



BEST PRACTICES IN SPECIAL EDUCATION

Prepared for Southeast Wisconsin Schools Alliance

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INTRODUCTION

Per federal mandates outlined in the Individuals with Disabilities Education Act (IDEA) and the Every Student Succeeds Act (ESSA), students with disabilities have the right to a free appropriate public education (FAPE) with provisions for special education and related services from birth through age 21.¹ Specifically, ESSA contains language emphasizing the needs of students with disabilities, as well as the development of educators' ability to identify and support these students.² Similarly, IDEA highlights improving outcomes for students with disabilities as a vital component of national education policy, with language stating:³

“ Disability is a natural part of the human experience and in no way diminishes the right of individuals to participate in or contribute to society. Improving educational results for children with disabilities is an essential element of our national policy of ensuring equality of opportunity, full participation, independent living, and economic self-sufficiency for individuals with disabilities. ”

In addition, guidance from the Department of Defense Education Activity reflects a broader commitment—at the federal, state, and local levels—to supporting students with disabilities with the pronouncement that “ALL students can learn when instruction is geared to their strengths and they are given sufficient opportunity to learn.”⁴

However, the reality is that “[t]oo many special education students are leaving high school unprepared for the future.”⁵ In fact, data from the National Center for Special Education Research indicates that young adults with disabilities enroll in postsecondary institutions at a lower rate (i.e., 54.9%) than their peers without disabilities (i.e., 62.1%). Students with disabilities are also less likely to live independently or be financially independent (i.e., as determined by having a checking account or credit card in their name) than students without disabilities.⁶ Moreover, using data from the 2016-2017 school year, **the National Center for Education Statistics finds that nearly one in five students with disabilities either aged or dropped out of high school.** Those students who did not age or drop out graduated with a regular high school diploma at a rate of 70.9%, whereas 10.4% earned an alternative credential (see Figure ES.1 on the next page).

¹ [1] “About IDEA.” U.S. Department of Education. <https://sites.ed.gov/idea/about-idea/> [2] “IDEA Series: Every Student Succeeds Act and Students with Disabilities.” National Council on Disability, February 7, 2018. pp. 9–10. https://ncd.gov/sites/default/files/NCD_ESSA-SWD_Accessible.pdf

² “S.1177 - Every Student Succeeds Act.” 114th United States Congress, December 10, 2015. <https://www.congress.gov/bill/114th-congress/senate-bill/1177/text>

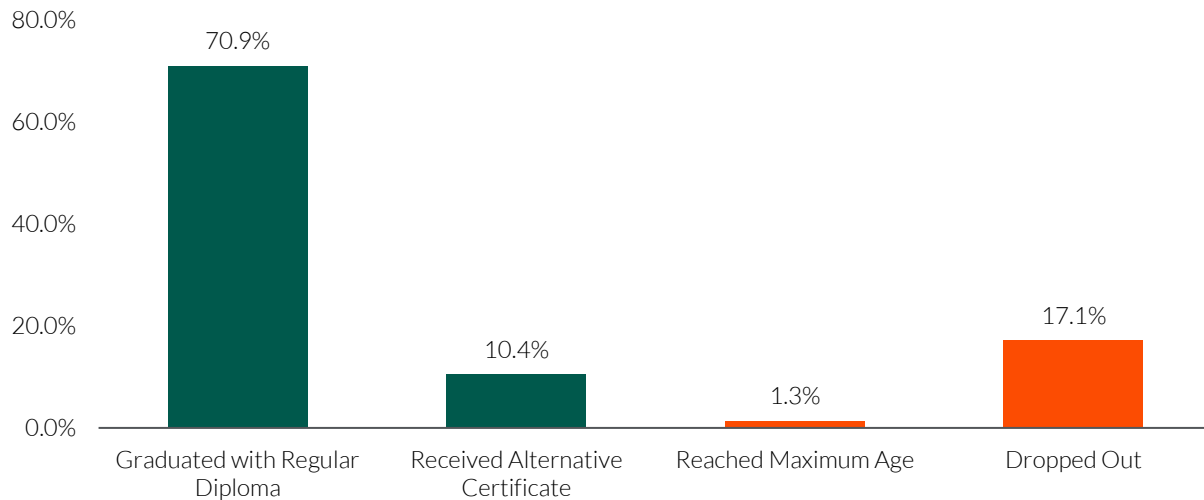
³ Quotation taken verbatim from: “Public Law 108-446 - Individuals with Disabilities Education Improvement Act of 2004.” 108th United States Congress, December 4, 2004. pp. 2–3. <https://ies.ed.gov/ncser/pdf/pl108-446.pdf>

⁴ “Special Education.” Department of Defense Education Activity. <https://www.dodea.edu/Curriculum/specialEduc/index.cfm>

⁵ Lipscomb, S. “Closing the Gap: Improving Outcomes for Students with Disabilities.” *Mathematica*, May 1, 2017. <https://www.mathematica-mpr.com/commentary/closing-the-gap-improving-outcomes-for-students-with-disabilities>

⁶ Sanford, C. et al. “The Post-High School Outcomes of Young Adults with Disabilities Up to 6 Years After High School: Key Findings from the National Longitudinal Transition Study-2 (NLTS2).” National Center for Special Education Research, U.S. Department of Education, September 2011. pp. 14, 39, 46. <https://ies.ed.gov/ncser/pubs/20113004/pdf/20113004.pdf>

FIGURE ES.1: STUDENTS WITH DISABILITIES WHO EXITED SCHOOL BY REASON, 2016-2017



Source: National Center for Education Statistics⁷

The National Longitudinal Transition Study (NLTS) 2012—sponsored by the U.S. Department of Education—collected survey data on a nationally representative sample of approximately 13,000 students in Grades 7 through 12, including mostly students with an individualized education program (IEP), students without an IEP who receive disability accommodations through a 504 plan, and students with no identified disability who possess neither an IEP nor a 504 plan. Notably, NLTS 2012 finds that students with an IEP are less likely to be prepared for or to plan for life after high school. In particular, the study notes that:⁸

- **Youth with an IEP are less likely than youth without an IEP to have plans and take steps to obtain postsecondary education.** While 76% of youth with an IEP expect to obtain some postsecondary education, 94% of their peers without IEPs have this expectation. The gap in planning to attend a four-year college is nearly 30 percentage points (i.e., 51% versus 80%). Similarly, only 42% of high school youth with an IEP report having taken college entrance or placement tests, compared with 70% of those without an IEP.
- **Paid jobs during school and parents’ expectations that youth will live independently are less common for those with an IEP than for other youth.** Forty percent of youth with an IEP report having had a paid job in the past year, compared with half of their peers. Consistent with their lower rates of work experience and performing daily living tasks on their own, youth with an IEP are nearly 20 percentage points less likely to have

