

Special Education Literature Review

Prepared for Arlington Public Schools

In the following report, Hanover Research reviews best practices in the management and organization of processes for identifying and serving students needing early intervention services, 504 plans, or individualized education plans. We begin with a brief review of Federal and State requirements before examining the literature on best practices and recommendations for identifying students needing special education services as well as on best practices for serving these students.

Overview

We begin our review of the best practices in the management and organization of processes for identifying and serving students needing early intervention services, 504 plans, or individualized education plans (IEP) with a brief overview of Federal and state requirements for serving individuals with disabilities. The best practices and recommendations discussed later in this report work within the Federal and state requirements discussed below.

Federal and State regulations govern the provision of special education services. Specifically, the December 3, 2004 reauthorization of the Individuals with Disabilities Education Improvement Act (IDEA) is the primary Federal legislation governing special education.¹ Congress incorporated the requirements of the No Child Left Behind Act (NCLB) into IDEA, and, consequently, a major focus of IDEA is ensuring that students with disabilities be involved in and make progress in the general education curriculum.² In January 2010, the Virginia Department of Education published “Regulations Governing Special Education Programs for Children with Disabilities in Virginia,” which details the primary State provisions for special education.

Section 504

Section 504 of the Rehabilitation Act of 1973 is a “national law that protects qualified individuals from discrimination based on their disability” by prohibiting “organizations and employers from excluding or denying individuals with disabilities an equal opportunity to receive program benefits and services.”³ Additionally, it “defines the rights of individuals with disabilities to participate in, and have access to, program benefits and services.”⁴

General Requirements ⁵
Recipients of federal monies must provide Free Appropriate Public Education (FAPE)
Must provide regular or special education
Local educational agencies (LEAs) must appoint a “504 Coordinator”
LEAs must develop and implement Section 504 policies and procedures
LEAs may adopt IDEA procedures for 504

Source: Division of Special Education and Student Services, Virginia Department of Education

¹ “Regulations Governing Special Education Programs for Children with Disabilities in Virginia.” 2010. Department of Education, 2. http://www.doe.virginia.gov/special_ed/regulations/state/regs_speced_disability_va.pdf

² Hall, S. 2007. “NCLB and IDEA: Optimizing Success for Students with Disabilities.” *Perspectives on Language and Literacy*, 33:1. Full text available on Proquest.

³ “Your Rights Under Section 504 of The Rehabilitation Act.” Fact Sheet. Office for Civil Rights. U.S. Department of Education. <http://www.hhs.gov/ocr/civilrights/resources/factsheets/504.pdf>

⁴ *Ibid.*

⁵ Verbatim from: “Section 504: Keys to Implement in Virginia’s Schools.” Division of Special Education and Student Services. Virginia Department of Education, 3. http://www.doe.virginia.gov/special_ed/tech_asst_prof_dev/section_504_implementation_va.pdf

Individuals with Disabilities Education Improvement Act of 2004

The Individuals with Disabilities Education Improvement Act of 2004 (IDEA) is a reauthorization of the Individuals with Disabilities Education Act of 1997 (IDEA 97).⁶ IDEA “[ensures] services to children with disabilities throughout the nation,” and governs how “states and public agencies provide early intervention, special education, and related services to more than 6.5 million eligible infants, toddlers, children and youth with disabilities.”⁷ There are two main age-based regulations: Part C provides early intervention services to infants and toddlers with disabilities (from birth through age 2) and their families, while Part B provides special education and related services to children and youth between the ages of 3 and 21.⁸

IDEA “guarantees a free and appropriate public education in the least restrictive environment to all children with disabilities.”⁹ The five steps in the special education process are listed below:

- ❖ Identification and referral
- ❖ Evaluation
- ❖ Determination of eligibility
- ❖ Development of an individualized education program (IEP) and determination of services
- ❖ Reevaluation¹⁰

Mandated by the Individuals with Disabilities Education Act, the Individualized Education Program (IEP) is required for any “public school child who receives special education and related services.”¹¹ The IEP has been described as “the cornerstone of a quality education for each child with a disability,” because it serves as an individualized guide for delivering special education supports and services.¹²

The IEP is the “responsibility of local public school divisions” as “special education is specially designed instruction to meet the unique needs of a child with a disability.”¹³ **Specially designed instruction** means adapting “the content, methodology, or delivery of instruction to address the unique needs of the student that result from the child’s disability; and to ensure access of the child to the general

⁶ Wright, P. 2004. “20 U.S.C. § 1400 Findings and Purposes.” The Individuals with Disabilities Education Improvement Act of 2004: Overview, Explanation and Comparison, 3.

