unemployed

 **1 in 2** have been involved in the justice system

WHO ARE THE 1 in 5?

A student who often uses the wrong word when speaking and mispronounces words that aren't familiar. A parent who struggles to estimate costs, figure out tips, and calculate discounts when shopping. A friend who often gets sidetracked and has trouble meeting work deadlines. Or maybe even you?

In the United States, 1 in 5 people have learning and attention issues. Contrary to popular myths, learning and attention issues are *not* the result of low intelligence, poor vision or hearing, or a lack of motivation. We know that students with learning disabilities and ADHD have brain-based difficulties in specific areas: reading, writing, math, organization, attention, listening comprehension, social skills, motor skills or, often, a combination unique to the person.³

What is often overlooked is that the 1 in 5 also have incredible strengths. Individuals with learning and attention issues often have average or above average intelligence, and some have extraordinary talents. For example, some studies have found evidence to suggest that many people with dyslexia are able to solve visual-spatial problems about impossible figures more quickly than their counterparts without dyslexia. It's not surprising that many build successful careers in fields that emphasize visual-spatial skills, such as art and the sciences.⁴ Additionally, individuals with learning and attention issues often develop [critical strengths](#) as part of their journey: persistence, empathy, courage, and assertiveness.

The 1 in 5 have abilities and skills that are vital to our society and economy. Yet too often their [disabilities](#) are not identified and their potential goes untapped—with significant individual and societal consequences.

What's more, when disability is combined with other intersectional characteristics that our education system has been known to marginalize or underserve—like race and class—we see a compounding effect on the failure to recognize and meet an individual's unique needs. Instead, it can perpetuate and even increase gaps in opportunities for these students that can negatively impact their success and last throughout their lifetime.

The impact of the right policy, partially implemented

In 2004, the Individuals with Disabilities Education Act (IDEA) reaffirmed the rights of children with disabilities to a free appropriate public education in the least restrictive environment. In response, our education system has

The 1 in 5

 **What science says:** Emerging findings in learning science point to differences in brain structure and function in the 1 in 5 (with variabilities across all of us!).

 [Learn more](#)

 **Implications:** The 1 in 5 don't "outgrow" learning disabilities and attention issues. But through quality interventions and instruction, they develop strategies and skills to be successful.

 [Experience what it's like for the 1 in 5](#)

3: Horowitz, Rawe, & Whittaker. (2017). [The State of Learning Disabilities: Understanding the 1 in 5](#). New York, NY: National Center for Learning Disabilities.

4: Rappolt-Schlichtmann, G., Boucher, A.R., & Evans, M. (2018). From deficit remediation to capacity building: Learning to enable rather than disable students with dyslexia. [Language-Speech-Hearing Services in Schools](#), 49(4):864–874. doi: 10.1044/2018_LSHSS-DYSLC-18-0031

WHO ARE THE 1 in 5?

kept the doors of general education classrooms open to the 1 in 5. More than 70% of students with learning disabilities and ADHD now spend 80% or more of their time in general education classrooms through [inclusion](#)—which is not a “place” but an approach to teaching that allows students with disabilities to learn alongside their peers.⁵

Over the last few decades, we’ve seen great improvements in the area of inclusion, and schools have largely delivered on IDEA’s promise of the “least restrictive” learning environment. Inclusion alone, however, does not equate to increased access to and equitable opportunity to learn the general education curriculum. Successful inclusion practices include the use of instructional strategies that are evidence-based for students with learning and attention issues in the delivery of instruction in the general education classroom. But the education system is failing to ensure that the 1 in 5 are held to the same high standards or given equal educational opportunities to learn and achieve at high levels. The National Assessment of Education Progress (NAEP) results show that the majority of students with learning disabilities are not proficient in reading and math. In mathematics, 91% of fourth graders and 96% of eighth graders with learning disabilities were not proficient.⁶ In reading, 97% of fourth graders and 96% of eighth graders with learning disabilities were not proficient. The classroom’s failure to serve the 1 in 5 results in higher retention, suspension, and drop-out rates than their peers.

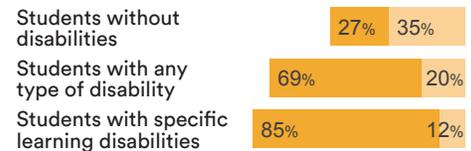
When disaggregated by race (see chart on following page), [the data shows gaps of more than 20 points between the percentage of black students performing below basic on the NAEP and the percentage of white students.](#) The data makes clear that we are not only failing to serve students with disabilities, but we are failing students of color with disabilities in an even greater way.

These impacts have consequences on more than academic outcomes: [1 in 4 black males with Individualized Education Programs \(IEPs\) receive out-of-school suspensions compared to 1 in 10 white males with IEPs.](#)⁸ And approximately 35% of black, Hispanic, and Native American students with disabilities leave high school without a regular diploma, compared to less than 25% of Asian and white students with disabilities.⁹

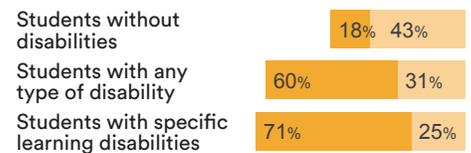
Students below proficient by grade, 2013 NAEP Scores⁷



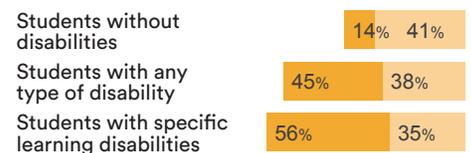
Reading, 4th Grade



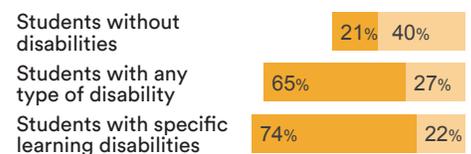
Reading, 8th Grade



Math, 4th Grade



Math, 8th Grade



5: Horowitz, Rawe, & Whittaker (2017).

6: Ibid. 2013 data from the NAEP report is the most recent data that was disaggregated by researchers specifically for students with learning disabilities. (The NAEP reports show all students with disabilities who have IEPs.)

7: Horowitz, Rawe, & Whittaker. (2017). This 2017 NAEP report data includes all students with disabilities who have IEPs—not just learning disabilities. NAEP data that has been disaggregated for students of color with learning disabilities is not available.

8: This data from the Office for Civil Rights includes all students with disabilities who have IEPs—not just learning disabilities. OCR data that has been disaggregated for students of color with learning disabilities is not available.

9: U.S. Department of Education, IDEA Section 618 Data, for students ages 14–21 in 2014–2015. This data

WHO ARE THE 1 in 5?

For too many children, classroom struggles become lifetime struggles. Students with learning disabilities enroll in four-year colleges at *half* the rate of their peers, and their completion for any type of college is 41%.

Ultimately, what happens to students with learning disabilities when they reach adulthood? Only 46% become employed—and 50% have some interaction with the justice system.¹⁰

We must do much better. There is proof we can.¹¹

The 1 in 5 *can* and *do* succeed. Those [who succeed](#) learn to navigate school and personal relationships. They exhibit self-awareness, proactively advocate and set goals for themselves, demonstrate perseverance and, even though their brain-based learning and attention issues don't "go away," they learn strategies for developing the necessary emotional and intellectual skills for success in school and beyond.¹² They become doctors, scientists, engineers, technology experts, business leaders, writers, educators—whatever they've set their sights on becoming. The list of well-known, successful figures with learning and attention issues in every field is long.

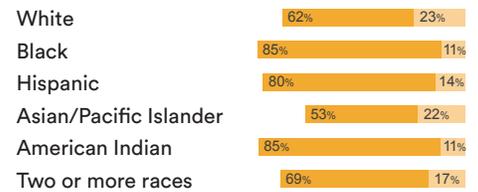
But few succeed on their own. The most successful young adults with learning and attention issues [cite](#) a supportive home life, connection to their community (often through school activities) and friends, and self-awareness and self-confidence as drivers for their success. The other factors strongly associated with positive outcomes for these young people? They recall that they had IEPs early on in school (i.e., elementary and middle school), had input into their IEPs, and had teachers who understood them, encouraged them, and held high expectations of them.¹³ Currently, too many of our 1 in 5 students don't have these opportunities or experiences.

What can we do together so the success of the 1 in 5 is the rule, not the exception?