⁷ Figure data taken directly from: “Table 219.90. Number and Percentage Distribution of 14- through 21-Year-Old Students Served Under Individuals with Disabilities Education Act (IDEA), Part B, Who Exited School, by Exit Reason, Sex, Race/Ethnicity, Age, and Type of Disability: 2015-16 and 2016-17.” National Center for Education Statistics, U.S. Department of Education, January 2019. https://nces.ed.gov/programs/digest/d18/tables/dt18_219.90.asp

⁸ Preceding text adapted and bulleted text quoted verbatim, with minor adaptations, from: Lipscomb, S. et al. “Preparing for Life After High School: The Characteristics and Experiences of Youth in Special Education. Findings from the National Longitudinal Transition Study 2012. Volume 1: Comparisons with Other Youth (Full Report).” National Center for Education Evaluation and Regional Assistance, U.S. Department of Education, March 2017. pp. i, iii, 61. <https://www.mathematica-mpr.com/our-publications-and-findings/publications/national-longitudinal-transition-study-2012-vol-1-comparisons-with-other-youth-full-report>

parents who anticipate that they will be living independently by age 30 (i.e., 78% versus 96%).

- **The gaps in the way youth with and without an IEP are preparing for life after high school are fairly consistent across most demographic groups and types of schools.** Regardless of their background or type of school, youth with an IEP are less likely than their peers to expect to obtain postsecondary education, take college entrance tests, and have work experience. Their parents are also less optimistic that they will live independently. Among youth with an IEP, those who are low-income, older, and have lower functional abilities are at highest risk in terms of their transition expectations and preparation.

Enrollment in special education has also risen since the turn of the new millennium. From the 2000-2001 school year to the 2017-2018 school year, the number of students (ages 3 to 21) served under IDEA, Part B, increased by 668,608 students, representing a 10.6% increase in volume.⁹ Given that students are being served via special education programming at increasing rates, it is vital that districts and schools be aware of and commit to using best practices to identify, place, and support these students. By doing so, educators establish “high expectations for each student and [provide] the supports each student needs [to] achieve those expectations.”¹⁰

Given the challenges faced by students with disabilities, the Southeast Wisconsin Schools Alliance (SWSA) seeks to determine best practices in identifying and supporting students with disabilities. Specifically, SWSA wants to explore evidence-based practices to facilitate accurate identification of students with disabilities and instructional strategies, interventions, accommodations, and procedures to support their academic and social-emotional development. Ultimately, SWSA seeks to use this knowledge to support its member schools and districts in implementing best practices and improving the outcomes of students with disabilities.

At SWSA's request, Hanover Research (Hanover) investigates research and policy guidance related to identifying and supporting students with disabilities across the K-12 spectrum. Findings from Hanover's analysis are organized into two main sections:




- **Section I: Accommodating and Placing Students with Disabilities** examines strategies to facilitate identification of students with disabilities and accommodate students with disabilities via well-composed IEPs and appropriate placement in the least restrictive environment (LRE). SWSA may use findings from this section to support member districts and schools in successfully identifying, classifying, placing, and accommodating students with disabilities.
- **Section II: Teaching Students with Disabilities** investigates instructional strategies and accommodations to support students identified as having a disability. SWSA may use findings from this section to support its served districts and schools in implementing more effective instructional strategies, curricula, and policies to support students with disabilities.

⁹ “Table 204.70. Number and Percentage of Children Served Under Individuals with Disabilities Education Act (IDEA), Part B, by Age Group and State or Jurisdiction: Selected Years, 1990-91 through 2017-18.” National Center for Education Statistics, U.S. Department of Education, December 2018. https://nces.ed.gov/programs/digest/d18/tables/dt18_204.70.asp

¹⁰ “Supporting Students with Disabilities.” Council of Chief State School Officers. <https://ccsso.org/topics/supporting-students-disabilities>

RECOMMENDATIONS

Based on our findings, Hanover Research recommends that SWSA:

-  **Emphasize effective literacy and numeracy strategies and direct instruction** in their work with member schools and districts around special education to bolster students' ability to access core curriculum concepts;
-  **Advocate for inclusive practices** to educate students with disabilities in the general student population, as research notes a number of benefits to inclusion, and;
-  **Provide guidance on appropriate procedures for including accommodations in IEPs and placing students in the most appropriate LRE** to ensure continued compliance by member schools and districts with federal and state mandates.

KEY FINDINGS

-  **An IEP team consisting of educators and a student's parents should follow established state and federal guidelines to determine eligibility for special education**, typically after a student has reached the most intensive level of the Multi-Tiered Systems of Support (MTSS) framework. Throughout the process, the IEP team assesses a student's strengths and needs by gathering information from a variety of sources—medical records, behavioral data, academic performance data, observational data, and formal testing data—and conducts a final review to determine eligibility for special education services.
-  **Students should be educated in the environment best suited to them that most closely resembles general education.** To accomplish this, the IEP team must determine the learning setting that is most conducive to providing the accommodations, services, and resources students with disabilities need while maximizing their interactions with the general education population. LREs exist along a continuum of placement options—moving from fewer restrictions and more interaction between students with and without disabilities (e.g., general education classes with support services and accommodations) to greater restrictions and less interaction between students with and without disabilities (e.g., residential programs).
-  **Districts and schools must staff their special education programs appropriately, that is according to state guidelines and any class sizing parameters outlined within students' IEPs.** A deficit exists in research on the impacts of class sizes on the academic achievement of students with disabilities. While there is some indication from research that smaller class sizes could benefit students with disabilities, the research is inconclusive and the supporting body of evidence is not substantial enough to make any firm parameters for class sizes and caseloads. Similarly, state guidelines vary on special education caseloads and class sizes, with different factors (e.g., disability type, age of students) impacting existing guidelines and recommendations.
-  **Districts with high-achieving special education subpopulations often emphasize inclusion and students' access to the general curriculum.** While few research studies find that special education students perform better in non-

inclusive settings, several studies suggest that inclusive classrooms have a neutral to slightly positive impact on students with disabilities' academic outcomes. For example, case studies of districts across California and Massachusetts with high-performing special education students indicate that inclusion in general classrooms and access to core curricula contribute positively to the performance of students with disabilities.



Special education students benefit from comprehensive instruction that addresses the multiple components of literacy. Consequently, students with disabilities—both mild or severe—should receive constant exposure to texts and immersion in language- and print-rich environments. Instruction should then focus on a multi-faceted learning approach emphasizing both skills and understanding and creating meaning. Specifically, direct instruction to improve word recognition and reading comprehension can be appropriate for both elementary and secondary school students with learning disabilities.



Teachers should use multiple examples during mathematics instruction to create multiple chances to develop understanding of key concepts and skills. Research shows that using multiple instructional examples helps advance students with disabilities' math understanding. Teachers may introduce such examples in a specific order to help students process mathematical applications in a logical fashion. By providing a range of examples, teachers allow students with disabilities to transfer skills to a wide variety of situations rather than a homogenous problem set. Teachers should also adapt their lesson preparation, instructional content, and delivery according to the type of learning problem displayed by each student with disabilities.