<http://www.wrightslaw.com/idea/idea.2004.all.pdf>

⁷ “Building the Legacy: IDEA 2004.” U.S. Department of Education. <http://idea.ed.gov/>

⁸ Ibid.

⁹ “Special Education.” Commonwealth of Virginia Department of Education.

http://www.doe.virginia.gov/special_ed/index.shtml

¹⁰ Ibid.

¹¹ Ibid.

¹² Kupper, L. Op. cit., 1.

¹³ “IEPS & Instructional Services.” Virginia Department of Education.

http://www.doe.virginia.gov/special_ed/iep_instruct_svcs/index.shtml

curriculum, so that the child can meet the educational standards that apply to all children.”¹⁴ The IEP needs to address:

- ❖ Present level of academic achievement and functional performance
- ❖ Measurable annual goals
- ❖ Benchmarks or short-term objectives
- ❖ Special education, related services, supplementary aids and services
- ❖ Participation with children without disabilities
- ❖ Participation in state and division-wide assessments
- ❖ Duration, frequency, and location of services
- ❖ Progress report schedule
- ❖ Initial transition
- ❖ Secondary transition¹⁵

The following sections of this report deal primarily with the process of identifying and serving students under the IDEA within schools. **Key findings include:**

- ❖ The literature strongly emphasizes the importance of assessment and progress monitoring in the identification of students who need early intervention services, 504 plans, and individualized education plans. The preeminent model for the assessment and identification of these students appears to be the Response-to-Intervention (RTI) model.
- ❖ Individualized Education Plans (IEP) are the primary – and legally required – method by which schools identify the needs of students with disabilities, as well as the ways in which these needs may be met. State standards-based IEPs are recommended in the literature as a way to ensure that students with disabilities or special needs have access to the general education curriculum. As the inclusive school framework becomes increasingly prevalent and highly recommended, standards-based IEPs may play an important role in ensuring inclusivity.
- ❖ Universal design for learning (UDL) principles work within the inclusive school framework and can guide curricular planning teams in developing curricula that accommodate the learning needs of students with disabilities. The UDL principles of multiple means of representation, multiple means of expression, and multiple means of engagement intend to add flexibility to instructional and assessment practices in the general education classroom in order to include students whose learning needs have traditionally been unaddressed by general education. Accommodations include the use of assistive technologies, as well as alterations in instructional approaches.

¹⁴ Ibid.

¹⁵ Verbatim from: Ibid.

- ❖ Teacher professional development is most successful when it focuses on five important aspects: active learning, alignment with district standards, duration, focus on subject matter knowledge/instruction, and transfer to the classroom. While there is a dearth of literature discussing effective in-school professional development specifically for special education teachers and administrators, some special education professional organizations outline industry standards and offer their own professional development resources, which we review in this report.
- ❖ Strategies for developing competent special education assistants include offering proper orientation sessions, including special education assistants in school and district professional development workshops, and training teachers to train their special education assistants.
- ❖ Assistive technologies play an increasingly large role in best practice recommendations for serving the needs of students with disabilities. The SETT, QIAATN, and NCTI/CITE frameworks serve as useful methodological guides in diagnosing students' assistive technology needs, and the Wisconsin Assistive Technology Initiative outlines who should be involved in the assessment process. Most assistive technologies fall under three categories: 1) mathematical aids, 2) reading aids, and 3) writing aids.

Best and Recommended Practices for Identifying Individuals with Disabilities and Their Needs

While all schools and school districts must follow the Federal and State requirements for serving individuals with disabilities, a variety of practices have arisen from within this requirement framework to best organize and manage the process of identifying and serving students with disabilities. In the next two sections, we review best and recommended practices from government agencies, research institutes and academic literature. We begin with a review of practices pertaining to the first step in the process – identifying these individuals – and then the next section turns to best practices in serving these individuals.

Identifying Individuals with Disabilities

The literature strongly emphasizes the importance of assessment and progress monitoring in the identification of students who need early intervention services, 504 plans, and individualized education plans. The preeminent model for the assessment and identification of these students appears to be the Response-to-Intervention (RTI) model.

Frequent assessments and progress monitoring are important in the identification of students who need early intervention services, 504 plans, and individualized education plans

As an educational achievement intervention strategy, Response-to-Intervention (RTI) models promise **individualized and progressive solutions** that are reliant upon multilayered and sensitive assessments. The model also involves attention on early action and the re-integration of low-achieving students into the regular classroom; this is discussed further as

an important component of the inclusive schools framework later in this report. RTI has been described as “the most significant change in special education in almost 30 years,”¹⁶ and it is poised to impact education considerably at both the special education and general classroom levels.