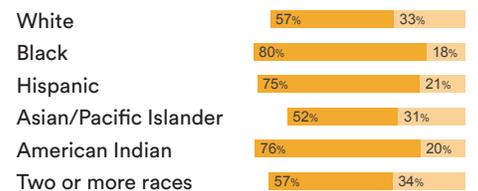
Students below proficient, disaggregated by race, 2017 NAEP Scores

Below Basic At Basic

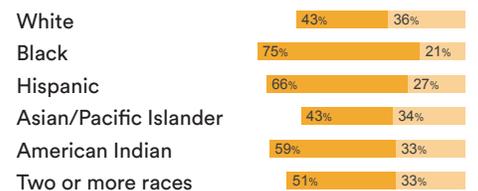
Reading, 4th Grade



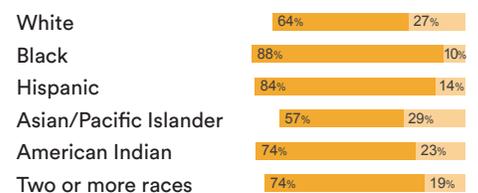
Reading, 8th Grade



Math, 4th Grade



Math, 8th Grade



includes all students with disabilities who have IEPs.

10: Horowitz, Rawe, & Whittaker (2017).

11: National Center for Learning Disabilities. (2015). [Student voices: A study of young adults with learning and attention issues](#). New York, NY: National Center for Learning Disabilities.

12: Goldberg, R.J., Higgins, E.L., Raskind, M.H., & Herman, K.L. (2003). Predictors of success in individuals with learning disabilities: A qualitative analysis of a 20-year longitudinal study. [Learning Disabilities Research & Practice](#), 18(4), 222–236.

13: National Center for Learning Disabilities. (2015).

WHAT TEACHERS SHARED

Teachers hold a unique vantage point for understanding the education system’s gaps and challenges in reaching and teaching the 1 in 5. Second only to caregivers, teachers are the most important adults in children’s lives. As research shows, the interaction between teacher and student¹⁴—as well as between [teacher and caregivers](#)—has a significant impact on the learning and development of the 1 in 5, with teacher beliefs and practices shaping those interactions. The teacher/student interaction is also highly susceptible—positively and negatively—to the many outside forces and systems that impact the classroom.

Children with learning disabilities and ADHD spend more than 80% of their day in general education classrooms, right alongside their peers without disabilities. To better understand the classroom experience, we wanted to capture what general education teachers *currently* know and believe about teaching students with identified disabilities and/or learning and attention issues. Through surveys and focus groups, we engaged teachers who have different levels of experience, come from a variety of backgrounds, and have worked with different student populations. Their perspectives were invaluable to identifying the gaps, challenges, and strengths in the current approach to teaching the 1 in 5. Here’s what teachers shared.

We asked teachers: **What do you know and believe about teaching the 1 in 5?**

We heard from:

 **1,350 surveyed K–12 public school general education teachers** who teach core subjects. Demographics weighted to be representative of public school teachers nationwide. *(See the Appendix to learn more about the survey and the teachers who participated.)*

 **13 focus groups of K–12 general education teachers** with mixed levels of experience and in low-income schools in Los Angeles, CA; Columbus, OH; and Johnston County, NC.

Many teachers are concerned about their level of preparedness in teaching the 1 in 5.

Only 17% of teachers surveyed feel very well prepared to teach students with mild to moderate learning disabilities.

While teachers may have completed a course on the 1 in 5 as part of their teacher certification or graduate school programs, few believe it was beneficial or still relevant to their current practice. Instead, teachers cite “on-the-job training and trial-and-error learning” as the ways they learned how to teach the 1 in 5. This lack of intention and rigor in training means teachers are missing out on the knowledge and skill to implement evidence-based practices for learning and attention issues, and potentially missing the ongoing learning and collaborative supports to continually sustain and develop them. Focus group teachers were nuanced about how they perceive their preparedness:

 Teachers feel that their preparedness for teaching struggling learners **depends on the type of “struggle” the student faces**. While they feel they may be equipped to teach a child with dyslexia or slower processing skills, they are not prepared to teach a student with emotional disturbance. The students who **struggle to learn and also exhibit**

14: RAND Corporation. (2012). [Teachers matter: Understanding teachers’ impact on student achievement](#). Santa Monica, CA: RAND Corporation. doi: 10.7249/CP693.1-2012-09

WHAT TEACHERS SHARED

behavioral issues provide teachers with the largest amount of trouble, regardless of school type or teacher mindset. Managing behaviors takes more time and has a greater impact than learning issues.



They also reported feeling prepared to teach three to four students with learning and attention issues [in their classroom] at one time, but not more.

To understand why teachers might feel unprepared to instruct the diverse students in their classrooms, we looked at state policies for educator certification. Research by NCLD reveals that virtually all states set a low bar for preparing general educators to teach students with disabilities.¹⁵ While certain teacher preparation programs might provide coursework and clinical experience above and beyond what states require, most state standards and licensure requirements do not articulate the specific skills, knowledge, or training that general educators should have for working with the 1 in 5.

- 7 states have specific coursework requirements for teaching students with disabilities at the elementary and secondary level.
- 2 states have comprehensive standards related to teaching students with disabilities.
- 2 states require specific clinical experiences with students with disabilities.
- 1 state has standards, coursework, and clinical preparation requirements.

In effect, almost every state has failed to bring their licensure or certification standards in line with our new reality: Every general education teacher will surely have students with these high-incidence disabilities in their classroom. Instead, states have continued to set separate tracks and requirements for aspiring teachers to pursue *either* special education *or* general education training. While there are opportunities for dual certifications, it's typically based on individual teacher choice and not on a carefully designed, systemic approach of putting policy into practice. Most general educators have little to no opportunity to learn about learning and attention issues, directly practice teaching students with disabilities during their pre-service training, and/or gain the instructional experience necessary to meet the needs of the 1 in 5—or even address the learning variances across all individuals—before entering the profession.

We wanted to learn from states:

What are aspiring general educators required to know and be able to do to be prepared to teach students with disabilities?

We reviewed: State-level coursework, practica, and initial licensure requirements related to students with disabilities or special education.

For focus states (Arizona, California, Colorado, Georgia, Iowa, New Hampshire, New York, Tennessee), we looked at initial, professional, renewal, and alternate route certifications and licensure in Elementary, Secondary ELA, Secondary Mathematics, and Reading Specialist.

For all other states, we looked at initial certifications and licensure in Elementary, Secondary ELA, and Secondary Mathematics only.

¹⁵: Other organizations have conducted extensive research on state-level standards, preparation, certification/licensure, induction, and professional learning for teachers. These reviews look more expansively at requirements for teaching diverse learners. You can learn more by visiting the Collaboration for Effective Educator Development, Accountability, and Reform (CEEDAR) Center website at ceedar.org.

WHAT TEACHERS SHARED



Teachers' understanding of 1 in 5 learners is incomplete—with a portion of teachers still holding on to misunderstandings that have been debunked by research.

Given the little preparation they've received for effectively teaching the 1 in 5, it's not surprising that general educators vary significantly in their understanding of learning and attention issues. Most can identify the classroom behaviors most often associated with learning disabilities and ADHD, but they are less familiar with the underlying weaknesses that constitute these disorders. In fact, 81% of teachers surveyed recognize that externalized responses—such as disruptive behaviors—may be signs of learning disabilities and/or ADHD. However, less than 50% of surveyed teachers felt capable of attributing these behaviors to internalized responses in these students, such as trouble with organizing, not knowing how or when to ask for help, or difficulty grasping abstract concepts. Some teachers express beliefs suggesting they are unaware of scientific findings showing that learning disabilities and ADHD are based on differences in brain structure and function:

1 in 3

view students' learning or attention issues as laziness.

1 in 4

believe learning and attention issues can be outgrown.

1 in 4

believe ADD/ADHD is a result of bad parenting.



Many teachers feel overwhelmed and unsupported in teaching the 1 in 5—but they are *interested* in improving their practice.

Only 30% of teachers surveyed feel strongly that, when they try their best, they can be successful with the 1 in 5.

They find students with behavior challenges the most difficult to teach—and they believe they need to improve their own classroom management skills. Focus group teachers cite a range of other challenges that impact their ability to teach the 1 in 5: lack of time to teach or prepare for classes, changing curriculum and state mandates, and a lack of resources, among others. Teachers also do not have many formal learning opportunities when it comes to teaching the 1 in 5, with at least one-third of teachers reporting that they have not participated in professional development on learning and attention issues. Yet, teachers express an interest in improving their practice and are highly interested in learning more about “strategies for teaching struggling learners.” Teachers share that they would prefer to learn about teaching the 1 in 5 through school- or district-provided professional development. Currently, teachers tend to turn to colleagues in their schools



As a teacher you see the struggling students. You have to be able to balance your time between that and the other ones who are getting it. That is a struggle to make sure you are balancing reaching them and reaching the other kids all at the same time.”

—North Carolina Teacher, Grades K–5

WHAT TEACHERS SHARED

and to social media as resources. While these resources are easy to access, there is no guarantee that teachers are learning strategies that are evidence-based or proven to boost learning and achievement for the 1 in 5.