TABLE OF CONTENTS

INTRODUCTION	2
RECOMMENDATIONS	5
KEY FINDINGS	5
SECTION I: ACCOMMODATING AND PLACING STUDENTS WITH DISABILITIES.....	8
Identifying Students with Disabilities	8
Drafting Individual Education Programs and Placing Students	11
SECTION II: TEACHING STUDENTS WITH DISABILITIES	14
Delivering High-Quality Instruction in Inclusive Settings	14
Promoting Literacy Skills	15
Supporting Numeracy Skills	18
ABOUT HANOVER RESEARCH	22

SECTION I: ACCOMMODATING AND PLACING STUDENTS WITH DISABILITIES

In this section, Hanover examines strategies to facilitate accurate identification of students with disabilities and accommodate students with disabilities via well-composed IEPs and appropriate placement in the LRE best suited to their needs.

Identifying Students with Disabilities

An IEP team consisting of educators and a student’s parents should follow established state and federal guidelines to determine eligibility for special education, typically after a student has reached the most intensive level of the Multi-Tiered Systems of Support (MTSS) framework.¹¹ Throughout the process, the IEP team assesses a student’s strengths and needs by gathering information from a variety of sources—medical records, behavioral data, academic performance data, observational data, and formal testing data—and conducts a final review to determine eligibility for special education services.¹²

Essentially, the IEP team seeks to determine whether a child meets the criteria for diagnosis within one of the disability categories detailed in Figure 1.1 beginning on the next page. Schools must provide FAPE that includes special education and related services to students who classify as having a disability within one or more of these categories.¹³ However, it is important to note that “not every child with learning or attention issues qualifies” for special education services, as a student must experience adverse impacts to their education resulting from one of the 13 listed conditions to receive accommodations and services via an IEP.¹⁴



Determining Eligibility

Schools must collect a preponderance of data to support a diagnosis of a student experiencing one of the federally-defined disabilities, appropriate placements, and implementation of accommodations.

¹¹ [1] “Eligibility: Determining Whether a Child Is Eligible for Special Education Services.” Learning Disabilities Association of America, September 11, 2013. <https://ldaamerica.org/eligibility-determining-whether-a-child-is-eligible-for-special-education-services/> [2] “IDEA-Reauthorized Statute: Individualized Education Program (IEP) Team Meetings and Changes to the IEP.” U.S. Department of Education. pp. 1-2. <https://www2.ed.gov/policy/speced/guid/idea/tb-iep-meetings.pdf> [2] Stanberry, K. “At a Glance: Who’s on the IEP Team.” Understood. <https://www.understood.org/en/school-learning/special-services/ieps/at-a-glance-whos-on-the-iep-team>



¹² [1] “The Special Education Referral Process.” Project IDEAL, Texas Council for Developmental Disabilities. </v/special-education-referral-process/> [2] “Evaluating Children for Disability.” Center for Parent Information and Resources, September 2017. <https://www.parentcenterhub.org/evaluation/> [2] “Comprehensive Assessment and Evaluation of Students with Learning Disabilities.” National Joint Committee on Learning Disabilities and LD Online | WETA, 2010. <http://www.ldonline.org/article/54711/>

¹³ [1] “Categories of Disability Under IDEA.” Center for Parent Information and Resources, March 14, 2017. <https://www.parentcenterhub.org/categories/#dd> [2] “Sec. 300.8 Child with a Disability.” U.S. Department of Education, July 11, 2017. <https://sites.ed.gov/idea/regs/b/a/300.8>

¹⁴ Lee, A.M.I. “The 13 Disability Categories Under IDEA.” Understood. <https://www.understood.org/en/school-learning/special-services/special-education-basics/conditions-covered-under-idea>

FIGURE 1.1: DISABILITY CATEGORIES

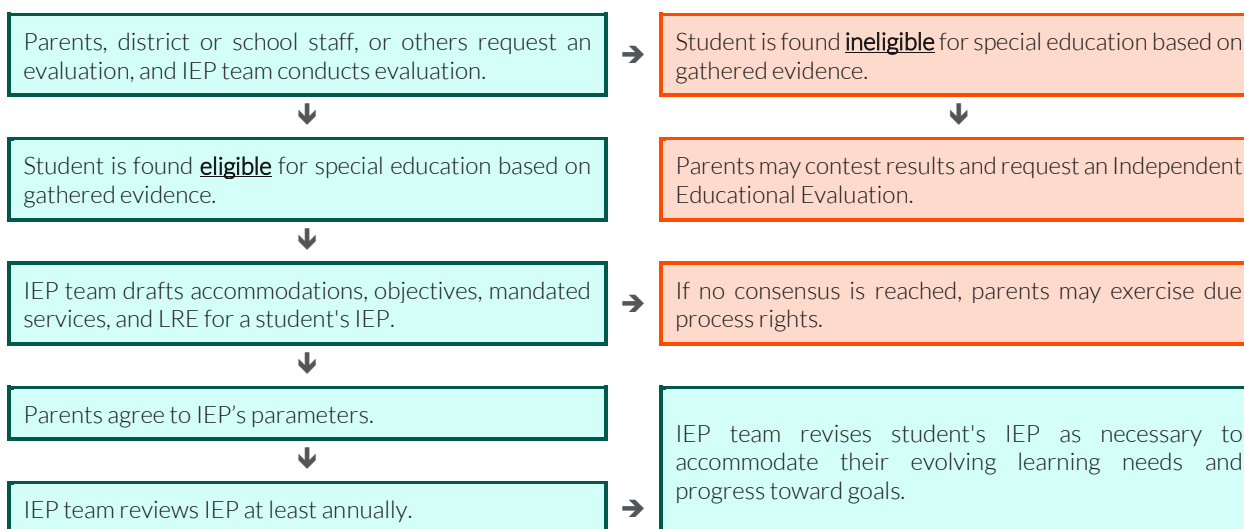
Disability	Description
 <p>Autism</p>	<p>Students have a developmental disability that affects communication and social interaction and adversely impacts their educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental or daily routine changes, and unusual responses to sensory experiences.</p>
 <p>Deaf-Blindness</p>	<p>Students have simultaneous hearing and visual impairments, the combination of which causes severe communication and other developmental and educational needs that cannot be accommodated in special education programs solely for children with deafness or children with blindness.</p>
 <p>Deafness</p>	<p>Students have a hearing impairment that is so severe that they have difficulty processing linguistic information through hearing, with or without amplification that adversely affects their educational performance.</p>
 <p>Emotional Disturbance</p>	<p>Students have a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects their educational performance: a) An inability to learn unexplained by intellectual, sensory, or health factors; b) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers; c) Inappropriate types of behavior or feelings under normal circumstances; d) A general pervasive mood of unhappiness or depression; e) A tendency to develop physical symptoms or fears associated with personal or school problems; and f) Schizophrenia.</p>
 <p>Hearing Impairment</p>	<p>Students have an impairment in hearing, whether permanent or fluctuating, that adversely affects their educational performance but that is not included under the definition of deafness.</p>
 <p>Intellectual Disability</p>	<p>Students have significantly sub-average general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, that adversely affects their educational performance. This category was formerly referred to as “mental retardation.”</p>
 <p>Multiple Disabilities</p>	<p>Students have concomitant impairments (e.g., intellectual disability and blindness), the combination of which causes such severe educational needs that cannot be accommodated in special education programs solely for one of the impairments. Multiple disabilities does not include deaf-blindness.</p>
 <p>Orthopedic Impairment</p>	<p>Students have a severe orthopedic impairment that adversely affects their educational performance. The term includes impairments caused by a congenital anomaly, impairments caused by disease (e.g., poliomyelitis, bone tuberculosis), and impairments from other causes (e.g., cerebral palsy, amputations).</p>
 <p>Other Health Impairment</p>	<p>Students have limited strength, vitality, or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment, that: a) Is due to chronic or acute health problems such as asthma, attention deficit or attention deficit hyperactivity disorder, diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome; and b) Adversely affects their educational performance.</p>
 <p>Specific Learning Disability</p>	<p>Students have a disorder in one or more of the basic psychological processes involved in understanding or using language that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or perform mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. Specific learning disability does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, mental retardation, emotional disturbance, or environmental, cultural, or economic disadvantage.</p>
 <p>Speech or Language Impairment</p>	<p>Students have a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, that adversely affects a child's educational performance.</p>