Before RTI: the IQ model

Previous solution systems, specifically the ability-achievement discrepancy (“IQ”) model, chased the same goal as RTI of improving student outcomes without emphasizing consistent data collection procedures.

The IQ model establishes a tiered process of identifying and resolving low educational outcomes. First, educators must identify a discrepancy between *ability* and *achievement* determined by some standardized measure of each. Typically, ability is measured by IQ or some other intelligence test, and achievement is measured

¹⁶ Burns, M. and M. Coolong-Chaffin. “Response to Intervention: The Role of and Effect on School Psychology.” *School Psychology Forum: Research in Practice*. November 2006. Volume 1, Issue 1: 3.

through standardized testing. If there is a significant discrepancy between the two scores, administrators must continue to identify the specific processing (psychological or cognitive) deficit that affects the student in question. Typically, this is done through a battery of psychological tests. If a deficit is found, an individual education plan (IEP) is drawn to address the student's specific needs. There are, however, options for excluding certain students based on low IQ (mental retardation), emotional disturbance, or other environmental factors like extreme poverty if these are determined to be at the root of the student's discrepancy.¹⁷

Several strong criticisms have been leveled at the IQ model. Foremost among these is a concern with the speed and timing of application, as articulated below:

School expectations change significantly at middle and upper grades where, increasingly, children are expected to *read to learn* while in the K-3rd grade period the main task is *learning to read*. Delaying intensive reading interventions to 3rd grade or later confers an enormous disadvantage that might be mitigated if effective reading interventions occurred earlier when reading problems are first apparent.¹⁸

IQ testing typically **delays action** until the upper elementary years, which severely hampers the effectiveness of any solutions. Furthermore, the IQ model is too dependent on appropriate grouping of students to consistently provide valid, actionable results. The design of testing frequently obscures subgroups of students who might be in need of further help but get placed inappropriately based solely on the outcome of their intelligence and standardized tests.¹⁹ In many cases, the IQ model has excluded slow learners—students with average IQs—from receiving important attention.²⁰ RTI promises to resolve many of these issues.

RTI Programs in Theory

RTI programs constitute a new organizational system in school administration. RTI was developed in recognition of the limitations of “traditional psychometric methods” of identifying learning challenges, which have been critiqued for their inability to effectively distinguish between learning disabilities and low achievement and their inconsistent, “overidentification” of students as being learning disabled.²¹ RTI aims to provide a more nuanced, meaningful, and valid approach, shifting the

¹⁷ Restori, A., Katz, G., and Lee, H. 2009. “A Critique of the IQ/Achievement Discrepancy Model for Identifying Specific Learning Disabilities.” *Europe's Journal of Psychology*, 4, 128-145; pp. 129-130.

<http://www.ejop.org/images/11%202009/9.%20A%20Critique%20of%20the%20IQ%20%20Achievement%20Discrepancy%20Model%20.pdf>

¹⁸ “Questioning the Ability-Achievement Discrepancy.” National Research Center on Learning Disabilities. 2007.

<http://www.nrcld.org/about/research/states/section3.html>; see also Restori, Katz and Lee, 2009, p. 132.

¹⁹ Steubing, K. et. al. 2002. “Validity of IQ-Discrepancy Classifications of Reading Disabilities: A Meta-Analysis.” *American Educational Research Journal*, 39: 2, 469-518.

²⁰ Restori, Katz and Lee, Op. cit., 132.

²¹ Ibid., 114.

“identification process away from diagnosing defects to examining student outcomes” in response to a contingent series of interventions.²²

RTI features a multilayered approach to preventing, monitoring, and resolving student learning issues.²³ Its main intent is to reinforce implementation of solutions. As Robert J. Weidl, an education analyst, has written: “While educators suggest that [they do adjust], in reality, instructional modification does not occur frequently and typically is not done systematically or based on performance data.”²⁴ RTI promises to improve both identification of learning needs and implementation of useful solutions to meet these needs.

Within a multi-tiered RTI system, students may be more likely to **receive help at earlier stages in their learning**, with perhaps some disabilities even being prevented from developing or their overall impact lessened. This preventive aspect has prompted many schools to adopt an RTI framework as a means for reforming their educational practices.²⁵ Furthermore, because the greatest criticism against the IQ model was its failure to *act* quickly after identifying students with need, **RTIs are most appropriately applied as early intervention programs**, which are leveraged intensely in the elementary years. It is important to note, however, that critics of RTI question the validity of relying on literacy for the early identification of learning disability. In other words, RTI may overly conflate “reading disability” (RD) and “specific learning disability” (SLD), which are not necessarily congruent in every child.²⁶

As potential serious learning disability (SLD) identification is embedded within this preventive framework, however, schools are faced with questions about how best to operationalize the RTI process. Professional concerns expressed about using RTI as a part of SLD identification typically revolve around issues related to instruction and assessment. Although sound instruction is paramount to successful implementation of RTI, assessment data should drive decision making. Therefore, **progress monitoring** comprises one of the most critical features of successful RTI implementation. Careful progress monitoring aids teachers and student support teams in making instructional decisions throughout all levels of the RTI system and provides data to corroborate SLD identification.