Teachers' beliefs about inclusion and about what the 1 in 5 can achieve vary.

Only 50% of surveyed teachers feel strongly that the 1 in 5 can achieve at grade-level standards.

Teachers also differ in their mindsets and beliefs about the benefits of inclusion, which is a legally mandated requirement of IDEA to have students with disabilities in the least restrictive environment. Although teachers have the perception that inclusion benefits the 1 in 5, one-third of teachers believe that inclusion does not benefit the other students—those who do not have learning and attention issues. Teachers also note that accommodations, IEPs, and 504 plans (all legally mandated) can be challenging. **Only 56% of teachers surveyed believe IEPs provide value to students, and just 38% believe IEPs help them be better teachers.** Focus groups and teachers surveyed both point to the challenges of remembering accommodations for each child and to the perception that IEPs and 504 plans often include accommodations or services that are not necessary. At the same time, teachers understand that they are responsible—to their student and legally—for successfully implementing IEPs.



There is an interconnection between teacher experience, teachers' sense of their own abilities to improve student achievement, and their belief in the abilities of 1 in 5 learners.

The more experience a teacher has with the 1 in 5—or, more importantly, the more they believe in their own abilities to be effective—the stronger their mindsets toward inclusion. Teachers we surveyed with less than five years of experience are less likely than their counterparts with more experience to feel that, if they try their best, they can be successful with students who have mild to moderate learning disabilities. They are also less likely to feel that these same students are capable of achieving at grade-level standards. Teachers in our focus group brought these data points to life: When teachers felt negatively toward inclusion, these feelings were driven more by concerns and frustrations about their own ability to meet the students' needs (their own self-efficacy) than by any underlying negative feeling about a specific child.

“

It's frustrating at first because initially I don't know necessarily what is causing them to struggle. And so then pinpointing it and being able to move forward after I find out what it is that's causing their struggles, I think initially it's frustrating. And then once I find that, it's relieving to know that now I've got a plan in place that I can help them to achieve.”

—Ohio Teacher, Grades K–5

Teachers are clear: They need to be better prepared before they are in the classroom full-time. And once they're there, they need to be better supported so they can better reach and teach the 1 in 5.

WHAT WORKS FOR THE 1 in 5—AND FOR ALL KIDS

General educators shared what they currently know and believe about teaching the 1 in 5. But what do they *need* to know and believe? A literature review of empirical studies, along with input from members of Understood’s Educator Advisory Council, NCLD’s Professional Advisory Board, and other experts, identified and captured important educator mindsets and evidence-based practices from the field that improve learning and achievement for the 1 in 5.

What We Found: 3 Mindsets

Three critical mindsets emerged as appearing to have a positive influence on learning and development among the 1 in 5:



Strong sense of self-efficacy



Positive orientation toward inclusion and personal responsibility for all students



Growth mindset



Strong sense of self-efficacy,

or the belief in their own ability to teach all students successfully

Why it’s important: When teachers have a strong sense of efficacy, they are more likely to have a positive orientation toward inclusion and take responsibility for providing the conditions and delivering instruction that allows *all* of their students to achieve.¹⁶ They also are less likely to be influenced by non-academic factors (e.g., socioeconomic status or student behavior) when placing students and are less likely to refer difficult students for special education when those students are not exhibiting other indicators of learning and attention issues.¹⁷

What it looks like: Teachers with a strong sense of self-efficacy are more likely to create mastery experiences for students that show them what success on a task looks like and that help them build toward their own achievement.¹⁸

16: Soodak, L. C., Podell, D. M., & Lehman, L. R. (1998). Teacher, student, and school attributes as predictors of teachers’ responses to inclusion. *The Journal of Special Education*, 31(4), 480–497. doi: 10.1177/002246699803100405

17: Tschannen-Moran, M. & Woolfolk Hoy, A. (2002) The influence of resources and support on teachers’ efficacy Beliefs. Annual Meeting of the American Educational Research Association, New Orleans, 1–5 April 2002.

18: Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, 28(2), 117–148. doi: 10.1207/s15326985ep2802_3

We wanted to learn from research: **What do teachers need to know and believe about teaching the 1 in 5?**

 We reviewed 150 articles that were 1) empirically driven—not theoretical or opinion—pieces; and 2) vetted in comprehensive meta-analysis and synthesis studies.

 Preference was placed on studies cited by the U.S. Dept. of Education’s *What Works Clearinghouse*.

 Where no synthesis studies were available, we triangulated findings from seminal and/or highly cited empirical studies to identify consistent and universal themes.

 We received input from members of Understood’s Educator Advisory Council, NCLD’s Professional Advisory Board, and other experts.

WHAT WORKS FOR THE 1 in 5—AND FOR ALL KIDS

Teachers with strong self-efficacy spend more time with struggling students and are more likely to motivate students who have low interest in school.¹⁹ They also are less likely to criticize students when they make errors.²⁰

Positive orientation toward inclusion and personal responsibility for all students

Why it's important: Teachers with a positive orientation toward inclusion are more likely to believe the 1 in 5 can succeed. They create a classroom environment and culture where the 1 in 5 and all students develop a feeling of belonging, an important prerequisite for student engagement, motivation, and achievement.²¹

What it looks like: Teachers with a positive orientation toward inclusion are more likely to differentiate instruction (i.e., adapt teaching methods for different learners).²² They also are more likely to view disabilities as developmental challenges that can be improved through effective teaching.²³ They put in place classroom norms and practices that intentionally build a classroom environment in which all students feel welcome.^{24, 25, 26}

Growth mindset

Represents teachers' beliefs that they can improve as teaching professionals and that all students can learn through practice and hard work.²⁷ As the literature in social-emotional learning (SEL) suggests, this moves beyond beliefs about the nature of intelligence to educators' understanding of how persistence, hard work, self-regulation, and effort relate to learning and other outcomes at school or work.



[Inclusion can] offer a web of direction that you wouldn't go into...sometimes it is a different perspective that I would never wander into and sometimes it is refreshing.”

—Ohio Teacher, Grades K–5

19: Tschannen-Moran, M. & Woolfolk Hoy, A. (2002).

20: Ibid.

21: McMahon, S. D., Parnes, A. L., Keys, C. B., & Viola, J. J. (2008). School belonging among low-income urban youth with disabilities: Testing a theoretical model. *Psychology in the Schools*, 45(5), 387–401. doi: 10.1002/pits.20304

22: Cullen, J., Gregory, J., & Noto, L. (2010). The teacher attitudes toward inclusion scale (TATIS) technical report. Online submission.

23: Ibid.

24: Klehm, M. (2013). Teacher attitudes: The effects of teacher beliefs on teaching practices and achievement of students with disabilities. *Open Access Dissertations*. Paper 2. Retrieved from https://digitalcommons.uri.edu/oa_diss/2/

25: Jordan, A., & Stanovich, P. (2003). Teachers' personal epistemological beliefs about students with disabilities as indicators of effective teaching practices. *Journal of Research in Special Educational Needs*, 3(1), 1–14.

26: Pavri, S., & Luftig, R. (2001). The social face of inclusive education: Are students with learning disabilities really included in the classroom? *Preventing School Failure: Alternative Education for Children and Youth*, 45(1), 8–14. doi: 10.1080/10459880109599808

27: Gutshall, C. A. (2013). Teachers' mindsets for students with and without disabilities. *Psychology in the Schools*, 50, 1073–1083.

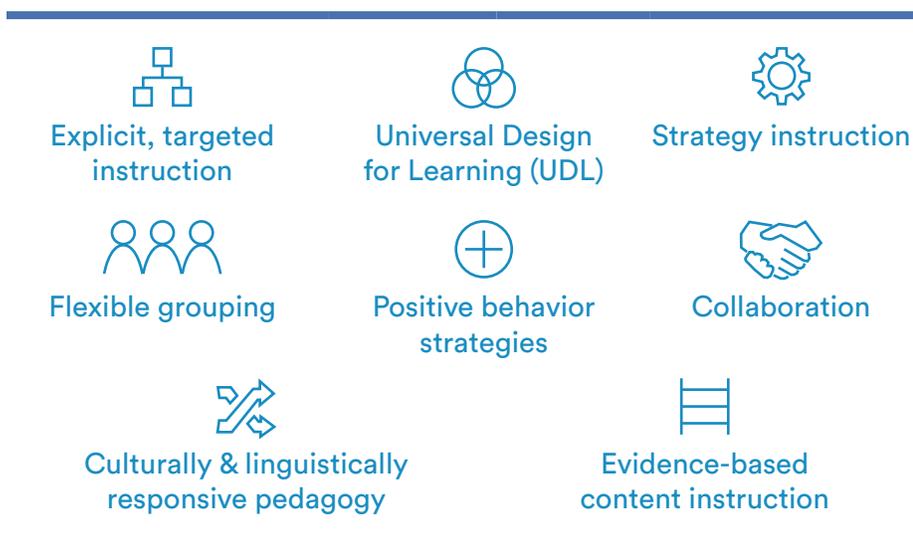
WHAT WORKS FOR THE 1 in 5—AND FOR ALL KIDS

Why it's important: Educators with growth mindsets recognize that conditions like learning disabilities or ADHD are brain-based and do not go away over time, but that the vast majority of students with learning and attention issues can achieve at grade level when provided the right supports.