Disability	Description
 Traumatic Brain Injury	Students have an acquired injury to the brain, resulting in total or partial functional disability, psychosocial impairment, or both that adversely affects their educational performance. Traumatic brain injury applies to open or closed head injuries resulting in impairments in one or more areas, such as: cognition, language, memory, attention, reasoning, abstract thinking, judgment, problem-solving, sensory, perceptual, and motor abilities, psychosocial behavior, physical functions, information processing, and speech. Traumatic brain injury does not apply to injuries that are congenital, degenerative, or induced by birth trauma.
 Visual Impairment	Students have an impairment in vision—both partial sight and blindness—that, even with correction, adversely affects their educational performance.

Source: U.S. Department of Education¹⁵

Figure 1.2 displays a simplified trajectory for evaluating students for special education once an evaluation has been requested and parents have consented. Essentially, the IEP team will collect relevant data via several instruments to establish evidence from which to conclude whether a student has a qualifying disability. If a student is found eligible, the IEP team then drafts an IEP that outlines accommodations, services, and goals designed to meet that student's learning needs.¹⁶

FIGURE 1.2: OVERVIEW OF SPECIAL EDUCATION IDENTIFICATION PROCESS



Source: PACER Center¹⁷

Importantly, **evaluations for special education must be comprehensive and individualized to the student under evaluation.** As emphasized by the Center for Parent Information and Resources—a resource hub supported by the U.S. Department of Education which provides guidance to all stakeholders within the special education community—“[a] child’s initial evaluation must be full and individual, focused on that

¹⁵ Figure text quoted verbatim, with minor adaptations, from: “Sec. 300.8 Child with a Disability,” Op. cit.

¹⁶ [1] “Sec. 300.304 Evaluation Procedures.” U.S. Department of Education. <https://sites.ed.gov/idea/regs/b/d/300.304> [2] “Sec. 300.324 Development, Review, and Revision of IEP.” U.S. Department of Education. <https://sites.ed.gov/idea/regs/b/d/300.324>

¹⁷ Figure adapted from: “Understanding the Special Education Process.” PACER Center, 2016. pp. 1–2. <https://www.pacer.org/parent/php/PHP-c231.pdf>

child and only that child.”¹⁸ Through such a targeted evaluation, educators and assessing personnel can answer three questions:¹⁹

- Does the student under evaluation have a disability that requires special education?
- What are the student’s specific educational needs?
- What accommodations and related services are appropriate for addressing those needs?

Drafting Individual Education Programs and Placing Students

Once a student has been classified as eligible for special education services, an IEP is constructed that outlines services and accommodations that will be provided to the student to reach specific measurable goals. IEPs will detail the location, length, and frequency of accommodations, modifications, and related services so that resources can be assigned appropriately.²⁰ Likewise, IEPs must include the items from Figure 1.3.

FIGURE 1.3: REQUIRED COMPONENTS OF IEPs

- A statement of the student’s present levels of academic achievement and functional performance
- A statement of measurable annual goals, including academic and functional goals
- A description of how the student’s progress toward meeting annual goals will be measured and when periodic reports on progress toward meeting annual goals will be provided
- A statement of special education, related services, and supplementary aids to be provided to the student and program modifications or supports for school personnel to be provided for the student
- An explanation of the extent to which the student will not participate with nondisabled students in the regular class and for other activities
- A statement of any individual appropriate accommodations that are necessary to measure the academic achievement and functional performance of the student on state and districtwide assessments or an explanation for use of an alternative assessment
- The projected date for the beginning of services and modifications and the anticipated frequency, location, and duration of those services and modifications
- Additional information on postsecondary goals and transitions once the student is 16

Source: U.S. Department of Education²¹

Importantly, federal legislation entitles students with disabilities to receive their educational program within the least restrictive environment (LRE), meaning that:²²

¹⁸ [1] “What Is the CPIR?” Center for Parent Information and Resources. <https://www.parentcenterhub.org/whatiscpir/> [2] “Evaluating Children for Disability,” Op. cit.

¹⁹ Bulleted text quoted verbatim, with minor adaptations, from: “10 Basic Steps in Special Education.” Center for Parent Information and Resources, April 9, 2017. <https://www.parentcenterhub.org/steps/>

²⁰ “Special Education Rights and Responsibilities, Chapter 4: Information on the IEP Process.” Disability Rights California. pp. 17, 19–20. <https://www.disabilityrightscalifornia.org/system/files?file=file-attachments/504001Ch04.pdf>

²¹ Figure text quoted verbatim, with minor adaptations, from: “Sec. 300.320 Definition of Individualized Education Program.” U.S. Department of Education, October 30, 2007. <https://sites.ed.gov/idea/regs/b/d/300.320>

²² Quotation taken verbatim, with minor adaptations, from: “Special Education Rights and Responsibilities, Chapter 7: Information on Least Restrictive Environment.” Disability Rights California. p. 3. <https://www.disabilityrightscalifornia.org/system/files?file=file-attachments/504001Ch07.pdf>

“ To the maximum extent appropriate, students with disabilities are educated with students who are not disabled, and special classes, separate schooling, or other removal of students with disabilities from the regular educational environment occurs only when the nature or severity of their disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily. ”

Thus, **students should be educated in the environment best suited to them that most closely resembles general education.** To accomplish this, the IEP team must determine the learning setting that is most conducive to providing the accommodations, services, and resources students with disabilities need while maximizing their interactions with the general education population.²³ LREs exist along a continuum of placement options—moving from fewer restrictions and more interaction between students with and without disabilities (e.g., general education classes with support services and accommodations) to greater restrictions and less interaction between students with and without disabilities (e.g., residential programs).²⁴ Below, Figure 1.4 displays several common LRE arrangements.