²² Ibid.

²³ “Essential Components of RTI – A Closer Look at Response to Intervention.” 2010. National Center on Response to Intervention, 2. http://www.rti4success.org/images/stories/pdfs/rtiessentialcomponents_042710.pdf

²⁴ Wedl, R. 2005 “Response to Intervention: An alternative to traditional eligibility criteria for students with disabilities,” 3. http://www.educationevolving.org/pdf/Response_to_Intervention.pdf

²⁵ Tilly, D. 2008. “The Evolution of School Psychology to Science-Based Practice: Problem Solving and the Three-Tiered Model.” *Best Practices in School Psychology V*, pp. 17-35.

²⁶ Kavale, K. et. al. Op. cit., 116.

TIER ONE: PRIMARY PREVENTION

The first tier of such a framework occurs as general education instruction. Because data used from an RTI process for potentially identifying students with SLD must show lack of adequate response to scientifically validated instruction, Tier 1 must necessarily involve implementation of instructional practices that have been tested empirically. Schools must be able to defend that the core programs and instructional procedures used by their teachers have been generally effective in promoting student achievement or that specific instructional components within these programs have empirical validation for improved achievement. When a student fails to respond adequately to instruction, teachers need to be reasonably certain that their instructional practices did not contribute to the student's poor learning.²⁷

Assessment data should play an integral role in Tier 1 preventive practices. Typically, screening measures are used to target students at the beginning of the year in terms of their relative likelihood for achieving important educational outcomes. For example, those students whose scores fall below a certain criterion score or perform below a particular percentile may be viewed as “at risk” for reading difficulties or disabilities if preventive instruction is not provided. In addition to one-time screening measures, schools may implement benchmark assessment systems in which all students are assessed at several points during the school year, such as progress monitoring.

Progress monitoring encompasses a system of brief assessments that are given frequently, at least monthly, to determine whether students are progressing through the curriculum in desired fashion and are likely to meet long-term goals. Data are plotted on a graph, and a line of best fit is superimposed on the data to show the student's actual rate of improvement. Consequently, progress monitoring scores provide teachers with information about both the level of student performance and his or her rate of academic improvement. A teacher can **compare the student's actual rate of improvement to his or her projected rate of improvement in order to determine whether the student is responding sufficiently to the instructional program** and is likely to meet long-term expectations.

To evaluate student responsiveness to these instructional programs, in addition to screening procedures, progress monitoring measures may be used at least weekly with students suspected as “at risk” of reading failure. When progress monitoring data indicate that students are performing below their peers in both level and rate of improvement, Tier 2 services may be initiated.²⁸

²⁷ Stecker, Op. cit.

²⁸ Ibid.

TIER TWO: SECONDARY PREVENTION

Tier 2 services often are **pull-out instructional services** that are delivered to small groups of students on a frequent basis, such as every day or several days per week. RTI frameworks have employed both standard-treatment and individual problem-solving approaches as methods for providing supplemental instruction.

With a problem-solving approach, a student support team may discuss or design the types of instructional practices and content that would best boost a particular student's achievement. Targeted students with similar needs may be grouped together for supplemental instruction. Although a problem-solving approach has much intuitive appeal, researchers tend to support the use of a standard set of interventions for particular grade levels for both empirical and logistical reasons. Like Tier 1 instruction, **supplemental instruction should be based on scientific evidence of its effectiveness.**²⁹

With individual problem solving, multiple types of secondary prevention programs may be implemented within one school. The quality of the instruction will be dependent on both the team's design and the educator's delivery of such instruction. Schools need to verify that each of the supplementary programs is designed well with empirical validation and that each program is delivered as expected. School resources may be taxed beyond their capacity for delivering this level of support and assurance that programs are scientifically based.

Progress monitoring data are critical for evaluating whether students respond sufficiently during Tier 2 support. The same measures used for progress monitoring at Tier 1 can be used at Tier 2. If students progress well, they may move back to Tier 1 without continued support of Tier 2 instruction. If students do not respond as desired to the core program, an additional round of Tier 2 instruction may be needed or a student support team may decide that more intensive, individualized intervention is needed, such as that provided in Tier 3.