What it looks like: Teachers are more likely to explicitly teach students *how* to solve problems and are less likely to use low-engagement teaching strategies. Integrating the focus of social-emotional learning with this mindset paves the way for student success.

What We Found: 8 Key Practices

There are eight key practices that educators can implement to improve achievement of the 1 in 5 in a general education classroom—with evidence that these practices can also improve achievement for all students in inclusion settings. These practices are most effective when educators implement them within, rather than in place of, system-wide structures and processes that support identification, intervention, and differentiation. An example is a [multi-tier system of supports](#) (MTSS)—a schoolwide system for early intervention and targeted supports for the whole child. MTSS provides different levels of intensity of intervention and a range of student- vs. teacher-led instruction specific to that child's needs.



Explicit, targeted instruction

Makes learning processes systematic, overt, and clear.

Why it works: Reduces the cognitive demand of guessing what the expectations are, so students can focus on mastering those expectations.

Multi-tier system of supports (MTSS):

MTSS is a framework for providing high-quality instruction and interventions matched to student need, monitoring progress frequently to make decisions about changes in instruction or goals, and applying child response data to important educational decisions. MTSS includes universal screening for all students, targeted support for those who are struggling, data-based progress monitoring, and interventions that increase in intensity based on student need. MTSS is an umbrella term that can include:

- Response to intervention (RTI)
- Positive behavior intervention systems (PBIS)
- Social-emotional learning (SEL)

Together, these systems are critical for the 1 in 5 because they screen students early and deliver necessary targeted supports—two important strategies for ensuring students are successful in school. The systems can also help schools tell the difference between students who have not had good instruction in the past and those who truly need special education.

WHAT WORKS FOR THE 1 in 5—AND FOR ALL KIDS

What is important to know: Explicit instruction includes methods such as step-by-step modeling (including examples and non-examples of expected student actions), think-alouds during problem solving, content-specific skills development, direct instruction, and examples of the skills students are expected to demonstrate.²⁸ Explicit instruction includes guided and independent practice. Providing students with immediate affirmative and corrective feedback helps them understand what and how to improve.

Universal Design for Learning (UDL)

Offers a framework and guidance for teachers to design differentiated learning experiences in flexible ways to meet the needs of individual learners.

Why it works: Fosters a learning environment with flexible means and multiple methods and materials so that teachers better meet the needs of every student—removing barriers to learning and creating equal opportunities to succeed.

What is important to know: UDL’s framework is based on evidence of different elements and best practices that can contribute to learning for *all* students and provide equitable access to learning experiences. Lesson plans and assessments that use UDL are grounded in three main principles:

Representation: Offering students information in more than one format (e.g., text, audio, video, *and* hands-on)

Action and expression: Giving students more than one way to interact with the material and show what they’ve learned.

Engagement: Motivating students in multiple ways, such as letting students make choices and designing assignments that are relevant to them.

Strategy instruction

Teaches students cognitive strategies (e.g., summarizing, question generating, clarifying, predicting) and metacognitive strategies (e.g., self-regulation, executive functioning skills, self-monitoring of academic gains, memory enhancements) for learning content.

Why it works: Gives students their own learning strategies that become



We don’t get to choose the kids that we get...but whoever I get needs me in some way and it is my job to touch each kid and start where they are and grow them as far as I can get them. I feel that is what my job is. **It doesn’t matter what they come to me with. I am supposed to meet them.** Wherever they come to me that is where I start and we grow from there.”

– North Carolina Teacher, Grades K–5

28: Cohen, J. (2018). Practices that cross disciplines? Revisiting explicit instruction in elementary mathematics and English language arts. *Teaching and Teacher Education*, 69, 324–335. doi: 10.1016/j.tate.2017.10.021

WHAT WORKS FOR THE 1 in 5—AND FOR ALL KIDS

routine for future independent learning.

What is important to know: Strategy instruction prioritizes presenting information in ways that students can identify, organize, comprehend, and recall. One example is a content anchoring routine in which students are taught a new concept by anchoring it to a familiar one. Two social-emotional skills critical to students with disabilities that should be integrated into strategy instruction are [self-advocacy and self-determination](#). When students advocate for themselves, they use specific skills as they learn about and identify their rights, needs, and interests and communicate those to teachers and others. Self-determination enables students to take charge of their lives, make choices in their self-interest, and freely pursue their goals. As schools move toward more personalized learning, these become even more critical.²⁹

⊕ Positive behavior strategies

Help teachers better understand and set expectations for student behavior. By applying these strategies, teachers can better understand students' behavior and what a particular student needs to do to learn; and help students build skills to communicate and manage their emotions or needs. Instead of being a punitive system, positive behavior strategies help students learn to replace a challenging or disruptive behavior with one that is more effective in addressing their needs. Teachers, in turn, can foster a more positive classroom climate and reinforce students' display of positive "replacement" behaviors and adaptive skills authentic to them.

Why it works: Makes expectations for behavior clear and consistent while differentiating supports, and demonstrates the understanding that behavior is communication.

What is important to know: Positive behavior strategies, as part of PBIS, is one data-driven approach for developing students' positive behavior, with initial screening and continuous progress monitoring as critical parts of the approach for *all* students. PBIS can go hand-in-hand with academic support systems such as [RTI](#) and is often part of a whole child system such as [MTSS](#). It is critical as part of a larger school-based strategy for social-emotional learning (SEL). When combined with cultural awareness and implicit bias training, these strategies can help teachers understand the motivations of students and modify the use of discipline.

⌘ Flexible grouping

29: Horowitz, Rawe, & Whittaker (2017).

Response to intervention (RTI):

A system for screening, monitoring student learning, and providing evidence-based interventions of varying intensity based on student needs. It is often the academic approach within a larger MTSS system.

Positive behavior intervention systems (PBIS):

Data-driven approach for developing students' positive behavior in the classroom, with initial screening, interventions that increase with intensity based on student need, and continuous progress monitoring as critical parts of the approach for all students. PBIS focuses on teaching positive behavior choices moment to moment. It involves setting and teaching observable behavioral expectations and acknowledging students for meeting these expectations.

Social-emotional learning (SEL):

Instruction that develops students' emotional intelligence, such as self-awareness, self-management, and relationship skills. While SEL instruction is similar to PBIS in that both are proactive approaches centered on promoting positive skills and environments rather than punitive or exclusionary discipline, it focuses more on developing lifelong social and emotional competencies and often involves curricula and instructional programming.

WHAT WORKS FOR THE 1 in 5—AND FOR ALL KIDS

Uses data to frequently rearrange students in the classroom according to needs/strengths for small group instruction.

Why it works: Holds high expectations for all while recognizing student needs vary by topic and skill. Ensures students have multiple opportunities for practice and feedback. Makes data accessible to educators and allows them to make individualized decisions about intervention.

What is important to know: Flexible grouping creates temporary groups based on student data. Groups stay together for the length of time necessary for students to develop an identified skill, master a specific concept, and/or accomplish a task. Flexible grouping is distinctly different from fixed student groups, which are organized around general achievement rates and don't change based on student needs or acquisition of skills or knowledge. Flexible grouping is based on the reality that the needs of students can change over time and that students possess strengths and weaknesses, thus reducing the stigma that is often associated with being in a particular fixed group that receives additional supports or more intensive interventions. Flexible grouping can also be leveraged for second language learners to implement reciprocal teaching, where students of different reading skills are paired.



I don't want to see a kid fall through the cracks if I can prevent it."

– North Carolina Teacher, Grades 10–12

Collaboration

Involves general educators, special educators, specialists, and paraprofessionals working as a team to review student data, do integrated lesson planning, and, where applicable, [collaboratively team teach](#). Collaboration also occurs between educators and caregivers to ensure a coordinated team approach to best supporting students' learning and development in the two places where children spend most of their time: at home and in school. Effective collaboration requires a commitment to regular and thoughtful planning that incorporates a focus on student work and data, in addition to empathy and perspective taking around student strengths and challenges.

Why it works: Leverages adults' knowledge/skills to align around student needs and strengths, and ensures shared expectations and ownership in teaching the same high-level standards and content to *all* students.