FIGURE 1.4: COMMON LRE PLACEMENTS

<p>General Education Classroom with Support</p> <p>Students spend the entire day in a general education classroom and receive supports and services as outlined in their IEP. These may include paraprofessional support, assistive technology, related services, accommodations, and instructional modifications.</p>	<p>Partial Mainstreaming/Inclusion Classes</p> <p>Students spend part of their day in a general education class and the remainder of their time receiving small group or individualized instruction in a special education classroom or via a pullout model for related services.</p>
<p>Special Education Class</p> <p>Students receive specialized instruction alongside other students with disabilities for most or all of their day.</p>	<p>Specialized Programs Outside of District</p> <p>Students participate in specialized programs at institutions outside of the district’s facilities, including private schools, residential programs, and hospital programs.</p>

Source: Understood²⁵

To implement students’ IEPs effectively and to sustain the efficacy of the LREs that students with disabilities participate in, districts and schools must staff their special education programs appropriately. However, there exists a deficit in research on the impacts of class sizes on the academic achievement of students with disabilities. While there is some indication from research that smaller class sizes could benefit students

²³ “Least Restrictive Environment and Inclusion: What Is the Difference?” Connecticut Parent Advocacy Center, December 23, 2009. <http://www.cpacinc.org/hot-topics/inclusion/least-restrictive-environment-and-inclusion-what-is-the-difference/>

²⁴ [1] “Least Restrictive Environment (LRE) and Educational Placement for Students with Individualized Education Programs.” Pennsylvania Department of Education, February 13, 2017. p. 2. [https://www.education.pa.gov/Documents/Codes%20and%20Regulations/Basic%20Education%20Circulars/PA%20Code/Least%20Restrictive%20Environment%20\(LRE\)%20and%20Educational%20Placement%20for%20Students%20with%20Individualized%20Education%20Programs%20\(IEPs\).pdf](https://www.education.pa.gov/Documents/Codes%20and%20Regulations/Basic%20Education%20Circulars/PA%20Code/Least%20Restrictive%20Environment%20(LRE)%20and%20Educational%20Placement%20for%20Students%20with%20Individualized%20Education%20Programs%20(IEPs).pdf) [2] “Placement Decisions and the Least Restrictive Environment (LRE).” Office of Superintendent of Public Instruction, Washington State. <https://www.k12.wa.us/student-success/special-education/special-education-families-ospi/placement-decisions-and-least>

²⁵ Figure adapted from: Morin, A. “Least Restrictive Environment (LRE): What You Need to Know.” Understood. <https://www.understood.org/en/school-learning/special-services/special-education-basics/least-restrictive-environment-lre-what-you-need-to-know>

with disabilities, the research is inconclusive and the supporting body of evidence is not substantial enough to make any firm parameters for class sizes and caseloads.²⁶ Similarly, state guidelines vary on special education caseloads and class sizes, with different factors (e.g., disability type, age of students) impacting existing guidelines and recommendations.²⁷

Some organizations—primarily teachers' unions and associations—do provide guidance on special education class sizes and caseloads. For example, the United Federation of Teachers recommends class sizes between six and 15 students for self-contained "special classes" depending on the intensity of student disabilities. Primarily, however, the organization states that special class sizes must adhere to the parameters of student IEPs.²⁸ Below, Figure 1.5 displays the special class staffing ratios recommended by the United Federation of Teachers.

FIGURE 1.5: SPECIAL CLASS STAFFING RATIOS

Students-to-Staff Ratio	Staff	Class Description
12:1 (Elementary and Middle School) 15:1 (High School)	<ul style="list-style-type: none"> 1 full-time special education teacher 	Serves students whose academic or behavioral needs require specialized instruction which can best be accomplished in a self-contained setting
12:1:1	<ul style="list-style-type: none"> 1 full-time special education teacher 1 full-time paraprofessional 	Serves students whose academic or behavioral management needs interfere with the instructional process, to the extent that additional adult support is needed to engage in learning, and who require specialized instruction which can best be accomplished in a self-contained setting
8:1:1	<ul style="list-style-type: none"> 1 full-time special education teacher 1 full-time paraprofessional 	Serves students whose management needs are severe and chronic requiring intensive constant supervision, a significant degree of individualized attention, intervention, intensive behavior management, and as additional adult support
6:1:1	<ul style="list-style-type: none"> 1 full-time special education teacher 1 full-time paraprofessional 	Serves students with very high needs in most or all need areas, including academic, social or interpersonal development, physical development, and management (i.e., student behavior characterized as aggressive, self-abusive, or extremely withdrawn and with severe difficulties in the acquisition and generalization of language and social skill development)
12:1:4	<ul style="list-style-type: none"> 1 full-time special education teacher 1 full-time paraprofessional per three students 	Serves students with severe and multiple disabilities with limited language and academic and independent functioning (i.e., students requiring a program primarily of habilitation and treatment, including training in daily living skills and the development of communication skills, sensory stimulation, and therapeutic interventions)

Source: United Federation of Teachers²⁹

²⁶ Zarghami, F. and G. Schnellert. "Class Size Reduction: No Silver Bullet for Special Education Students' Achievement." *International Journal of Special Education*, 19:1, 2004. pp. 89–92. <https://files.eric.ed.gov/fulltext/EJ852046.pdf>

²⁷ Jackson, T.L. "Caseload/Class Size in Special Education." National Association of State Directors of Special Education, September 2003. pp. 1–6. http://nasdse.org/DesktopModules/DNNspot-Store/ProductFiles/10_d2fad293-9994-4b81-b27b-a67b78a10104.pdf

²⁸ "Special Class Staffing Ratios." United Federation of Teachers. <http://www.uft.org/teaching/special-class-staffing-ratios>

²⁹ Figure text quoted verbatim, with minor adaptations, from: Ibid.

SECTION II: TEACHING STUDENTS WITH DISABILITIES

In this section, Hanover investigates instructional strategies and accommodations to support students identified as having a disability.

Delivering High-Quality Instruction in Inclusive Settings

Districts with high-achieving special education subpopulations often emphasize inclusion and students' access to the general curriculum. While few research studies find that special education students perform better in non-inclusive settings, several studies suggest that inclusive classrooms have a neutral to slightly positive impact on students with disabilities' academic outcomes.³⁰ For example, case studies of districts across California and Massachusetts with high-performing special education students indicate that inclusion in general classrooms and access to core curricula contribute positively to the performance of students with disabilities.³¹

Within their appropriate LRE, experts recommend that students with disabilities receive direct, explicit instruction to support academic outcomes. For example, the Learning Disabilities Association of America highlights direct instruction as producing “large outcomes” for students with learning disabilities.³² Likewise, the National Center for Special Education Research finds that explicit reading and literacy instruction can support the needs of students with mild to moderate intellectual disabilities who are learning basic reading skills.³³ The Center on Instruction also notes that explicit instruction is “a mainstay feature in many special education programs” and recommends that teachers use this strategy regularly to support students, specifically in mathematics.³⁴ On the next page, Figure 2.1 describes key

³⁰ [1] Bui, X. et al. “Inclusive Education Research and Practice.” Maryland Coalition for Inclusive Education, 2010. pp. 1–2. [http://www.mcie.org/site/usermedia/application/11/inclusion-works-\(2010\).pdf](http://www.mcie.org/site/usermedia/application/11/inclusion-works-(2010).pdf) [2] Rea, P.J., V.L. McLaughlin, and C. Walther-Thomas. “Outcomes for Students with Learning Disabilities in Inclusive and Pullout Programs.” *Exceptional Children*, 68:2, 2002. pp. 212–218. http://people.oregonstate.edu/~hammerr/soc516/Rea_et_al_2002.pdf [2] Willis, J. “Brain-Friendly Strategies for the Inclusion Classroom, Chapter 1: Success for All Students in Inclusion Classes.” Association for Supervision and Curriculum Development, May 2007. <http://www.ascd.org/publications/books/107040/chapters/Success-for-all-Students-in-Inclusion-Classes.aspx>

³¹ [1] Huberman, M., M. Navo, and T. Parrish. “Effective Practices in High Performing Districts Serving Students in Special Education.” *Journal of Special Education Leadership*, 25:2, September 2012. p. 69. Accessed via EBSCOhost. [2] “A Study of MCAS Achievement and Promising Practices in Urban Special Education: Summary of Field Research Findings.” Donahue Institute, University of Massachusetts, October 2004. p. 2. http://www.donahue.umassp.edu/documents/Executive_Summary_of_Field_Research_Findings.pdf








³² “Successful Strategies for Teaching Students with Learning Disabilities.” Learning Disabilities Association of America, October 14, 2013. <https://ldaamerica.org/successful-strategies-for-teaching-students-with-learning-disabilities/>

³³ Connor, C.M. et al. “Improving Reading Outcomes for Students with or at Risk for Reading Disabilities: A Synthesis of the Contributions from the Institute of Education Sciences Research Centers.” National Center for Special Education Research, U.S. Department of Education, February 2014. pp. 42–47. <https://files.eric.ed.gov/fulltext/ED544759.pdf>

³⁴ Jayanthi, M., R. Gersten, and S. Baker. “Mathematics Instruction for Students with Learning Disabilities or Difficulty Learning Mathematics: A Guide for Teachers.” Center on Instruction, 2008. p. 5. <https://www.centeroninstruction.org/files/Mathematics%20Instruction%20LD%20Guide%20for%20Teachers.pdf>

components of explicit instruction—such as modeling and guided practice—that will help support the academic achievement of students with disabilities.

FIGURE 2.1: COMPONENTS OF EXPLICIT INSTRUCTION

Component	Description
 Clearly Stated Goals	State what is to be learned and why it is important. Students achieve better if they understand instructional goals and expected outcomes, as well as how the information or skills presented will help them.
 Focus on Critical Content	Teach skills, strategies, vocabulary terms, concepts, and rules that will empower students in the future and match the students' instructional needs.
 Logical Skills Sequence	Consider several curricular variables, such as teaching easier skills first, teaching high-frequency skills before skills less frequent in usage, and ensuring mastery of prerequisites to a skill before teaching it.
 Packaging Complex Skills	Segmenting complex skill into smaller instructional units of new material to addresses concerns about cognitive overloading, processing demands, and the capacity of students' working memory.
 Step-by-Step Demonstrations	Clearly demonstrate target skills or strategies to show the students a model of proficient performance Clarify the decision-making processes needed to complete a task or procedure by thinking aloud.
 Guided Practice	Regulate the difficulty of practice opportunities and provide students with guidance in skill performance. When students demonstrate success, gradually increase task difficulty and provide less guidance.
 Immediate Feedback	Follow up on students' responses as quickly as possible. Immediate feedback about the accuracy of responses helps ensure high rates of success and reduces the likelihood of practicing errors.

Source: Guilford Press³⁵

Promoting Literacy Skills

Like general education students, **special education students benefit from comprehensive instruction that addresses the multiple components of literacy.** According to the American Speech-Language Hearing Association, comprehensive literacy instruction:³⁶

“ Means that individuals must have access to instruction each day that supports their ability to read words (i.e., phonemic awareness, phonics, word identification) and read with comprehension (i.e., fluency, vocabulary, text comprehension), combined with instruction aimed at improving their ability to write text to improve their thinking and communicate with others. ”

³⁵ Figure text quoted verbatim, with minor adaptations, from: Archer, A.L. and C.A. Hughes. “Exploring the Foundations of Explicit Instruction.” Guilford Press, 2011. pp. 2-3. <https://explicitinstruction.org/download/sample-chapter.pdf>

³⁶ Quotation taken verbatim, with minor adaptations, from: “Literacy in Individuals with Severe Disabilities.” American Speech-Language-Hearing Association. <https://www.asha.org/NJC/Literacy-in-Individuals-With-Severe-Disabilities/>



Importance of Literacy

Receptive communication (i.e., reading, listening, and viewing) skills are vital to understand new content across subject areas, and expressive communication skills (i.e., writing, speaking, and visualizing) support students' articulation of content knowledge. As such, any successful special education program must prioritize literacy to promote learning in all academic disciplines.

Consequently, students with disabilities—both mild or severe—should receive constant exposure to texts and immersion in language- and print-rich environments. Instruction could then focus on a multi-faceted learning approach emphasizing both skills and understanding and creating meaning.³⁷

Notably, students with disabilities who lack “conventional understandings of emergent letters, sounds, words, and the meaning of written language” require comprehensive emergent literacy instruction.³⁸ While emergent literacy begins at birth for all children, those with significant disabilities often remain in this stage for an extended period. Indeed, students with severe disabilities often require comprehensive emergent literacy instruction “to develop the range of knowledge, skills, and understanding they require to eventually use

print to interact meaningfully with others.”³⁹ Instruction should involve constant interactions around print and should focus on code-focused skills (i.e., phonological awareness, alphabet knowledge, basic decoding) in preparation for more advanced literacy instruction.⁴⁰ Specifically, emergent learning instruction for students with disabilities should help students:⁴¹

- Identify most letters, most of the time;
- Engage and express interest during shared reading interactions;
- Successfully communicate, initiate, and interact; and
- Understand that print has meaning.