What is important to know: Adult collaboration is effective when it is sufficiently supported. For example, integrated lesson planning ensures alignment of the scope, sequence, and pacing of instruction provided by all instructional staff and ensures that diverse learners receive effective instruction, aligned with standards, across all providers and tiers of instruction. The school schedule plays an important role in ensuring that

WHAT WORKS FOR THE 1 in 5—AND FOR ALL KIDS

teachers have sufficient time to review student data, do this integrated planning, and, where applicable, co-teach, as well as have meaningful time to connect and co-plan with caregivers supporting students. In addition to structural components that enable collaboration, the team members' own social-emotional skills (self-awareness, social awareness) are critical foundations for success. When school leaders create an environment in which teachers can be vulnerable and honest about where they need support or have gaps in understanding how to reach a student, the entire team can support each other on behalf of the student.

Culturally & linguistically responsive pedagogy

Understands, responds to, incorporates, and celebrates students' cultural references—engaging [families/caregivers as equal partners](#).

Why it works: Creates learning environments that are respectful and inclusive, and that connect to and build upon what students know. By better understanding the whole child, caregivers and schools can better support learning together. Culturally responsive instruction increases student engagement and learning and behavior outcomes, especially for students who are culturally and linguistically diverse.³⁰ Culturally responsive teaching also helps ensure the appropriate identification of students who are eligible for special education and provision of services for culturally and linguistically diverse students.

What is important to know: High-quality culturally responsive instruction requires both *rigor*—a focus on critical thinking and problem solving; and *relevance*—making sure students regularly see themselves and their cultures reflected in the curriculum.³¹ A rigorous curriculum is one that challenges students and works to bridge the achievement gap by avoiding an all-too-common error of low expectations. This refers to the unwarranted belief that some students may not be able to handle more demanding work. As a result, teachers may not steer these students toward more difficult material. A relevant curriculum is one in which students are engaged because the subject matter and approach align with their culture and interests. Culturally responsive pedagogy should not be limited to academic instruction, but thoughtfully integrated into any social-emotional learning approaches used within the classroom and school.

30: Green, A. & Stormont, M. (2017). Creating culturally responsive and evidence-based lessons for diverse learners with disabilities. *Intervention in School and Clinic*. 53(3), 138–145. doi: 10.1177/1053451217702114

31: Ford, D. (2018, February). *Creating culturally responsive education to address disproportionality: Seeking equity*. Paper presented at the meeting of the Council for Exceptional Children, Tampa, FL.

WHAT WORKS FOR THE 1 in 5—AND FOR ALL KIDS

☰ Evidence-based content instruction

Leverages practices based on multisensory, explicit, structured, and sequential content instruction for literacy and math.

Why it works: These strategies combine the effectiveness of explicit instruction with research based on emerging science of learning. Explicit instruction of phonemic awareness and phonics in literacy help students understand how to connect sounds with letters and individual sounds within words.

What is important to know: Evidence-based strategies include those based on [multisensory](#), explicit, sequential, structured literacy and concrete-representational-abstract strategies in math. Structured literacy explicitly teaches systematic word-identification and decoding strategies, which benefit most students and are vital for those with dyslexia. Teaching students math in an explicit, sequential manner allows one skill to build to the next. Concrete-representational-abstract teaching strategies in math include modeling and practice for students first with concrete materials (such as base ten blocks), then transition to representational (such as dots on a page), and end in abstract (only numbers and mathematical representations on a page).

We know what works. How do we get there?

What works for the 1 in 5 helps all students:

🔍 **What science says:** Emerging research is finding significant variations in human brains (neurodiversity). Everyone has strengths and weaknesses with skills occurring on a continuum. Each person does not approach all learning tasks the same way. Even the same person will approach different learning tasks in different ways.

📄 **Implications:** Every student benefits from different approaches to learning as articulated in the 8 Key Practices. Typical learners often experience the same growth rate as students with learning and attention issues when general educators use evidence-based instructional strategies that support struggling learners. For example, new studies show that when general educators use explicit instruction in phonics, reading proficiency rates improve drastically for all students. In one district, student proficiency increased from 47% to 84% after teachers taught their students using explicit and systematic phonics instruction they learned in training on the science of reading.³² Another example on explicit instruction includes a recent study on fourth- and fifth-grade reading instruction. When general educators taught students using an explicit reading strategy called “collaborative strategic reading,” students with and without learning disabilities enhanced their reading comprehension skills.³³

32: Hanford, E. (September, 2018). Hard Words: Why aren't kids being taught to read? *APMReports*. Retrieved from <https://www.apmreports.org/story/2018/09/10/hard-words-why-american-kids-arent-being-taught-to-read>

33: Boardman, A. G., Vaughn, S., Buckley, P., Reutebuch, C., Roberts, G., & Klingner, J. (2016). Collaborative strategic reading for students with learning disabilities in upper elementary classrooms. *Exceptional Children*, 82(4), 409-427. doi:10.1177/0014402915625067

FORWARD TOGETHER

For too long, our education system has allowed too many students with learning and attention issues to fail. And they aren't alone in their struggle. The majority of all [U.S. students](#), including those without learning and attention issues, are not proficient in reading or math. Our education system isn't working: not for students, not for caregivers, not for teachers. To meet local, state, and national student achievement goals—not just on standardized assessments but on real life indicators—we need to work differently for the 1 in 5 and for *all* students.

Learning science shows that there is great variability in the way we all learn. Collectively, we need to start intentionally planning and teaching for these differences. We need to integrate instructional and social-emotional strategies that can have a clear impact on student success, being particularly mindful of culturally responsive pedagogy so that we reach, teach, and create opportunities for students from all backgrounds. We need to ensure that the different pathways to teacher preparation support the strategies that allow us to reach every student, and that school and districtwide professional development plan for gaps in that knowledge. Creating equitable schools means investing in understanding *who each student is* when they walk through the classroom door. It means building a better understanding of how disability, race, class, gender, language, trauma, and other factors intersect to impact individual students and how they learn.

General educator. Special educator. Student support/related services. Principal. District administrator. Teacher prep leader. State or federal policymaker. Families and caregivers. It's time for all of us to act.

There are [shared commitments](#) we can make and [steps](#) we can take no matter what work we do. Of course, there are also [role-specific actions](#) for leading your organization, schools, and classrooms to more effectively reaching and teaching 1 in 5 and *all* students.

A more extensive toolkit is forthcoming to help you put this all into practice, but here are a few ways to get started.

Shared commitments and steps:

Build a deep understanding of the science of learning and what learning and attention issues are.

Learn and promote evidence-based strategies and best practices.

Break down silos

Role-specific actions:

Teachers

Teacher Preparation Leaders

School Leaders

District/School Network Leaders

Families and Caregivers

Policymakers

FORWARD TOGETHER

Build a deep understanding of the science of learning and what learning and attention issues are.

The experience of the 1 in 5 can still feel unfamiliar to many of us. Understood.org and NCLD provide [resources](#) and [tools](#) that build educators' [understanding](#) of the 1 in 5. The user-friendly resources make accessible the complex findings from learning science on how the 1 in 5 and all students learn, so you can use the information in your daily work. You can also find tools and simulations to experience what it feels like to have a specific learning disability, ADHD, and weaknesses in areas of information processing and executive functioning that impact learning. This dual approach builds both empathy for students *and* accurate insights into how they learn.

Learn and promote evidence-based strategies and best practices.

The **8 Key Practices** are a strong start to better reaching and teaching the 1 in 5 across general education and special education. These are foundational practices that should shape the classroom experience and anchor how teacher preparation and school/district systems support the student/teacher interaction.

Break down silos.

We all have a role to play in breaking down the silos of special education, general education, family partnerships, school and district administration, teacher preparation, and state and federal policy, so that there is a full partnership created on behalf of students. When these strategies are embedded within a tiered system of integrated and intensifying supports, each student can get what they individually need, and no teacher has to do it alone. This could mean formally redesigning systems that foster collaboration across roles, departments, and organizations. It could mean changing teacher preparation so that there is more integration between general education and special education. But it could also be as simple as individuals informally reaching out to work together on behalf of individual students. You can get more involved with [NCLD](#) to learn more about policy and practice changes that aim to improve how our system serves students with learning and attention issues.

Shared
commitments
and steps

FORWARD TOGETHER

Teachers



Build your own understanding and empathy practices for your students to unlock the potential they bring to your classroom and to the world. Use [tools and practices](#) for understanding your students and building empathy for all differences (including learning and attention issues) in the classroom.

Implement the 8 Key Practices with your students, analyze the impact on student learning with your colleagues, and adjust your instruction as necessary. Visit [Understood](#) to find free, practical, evidence-based resources for educators added every month.

Be an in-school champion. Take the strategies and resources you're using to better support the 1 in 5, and develop your teacher leadership by sharing with colleagues and mentoring them on the journey. Advocate with school leadership to implement these practices across the school more broadly—and show how they are helping *all* students.