Direct instruction to improve word recognition and reading comprehension can be appropriate for both elementary and secondary school students with learning disabilities. Instruction focusing on word recognition typically involves drilling and practice, whereas instruction focused on comprehension will help student develop strategies to look for patterns and main ideas within key passages of text, as well as holistically within the larger text.⁴² Beginning on the next page, Figure 2.2 displays instructional components and related student activities and instructional techniques to improve word recognition and reading comprehension skills.

³⁷ Erickson, K.A. “Comprehensive Literacy Instruction, Interprofessional Collaborative Practice, and Students with Severe Disabilities.” *American Journal of Speech-Language Pathology (Online)*, 26:2, May 2017. pp. 199, 203. Accessed via ProQuest.

³⁸ “Literacy in Individuals with Severe Disabilities,” Op. cit.

³⁹ Erickson, Op. cit., pp. 195–198.

⁴⁰ “What Works: An Introductory Guide for Early Language and Emergent Literacy Instruction.” National Center for Family Literacy, 2009. p. 14. <https://ksdetasn.s3.amazonaws.com/uploads/ckeditor/attachments/31/what-works.pdf>

⁴¹ Bulleted text quoted verbatim, with minor adaptations, from: Erickson, Op. cit., p. 199.

⁴² Stanberry, K. and L. Swanson. “Effective Reading Interventions for Kids with Learning Disabilities.” Reading Rockets, 2009. <https://www.readingrockets.org/article/effective-reading-interventions-kids-learning-disabilities>

FIGURE 2.2 STRATEGIES TO IMPROVE WORD RECOGNITION AND READING COMPREHENSION SKILLS

Strategy	Supporting Techniques and Teacher Moves
Word Recognition	
Sequencing	<ul style="list-style-type: none"> ▪ Break down tasks ▪ Gradually reduce prompts or cues ▪ Match the difficulty level to the task and student ▪ Sequence short activities ▪ Use step-by-step prompts
Segmentation	<ul style="list-style-type: none"> ▪ Break down the target skill into smaller units or component parts ▪ Segment or synthesize component parts
Advanced Organizers	<ul style="list-style-type: none"> ▪ Direct students to review material prior to instruction ▪ Direct students to focus on particular information ▪ Provide students with prior information about tasks ▪ Tell students the objectives of instruction up front
Reading Comprehension	
Directed Response/ Questioning	<ul style="list-style-type: none"> ▪ Ask questions ▪ Encourage students to ask questions ▪ Engage in students in dialogue with peers and instructional staff
Control Difficulty of Processing Task Demands	<ul style="list-style-type: none"> ▪ Assist students as needed ▪ Give simplified demonstrations and keep activities short ▪ Sequence tasks from easy to difficult ▪ Present easy steps or concepts first and progress to more difficult steps or concepts ▪ Allow students to control level of difficulty
Elaboration	<ul style="list-style-type: none"> ▪ Provide students with more information or explanation about concepts, steps, or procedures ▪ Use redundant text or repetition within text
Modeling	<ul style="list-style-type: none"> ▪ Demonstrate the processes or steps the students are to follow
Group Instruction	<ul style="list-style-type: none"> ▪ Deliver instruction and facilitate dialogue with small groups of students
Strategy Cues	<ul style="list-style-type: none"> ▪ Remind students to use strategies or multiple steps. ▪ Explain steps or procedures for solving problems. ▪ Use "think aloud" model ▪ List the benefits of strategy use or procedures

Source: Reading Rockets⁴³

Furthermore, based on their needs, students with learning disabilities may benefit from differentiated literacy instruction within a general education classroom or require more intensive accommodations and remediation, such as:⁴⁴

- **Targeting areas that are critical to reading and writing proficiency.** Key foci include decoding, vocabulary, comprehension, fluency, spelling, composing, higher-order language, metalinguistic awareness, self-regulation, and executive functioning.
- **Combining strategy-based instruction, remediation, and skill-based instruction.** Strategies are only effective if students have appropriate skills to use them. In addition, skill learning may be insufficient to bring generalization to other tasks.

⁴³ Figure text quoted verbatim, with minor adaptations, from: Ibid.

⁴⁴ Bulleted text quoted verbatim, with minor adaptations, from: "Adolescent Literacy and Older Students with Learning Disabilities." National Joint Committee on Learning Disabilities, June 2008. pp. 12-14. <http://www.ldonline.org/?module=uploads&func=download&fileId=755>

- **Teaching literacy strategies within the context of content area material and discipline-specific literacy.** Situating literacy instruction in specific disciplines can facilitate students' development of competence in reading content area texts and writing to communicate ideas associated with a content area.
- **Providing clearly-scaffolded and sequenced instruction and remediation that strives toward helping students become independent learners.** Both modeling and informative instructional feedback are effective strategies that should be incorporated into a systematic approach for teaching critical literacy and literacy-related language skills.
- **Providing repeated opportunities to apply and generalize strategies and skills.** It is often necessary to reteach skills and strategies and to provide guided practice in their functional application at higher and higher levels of complexity.
- **Identifying and incorporating strategies and tools that provide support for acquisition of critical literacy skills necessary in print and digital environments.** These include, but are not limited to, the implementation and utilization of assistive technology tools, use of student skills in digital environments, and principles of universal design.
- **Actively using student performance assessment data to monitor progress,** determine continuing instructional and remedial needs, and obtain information about the student's strengths and interests to incorporate into instructional planning.

Supporting Numeracy Skills

Every student with a disability performs differently in math; however, students with learning disabilities specific to math tend to exhibit several common characteristics, such as:⁴⁵

- Difficulty processing information;
- Difficulty identifying relevant information in mathematics problems, especially in word problems;
- Problem maintaining attention;
- Difficulty selecting an effective problem-solving strategy;
- Poor reasoning and problem-solving skills;
- Memory and vocabulary difficulties;
- Weak visual/spatial representational skills;
- Learned helplessness—that is, having low motivation, being a passive learner, and attributing both successes and failures to external, uncontrollable factors;
- Mathematics anxiety;
- Deficits in the areas of mathematics facts and computational skills;
- Difficulty translating information into a mathematical expression or equation;
- Difficulty reading about mathematics;



⁴⁵ Bulleted text quoted verbatim, with minor adaptations, from: "Common Characteristics of Students with MLD." IRIS Center, Vanderbilt University. <https://iris.peabody.vanderbilt.edu/module/rti-math/cresource/q1/p01/common-characteristics-of-students-with-mld/>

- Difficulty understanding the language, or vocabulary, of mathematics;
- Difficulty understanding mathematics concepts and how concepts relate to procedures;
- Difficulty solving multi-step problems; and
- Working through a problem without making sure all steps are completed or that the answer makes sense.

As a baseline strategy to support students with disabilities, **teachers should use multiple examples during mathematics instruction to create multiple chances to develop understanding of key concepts and skills.** In a meta-analysis on teaching mathematics to students with disabilities, the Center on Instruction identifies a series of effective practices for Kindergarten through Grade 12, including using multiple instructional examples.⁴⁶ This mirrors findings derived from case studies by Regional Educational Laboratory Northeast and Islands which states, “Multiple approaches to teaching math concepts are needed to help students with disabilities reach a deep understanding of math.”⁴⁷

Teachers may introduce such examples in a specific order to help students process mathematical applications in a logical fashion. By providing a range of examples, teachers allow students with disabilities to transfer skills to a wide variety of situations rather than a homogenous problem set.⁴⁸ Guidance published by the Access Center, a former initiative of the American Institutes for Research, recommends that teachers adapt their lesson preparation, instructional content, and delivery according to the type of learning problem displayed by each student with disabilities, as displayed in Figure 2.3 beginning below.




FIGURE 2.3: MODIFICATIONS TO MATH INSTRUCTION BY LEARNING PROBLEM

Problem	Lesson Presentation	Lesson Content
 Organization	<ul style="list-style-type: none"> ▪ Provide demonstrations, modeling, guided practice, and frequent review ▪ Have students complete missing words in guided notes ▪ Avoid cluttered and crowded worksheets 	<ul style="list-style-type: none"> ▪ Teach routines and procedures ▪ Provide outline of content planned ▪ Color code main steps, processes, and vocabulary ▪ Provide advanced organizers
 Inattention/ Distractibility	<ul style="list-style-type: none"> ▪ Vary presentation of content via different activity types ▪ Use highlighters to direct student attention to important information, key words, and directions ▪ Use physical, visual, or auditory signals to redirect students to stay on task ▪ Talk slowly with voice change or with emphasis on key words or definitions 	<ul style="list-style-type: none"> ▪ Have students complete each step of a math problem in a different color ▪ Provide copies of sample problems to prevent students copying in error ▪ Encourage students to vocalize the content and procedure ▪ Give physical cues for important concepts or key information ▪ Use games to reinforce concepts

⁴⁶ Jayanthi, Gersten, and Baker, Op. cit., p. 6.

⁴⁷ Louie, J. et al. “Math Education Practices for Students with Disabilities and Other Struggling Learners: Case Studies of Six Schools in Two Northeast and Islands Region States.” Regional Educational Laboratory Northeast and Islands, August 2008. p. 5.
https://ies.ed.gov/ncee/edlabs/regions/northeast/pdf/REL_2008053a.pdf

⁴⁸ Jayanthi, Gersten, and Baker, Op. cit., p. 6.

Problem	Lesson Presentation	Lesson Content
	<ul style="list-style-type: none"> Use concrete materials for hands-on work 	
 <p>Following Directions</p>	<ul style="list-style-type: none"> Model or demonstrate each problem step Design presentations, including oral ones, so they are smaller and shorter Provide visual cues and reinforcement of content Use graphs and tables to reinforce concepts 	<ul style="list-style-type: none"> Have students verbalize content, directions, and techniques Provide examples of correct formats and completed sample problems Provide an outline of content Use mnemonics aids to signal steps Provide a protocol for each lesson
 <p>Memory and Recall</p>	<ul style="list-style-type: none"> Balance visual and auditory stimuli Use semantic maps and diagrams Allow students to trace geometric shapes and other visual patterns during visually presented lessons 	<ul style="list-style-type: none"> Chunk pieces of information Re-teach often, varying approaches Point out then repeat concepts and main ideas at the beginning, middle, and end of a lesson
 <p>Understanding and Comprehension</p>	<ul style="list-style-type: none"> Provide visual cues to help students who may have difficulty visualizing shapes, dimensions, and sizes Use cooperative learning techniques Model and teach metacognitive strategies Use manipulatives 	<ul style="list-style-type: none"> Show the purpose of a lesson Provide examples of correctly solved problems at the beginning of a lesson Teach the meaning of key vocabulary Introduce one concept at a time and teach to mastery

Source: The Access Center, American Institutes for Research⁴⁹

Special education students also benefit from instruction using heuristic problem-solving strategies. Heuristics supplement direct instructional strategies by moving beyond a specific problem type and guiding problem-solving across a range of applications and scenarios.⁵⁰ The Council for Learning Disabilities (CLD) highlights several heuristic strategies to support students' broader problem-solving skills (see Figure 2.4 beginning below). Notably, heuristic strategies related to verbalization, numerical translation, and visualization are effective in supporting students with disabilities.⁵¹

FIGURE 2.4: HEURISTIC PROBLEM-SOLVING STRATEGIES

R	emember the problem correctly	<p><i>This strategy assists students with solving word problems. Students who have trouble with abstract reasoning, attention, memory, or visual spatial skills may benefit.</i></p>
I	dentify the relevant information	
D	etermine the operations and unit for expressing answers	
E	nter the correct numbers, calculate, and check the answer	

⁴⁹ Figure text quoted verbatim, with minor adaptations, from: "Learner Accommodations and Instructional Modifications in the Mathematics Classroom for Students with Learning Disabilities." The Access Center, American Institutes for Research, pp. 2–6. http://drsticks.com/uploads/Accommodations_for_Math_Chart.pdf

⁵⁰ Jayanthi, Gersten, and Baker, Op. cit., p. 9.

⁵¹ "Instruction: Research Clips." National Council of Teachers of Mathematics, 2007. https://www.nctm.org/uploadedFiles/Research_and_Advocacy/research_brief_and_clips/Student_with_Difficulties_Clip.pdf

F	ind what you are solving for	<i>This strategy assists students with solving word problems. Teach each step in the sequence, allowing sufficient time for guided practice prior to asking students to independently implement the strategy.</i>
A	sk yourself, "What are the parts of the problem?"	
S	et up the numbers	
T	ie down the sign	
D	iscover the sign	
R	ead the problem	
A	answer or draw and check	
W	rite the answer	

T	hought: Think about what data is needed to solve a problem and circle the key word	<i>This strategy allows students to use different steps to analyze and solve word problems.</i>
I	nformation: Identify data needed to solve the problem, draw a picture, or cross out unneeded information	
N	umber sentence: Write a number sentence	
S	olution sentence: Write a solution sentence	

S	earch the word problem	<i>This strategy supports students in solving algebra word problems.</i>
T	ranslate the words into an equation	
A	nswer the problem	
R	eview the problem	

Source: Council for Learning Disabilities⁵²

⁵² Figure text quoted verbatim, with minor adaptations, from: Hott, B.L., L. Isbell, and T.O. Montani. "Strategies and Interventions to Support Students with Mathematics Disabilities." Council for Learning Disabilities, December 2014. pp. 2-4. https://www.council-for-learning-disabilities.org/wp-content/uploads/2014/12/Math_Disabilities_Support.pdf

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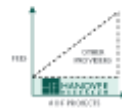
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