Advocate for a school schedule that prioritizes time for teacher collaboration and planning with the other teachers and specialists who support the students in your classroom. Proactively partner with and ask for support from the special educators and specialists in your school.

Partner with families/caregivers. Work together with families and caregivers by [providing resources](#) and leveraging [tools to improve communication](#) and collaboration.

Push for high-quality professional development. (Originally published for parents, this toolkit is great for teachers too, and ongoing resources for educator-specific strategies are coming!) Share this report and toolkit with your school, district, and board leadership to advocate for more teacher development and training in topics such as MTSS or UDL—frameworks that benefit all students and target the specific needs of the 1 in 5.

Advocate for literacy curriculum and professional development that incorporates explicit and structured literacy instruction, including phonics and phonemic awareness.

Reflect on how inclusive your classroom is and make changes. Assess your classroom. High expectations should be communicated for all students, and every student should have a chance to demonstrate their strengths through different modes of learning. Incorporate principles of UDL into all planning and instruction. Classrooms should be built around the principles of UDL with accommodations for all learners—not just specifically for students with IEPs—to meet their individual needs and build on their strengths.

[Share a brief version of the findings and call to action for teachers](#) 

Role-specific actions:

Teachers

Teacher Preparation Leaders

School Leaders

District/School Network Leaders

Families and Caregivers

Policymakers

FORWARD TOGETHER

Teacher Preparation Leaders



Explore teacher certification programs that have bolstered their preparation for all teachers in teaching the 1 in 5 (See *New Approaches to Teacher Certification on page 28*). There are examples from both traditional university and alternate route teacher preparation programs that integrate evidence-based practices from general *and* special education into their courses and intensive clinical experiences with students with disabilities. This allows aspiring teachers to build the knowledge, skills, and mindsets to be successful with the 1 in 5—and all students. For many of the programs, graduates receive certifications or licensures in a general education area *and* in special education.

Examine your program’s coursework and practicum requirements. Seek feedback from graduates about how well the program prepared them for the classroom experience. Identify ways to strengthen the courses and clinical practice offered through your program and exceed the minimum standards set by the state.

Partner with local districts. Develop opportunities for your teacher candidates to obtain diverse teaching experiences and serve various student populations before completing the program.

Assess the effectiveness of your overall program through the lens of teaching the 1 in 5:

- Your current philosophy for teaching the 1 in 5 and holding high expectations for students with disabilities should be clearly stated and part of the overall mission for developing teacher readiness for the classroom full-time.
- Course offerings should provide teachers an opportunity to become experts in both special education *and* content areas—in a way that is affordable and accessible. Research has also found that the increased likelihood of turnover identified as the percentage of students with disabilities increases in a class is moderated by special education certification and dual certification in special education and general education.
- Your current degree requirements should intentionally break down the silos between content areas and special education—recognizing that 1 in 5 strategies based on learning science and learner variability research benefit all students, and incorporating expectations for successful candidates to exhibit evidence of critical mindsets and *8 Key Practices*.

Evaluate your coursework and clinical experience requirements:

- The learning frameworks and resources for your courses and practica should integrate brain-based science and learner variability research into how teachers are learning to teach.

Role-specific actions:

Teachers

Teacher Preparation Leaders

School Leaders

District/School Network Leaders

Families and Caregivers

Policymakers

FORWARD TOGETHER

- Courses and practica should integrate the evidence-based findings on critical practices and mindsets so that *all* aspiring teachers develop proficiency in those areas.
- Practicum requirements should intentionally include teaching students with learning and attention issues in general education settings. Theory is not enough—teacher candidates should have specific, carefully crafted, and repeated experiences of putting what they learn into practice with students who learn differently, with multiple opportunities to apply knowledge and skills with feedback.

Evaluate program graduates based on the competencies mastered instead of course or time completion. Identify specific practices demonstrating competencies to teach students with learning and attention issues in the general education setting, in the following areas:

- *Instructional design and lesson planning*
- *Engaging learning environments for all learners*
- *Instructional delivery and facilitation*
- *Assessment*
- *Continual professional improvement*

Share a brief version of the findings and calls to action for teacher preparation leaders [↗](#)

School Leaders



Establish a schoolwide mission and vision for inclusion that students with learning and attention issues are first and foremost general education students, and foster a collective commitment among all school staff to implementing this mission and vision with high expectations for all students and with appropriate services and supports.

Prioritize professional development and schoolwide implementation of key practices within general education classrooms and into learning management system resources.

- Build foundational understanding and break down misconceptions about the 1 in 5 by leveraging the [Through Your Child's Eyes simulation](#) and [Understanding Learning and Attention Issues](#) in professional development.
- Use the [Universal Design for Learning](#) framework to have all teachers remove barriers to learning in lessons.
- Incorporate key practices via reading and math instruction, then expand across all content areas.

Role-specific actions:

Teachers

Teacher Preparation Leaders

School Leaders

District/School Network Leaders

Families and Caregivers

Policymakers

NEW APPROACHES TO TEACHER CERTIFICATION

to Reach and Teach the 1 in 5

Urban Teachers at Johns Hopkins University

An intentional approach that builds teacher expertise in incorporating strategies for the 1 in 5 into the classroom—recognizing that all students benefit. The three-year scaffolded experience results in a master’s degree and dual certification in either Elementary, Secondary English, or Secondary Math and Special Education:

Year 1: Intensive full-day residency with graduate courses

Year 2: Fellowship in full-time, paid positions with coaching as well as courses

Year 3: Teaching position with continued coaching

Graduate feedback makes clear just how effective this program is: 95% of participants say Urban Teachers gave them the knowledge and skills to be effective in the classroom.

Bowling Green State University Inclusive Early Childhood Education

Blends evidenced-based practices from early childhood education with early childhood special education to teach the knowledge, skills, and values to meet the needs of each child. Aspiring teachers begin clinical preparation in their first year, increasing classroom experience over time. They graduate with multiple credentials including an Early Childhood Education license and an Early Childhood Interventionist Specialist license.

Portland State University Secondary Dual Educator Program

Engages aspiring teachers in a series of field-supervised extensive clinical placements and courses that prepare them to meet the academic needs of all students in their classrooms by integrating the pedagogy of general and special education. Successful participants earn a master’s degree with content area and Special Education endorsements. The program is recognized by both the American Association of Colleges for Teacher Education and the Alliance for Excellent Education as a promising example of teacher preparation.

Richmond Teacher Residency at Virginia Commonwealth University

Prepares aspiring teachers to meet the needs of diverse learners. With a focus on keeping effective educators in the classroom, the program prepares new teachers to succeed in high-need schools and provides Richmond Public Schools with high-quality teachers for hard-to-staff roles. After completing an intense semester-long curriculum, teacher candidates begin their residency as student teachers in the Richmond Public Schools, where they work closely with a master teacher who provides coaching and mentoring throughout the entire school year. Residents graduate with a master’s degree, a teaching license, and a full year of experience in the classroom, and make an additional three-year commitment to teaching in a high-need school.

Cal State Long Beach Dual Credential Program

Blended Multiple Subject and Education Specialist credential program in which successful candidates receive dual certification. Candidates learn to teach in a high-need urban school setting alongside master teachers in a two-year clinical placement model.

FORWARD TOGETHER

- o Agree to a set of schoolwide strategies for building cognitive and metacognitive learning strategies so that these are reinforced and consistent across student experience.
- o Embed expectations and provide time for professional learning for inclusion into your schoolwide systems (e.g., faculty meetings, department/grade-level meetings, classroom walk-throughs, teacher feedback, and evaluations).

When hiring, look for teacher candidates who can demonstrate critical mindsets and key practices.

Implement [multi-tier systems of supports](#), with faculty training, for early screening and timely intervention for students with learning and attention issues. This includes implementing a schoolwide system of positive behavioral supports and interventions and establishing supportive school discipline policies and procedures.

Identify and train in-school champions/teacher leaders to lead collaboration, coach, model, and provide resources. In-school champions could be current teacher coaches or special educators in leadership roles.

Rethink your school schedule to prioritize time for collaboration among general educators, special educators, related service providers, and families, as well as creating flexible time so teachers can group and regroup students based on ongoing identification of strengths and needs. Use a student-centered scheduling approach that prioritizes inclusion and schedules around students with learning and attention issues first. Where and when your school reviews student data, ensure that special educators and related specialists are at the table with general educators.

Engage families as partners. Find [tools](#) for building partnerships with families, and connect your families to [resources](#) on how to help and support their children.

[Share a brief version of the findings and calls to action for school leaders](#) 

District/School Network Leaders



Partner with area educator preparation colleges to set expectations for leader and teacher hiring in your district. Advocate for required practicum in inclusion classrooms and for degrees that require dual certifications for general education and special education.

Set district/network-wide expectations for inclusion. Build school board, district, school leadership, and community understanding of the facts and

Role-specific actions:

Teachers

Teacher Preparation Leaders

School Leaders

District/School Network Leaders

Families and Caregivers

Policymakers

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myths about 1 in 5 learners and how strategies for the 1 in 5 benefit *all* students. Ensure that network- and district-wide definitions of equity include learning differences. Include expectations for critical mindsets and key practices in leader and faculty job descriptions, feedback and performance evaluations, and coaching tools.

Implement district/network-wide supports for inclusion with a goal of building staff expertise.

- Review data (e.g., academic achievement, disciplinary removals, and more) and provide targeted support to schools most in need.
- Provide the necessary technologies, with training, for shared data collection and analysis on student learning needs to support collaboration and continuous improvement.
- Dedicate professional development days to strategies that support the 1 in 5 and *all* students, and provide ongoing coaching support for teachers. These might include training in the areas of Multi-Tier Systems of Supports (MTSS) and Universal Design for Learning or other elements of the key practices. Learning progressions can be used to support teacher decision making about instruction.
- Provide principals with professional development, guidance, tools, and resources necessary to foster inclusive practices. This includes providing support for principals to effectively supervise, evaluate, and coach teachers in the building. Additionally, districts can provide principals with tools and resources for designing school schedules that are student-centered and create time for collaboration, teacher/parent partnerships and other essential practices.
- Provide resources to establish school-based teacher leader roles for in-school champions.

[Share a brief version of the findings and calls to action for district/school network leaders](#) 

Families and Caregivers



Hold high expectations for the 1 in 5. One of the biggest challenges facing students with learning and attention issues is the stigma surrounding them and the low expectations that are often set for them. When we raise the bar, students will very often rise to meet it. Speak out about your [child's strengths](#) to help eliminate the [stigma](#) and change minds. Together, we can help every educator, parent, and community member recognize the potential in every child.

Role-specific actions:

Teachers

Teacher Preparation Leaders

School Leaders

District/School Network Leaders

Families and Caregivers

Policymakers

FORWARD TOGETHER

Maintain [open communication](#) with your [child's teacher](#) and principal.

Learn more about the practices they are using in your child's school to support the 1 in 5. You can ask about the schedule of the school day, how students are grouped for differentiated instruction, and whether there are schoolwide systems to support the academic, behavioral, and emotional success of each student. Learn about the critical mindsets and evidence-based key practices that help educators better reach and teach the 1 in 5, and ground your conversations with your child's school in this evidence. Visit [Understood for Educators](#) to explore the free, practical, evidence-based resources educators can use. [Sign up](#) to receive personalized resources for advocating for your child and partnering with the school.

Be an advocate for high-quality professional development and opportunities for teachers and principals.

Not every teacher in your child's school will have taken courses on how to support the 1 in 5 before they entered the classroom. It's important for schools to provide professional development—opportunities throughout the year for teachers to learn new skills. You can use the [professional development toolkit](#) on Understood to ask your school or district to invest in training on four strategies that teachers can benefit from learning more about.

Stay involved and receive updates on the latest opportunities to speak out.

To make meaningful and lasting change, we must advocate at every level—in schools, in communities, within states, and nationally. [Sign up](#) for emails from NCLD so you can be the first to know when there's an opportunity to speak out and advocate on behalf of the 1 in 5.

[Share a brief version of the findings and calls to action for families and caregivers](#) 

Role-specific actions:

Teachers

Teacher Preparation Leaders

School Leaders

District/School Network Leaders

Families and Caregivers

Policymakers

Policymakers



State licensure and certification bodies:

Enact principal certification and licensure policies that require the knowledge necessary to meet the needs of students with learning and attention issues and that promote meaningful systems of support, evaluation, mentoring, and coaching for principals, emphasizing the instructional and distributive leadership practices for effective inclusive schools.

Enact policies that require teachers to have specific training and practical experience in working with the 1 in 5 before entering the classroom, without lowering expectations or standards for teachers. Here's how to begin:

- **Develop or revise teaching standards for teacher candidates** to include

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competencies related to instructing the 1 in 5. Take a look at Utah and New Mexico, which currently have the most comprehensive standards for teaching students with learning disabilities and other conditions.

- **Strengthen course requirements so that aspiring teachers have the opportunity to develop a deeper understanding of the 1 in 5 before they enter the classroom.** Only a few states are currently doing this work: Connecticut teacher candidates must complete two special education courses (one on the development of exceptional children and one on instruction), while aspiring teachers in Illinois must complete coursework on the psychology, identification, and instruction of exceptional children.
- **Require teacher preparation coursework to incorporate evidence-based instruction.** For example, Arkansas requires aspiring teachers to learn how to use the [Universal Design for Learning](#) framework and guidelines. In Tennessee, literacy general educators must learn and use the [response to intervention](#) framework, which helps them identify and address signs of learning issues.
- **Redesign clinical preparation requirements so that every general educator gains experience teaching students with learning disabilities, ADHD, and other disorders that impact school performance.** New Jersey requires at least one clinical experience in a special education setting—either an inclusive setting, a resource room, or a special classroom.
- **Incorporate a competency-based component into the licensure and certification renewal process.** As teachers gain experience in the classroom, states should expect them to demonstrate their skills through performance assessments and competency-based learning. [Florida Educator Accomplished Practices](#) is an example that bases teacher preparation accountability and certification on what teachers must know, understand, and be able to do—actual practices—moving beyond coursework and less-defined “experiences.”

State education agencies:

Provide targeted assistance and support to schools and districts. States can do this in a number of ways:

- **Issue guidance, provide additional funding, or offer technical assistance** to schools and districts as they aim to deliver more and higher-quality professional development related to serving the 1 in 5.
- **Encourage districts in their ESSA planning process to focus on and invest resources** in the areas of professional development, teacher preparedness to serve the 1 in 5, and schoolwide strategies to support all learners.

Role-specific actions:

Teachers

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Federal and state legislatures:

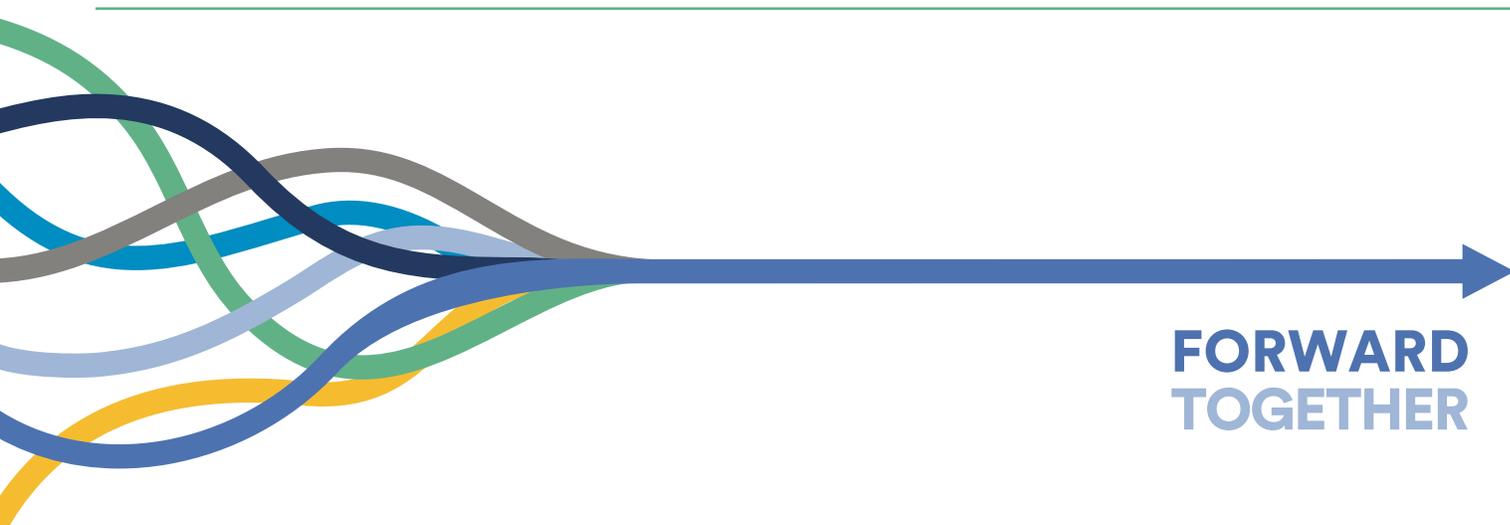
Increase funding and resources available to districts to support effective teacher professional development to better serve the 1 in 5. In addition to the small sums of money available to districts through Title II of the Every Student Succeeds Act, competitive grants should be made available to support high-quality professional development. This training can be especially useful in the areas of [multi-tier systems of supports](#) and [Universal Design for Learning](#)—two approaches that ensure that all students have opportunities to learn and the supports needed to do so.

Build systems to collect and analyze data on the professional development provided to teachers in an effort to increase the availability of effective development, and direct districts to this information.

Increase investment in grants and other programs that improve teacher preparation and incentivize teaching in high-need areas. For example, Teacher Quality Partnership Grants under the Higher Education Act provide funding for strong clinical preparation, including one-year residency programs that support the preparation of general educators as they learn how to effectively instruct English language learners and students with disabilities. In addition, TEACH Grants provide up to \$4,000 a year to students to complete coursework required to begin teaching in a high-need field such as English language acquisition or special education.

[Share a brief version of the findings and calls to action for policymakers](#) 

General educator. Special educator. Student support/related services. Principal. District administrator. Teacher prep leader. State or federal policymaker. Families and caregivers. It's time for all of us to act.



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HELPFUL TERMS

504 plan

A blueprint for how a school will provide supports and remove barriers for a student with a disability, so the student has equal access to the general education curriculum. Students with 504 plans do not require individualized instruction, but they do require accommodations (e.g., audiobooks, note-taking aids, extended time to complete tests).

Attention issues

A general term that refers to brain-based conditions impacting a person's ability to focus, such as attention-deficit disorder (ADD) and attention-deficit hyperactivity disorder (ADHD), a condition characterized by symptoms that include inattention, hyperactivity, and impulsivity.

Critical mindsets

The three beliefs or attitudes that educators hold that appear to have a positive influence on the learning and development of students with learning disabilities and attention issues: A strong sense of self-efficacy, a positive orientation toward inclusion and personal responsibility for all students, and a growth mindset.

Culturally responsive pedagogy

Instruction that empowers students by utilizing their cultural and linguistic backgrounds to support teaching and learning of knowledge, skills, and concepts.

Differentiated instruction

Instruction that has the same learning goal for all students but is tailored to match each student's learning style, allowing each student to show knowledge in different ways.

Evidence-based content instruction

Instruction that leverages practices based on multisensory, explicit, structured, and sequential content instruction for literacy and math.

Explicit instruction

Instruction that makes learning processes overt and clear.

Flexible grouping

Uses data to frequently rearrange students according to needs/strengths for small group instruction.

General education

The knowledge and skills that all students in the state are expected to master.

Growth mindset

The belief that one can improve through practice and hard work.

Inclusion

A strategy for ensuring that students who receive special education are part of the a general education classroom and school community. The intent of inclusion is to ensure that students with disabilities receive the necessary supports to be successful in the general education curriculum.

Individualized Education Program (IEP)

A legally binding document that details the support and services (such as speech therapy or multisensory reading instruction) a school will provide to meet the individual needs of a student with a disability who qualifies for special education.

Individuals with Disabilities Education Act (IDEA)

The federal law that guarantees all children with disabilities access to a free and appropriate public education.

Key practices

The eight actions educators can take or strategies they can implement to improve achievement of the 1 in 5 in a general education classroom, with evidence that they can also improve achievement for all students in inclusion settings: explicit, targeted instruction; Universal Design for Learning; strategy instruction; positive behavior strategies; flexible grouping; collaboration; culturally and linguistically responsive pedagogy; and evidence-based content instruction. These practices are most effective when educators implement them within, rather than in place of, system-wide structures and processes that support

HELPFUL TERMS

identification, intervention, and differentiation, such as a multi-tier system of supports.

Learning disabilities

Brain-based disorders that result in learning challenges in particular skill areas, such as reading or math. These children may also have trouble paying attention and getting along with their peers. Often referred to as LD, this general term includes students with dyslexia, dysgraphia, dyscalculia, and/or other language-based learning disabilities.

Learning science

The study of how people learn and how different kinds of environments, circumstances, mindsets, and approaches impact learning experiences.

Least restrictive environment

A setting that provides a child with appropriate opportunities to learn alongside non-disabled students, to the greatest extent.

Multi-tier system of supports (MTSS)

A schoolwide framework for providing interventions to struggling students. MTSS includes universal screening for all students, targeted support for those who are struggling, data-based progress monitoring, and interventions that increase in intensity based on student need. MTSS is an umbrella term that can include response to intervention (RTI), positive behavior intervention systems (PBIS), and social-emotional learning (SEL) instruction (see below).

Positive behavior intervention systems (PBIS)

Data-driven approach for developing students' positive behavior, with initial screening and continuous progress monitoring as critical parts of the approach for all students. PBIS can go hand-in-hand with academic support systems, such as RTI, and is often part of a whole child system such as MTSS.

Response to intervention (RTI)

A system for screening, monitoring student learning, and providing evidence-based interventions of varying intensity based on student need. It is often the academic approach within a larger MTSS system.

Self-efficacy

The belief in one's own ability.

Social-emotional learning (SEL)

Instruction that develops students' emotional intelligence, such as self-awareness, self-management, and relationship skills. SEL instruction is often implemented hand-in-hand with PBIS as part of a multi-tier system of supports.

Special education

Specially designed instruction and related services, provided at no cost to parents, to meet the unique needs of a child with a disability.

Specific learning disability

One of the 13 categories of disabilities covered by IDEA. A disorder—unrelated to intelligence, motivation, effort, or other known causes of low achievement—that makes a child struggle in certain areas of learning, such as reading, writing, or doing math. Sometimes referred to as SLD.

Strategy instruction

Instruction that teaches students cognitive strategies (e.g., summarizing, question generating, clarifying, predicting) and metacognitive strategies (e.g., self-regulation, executive functioning skills, self-monitoring of academic gains, memory enhancements) for learning content.

Universal Design for Learning

A framework for designing learning experiences in flexible ways to meet the needs of individual learners.

APPENDIX

Survey Methodology

Lake Research Partners designed and administered an online survey between January 25 – February 23, 2018.

Survey reached 1,350 public school teachers.

Teacher sample drawn from purchased lists of K–12 public school teachers compiled by MDR Education and Lucid.

Sample screened to be currently employed public school teachers who do not teach special education, consider themselves to be the lead teacher at least 50% of the time in their classroom, and teach core subjects.

Sample weighted slightly by gender, region, race, grade level, years of experience, and percentage of students participating in the school's free and reduced lunch program to be representative of public school teachers nationwide.

Margin of error for the entire survey is +/- 2.7% at the 95% confidence interval.

Survey was made up of 59 questions.

First half of questions asked teachers to think about the overall school environment and all students, regardless of disability status.

Latter half of questions focused specifically on students with "mild to moderate learning disabilities."

"Mild to moderate learning disabilities" (MMLD) was the term used in the survey for questions pertaining to the 1 in 5.

MMLD emerged from prior teacher focus groups as the best proxy language to describe the 1 in 5.

Each question specific to the 1 in 5 included the following definition:

"Mild to moderate learning disabilities include: Students who have been identified with dyslexia, dysgraphia, dyscalculia, ADD, ADHD, processing disorders, or other language-based learning disabilities or students who struggle with these same challenges but do not have an identification."

APPENDIX

Teacher Demographics

The following are the specific demographics of survey participants. The sample was then weighted slightly by gender, region, race, grade level, years of experience, and percentage of students participating in the school's free and reduced lunch program to be representative of public school teachers nationwide.

Gender

Male	20%
Female	78%
Prefer not to answer	2%

Age

Under 30	18%
31-40	29%
41-50	26%
51-65	21%
66+	1%
Prefer not to say	4%

Race

White	82%
Black	6%
Latinx	7%

Family member with disability

Yes	38%
No	58%
Not sure	4%

Region & teaching area

Northeast	20%
Midwest	22%
South	39%
West	19%

Urban	20%
Suburban	43%
Rural	35%

Grade level taught

K-5	48%
K-3	21%
4-5	15%
Middle School	23%
High School	29%

Free & reduced lunch

0-20%	15%
21-40%	19%
41-60%	23%
61-80%	20%
81-100%	19%
Not sure	4%

% of class with an IEP or 504 plan

0-5% of class	36%
6-10% of class	20%
11-20% of class	24%
21-30% of class	10%
More than 30%	7%
Not sure	3%

% of class with a learning disability

0-5% of class	29%
6-10% of class	22%
11-20% of class	23%
21-30% of class	12%
More than 30%	9%
Not sure	5%

% of class with a behavior problem

0-5% of class	38%
6-10% of class	21%
11-20% of class	15%
21-30% of class	11%
More than 30%	11%
Not sure	4%

Family member with disability

Yes	38%
No	58%
Not sure	4%

Interaction with parents of students with learning disability

Daily	5%
Weekly	31%
Monthly	30%
Quarterly	16%
Once a semester	8%
Annually	2%
Never	1%
Not sure	7%

 **56%**
via email

 **16%**
by phone

 **8%**
by text

 **8%**
in person

 **6%**
at required
conferences

 **5%**
at requested
conferences