One major difference among schools implementing RTI practices is the number of tiers and/or number of rounds of successive, preventive services that are provided prior to special education referral. Ideally, general education classroom teachers provide **at least one round of preventive instruction in Tier 1, and one or two rounds of support are provided in Tier 2 prior to referral for Tier 3.** Tier 3 services are individualized services designed to meet the unique learning needs of students, essentially constituting special education.³⁰

²⁹ Tilly, Op. cit.

³⁰ Ibid.

TIER THREE: TERTIARY INTERVENTION

RTI progress monitoring data collected throughout the multi-tiered system can be used to help document the presence of a learning disability. Other assessments may be conducted at this point, such as classroom observations; data to eliminate other disabilities, environmental or economic disadvantage, cultural, or linguistic factors as the primary cause of the learning problems; and data from other academic measures to help document learning strengths and weaknesses. If it appears that a student does have a learning disability, he or she enters Tier 3 intervention and receives special education instruction.³¹

Instruction does not have to be delivered one-to-one, but it typically is **delivered to small groups of students with similar needs**. Special educators must use research-validated practices designed to meet the more intensive academic and behavioral needs of students with disabilities. Intensity of instruction, amount of instructional time, and specificity of instructional design and delivery focused on student need distinguish special education from previous levels of academic support.

At this tier, special educators conduct **progress monitoring once or twice weekly** to judge the adequacy of student progress and the efficacy of the instructional program, as well as to inform instructional planning. Ongoing revisions, or modifications, in the instructional program may be required. When students fail to progress as anticipated, then special educators should revise features of their instructional programs, continue to collect data, and reevaluate the effects of their instructional changes on student performance. Programmatic changes that teachers generally consider tailoring to specific student needs include the particular instructional procedures used, the teacher-to-student ratio for instructional delivery, time allocated for particular instructional components, instructional materials used, and type of motivational or reinforcement strategies implemented.³²

Case Study: Michigan's RTI Model

Michigan's Integrated Behavior and Learning Support Initiative (MiBLSi) constitutes "an integrated model of behavior and reading support,"³³ an RTI model for participating schools within the State of Michigan. MiBLSi is "funded under IDEA mandated activities funds through the Michigan Department of Education, Office of Special Education and Early Intervention Services."³⁴ It began in 2004 after a pilot program involving five schools in western Michigan; it has been integral to the State's effort to meet IDEA standards. Each group of schools added in successive years is

³¹ Stecker, Op. cit.

³² Ibid.

³³ "MiBLSi Model." MiBLSi. <http://miblsi.cenmi.org/MiBLSiModel.aspx>

³⁴ MiBLSi. <http://miblsi.cenmi.org>

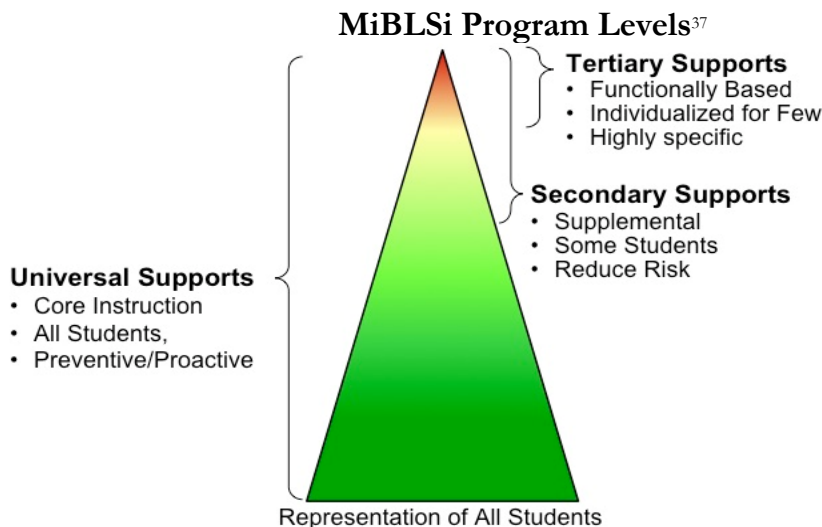
called a cohort. The table below summarizes program growth between 2004 and 2009.

MiBLSi RTI Program Growth

MiBLSi Program Growth		
Year (Cohort)	New schools	Total schools
2004 (1)	21	26
2005 (2)	31	57
2006 (3)	50	107
2007 (4)	165	272
2008 (5)	95	367
2009 (6)	123	490

Source: Harms, A. 2010.³⁵

The focus of MiBLSi is on reading and behavior. It is assumed that reading/literacy was the curriculum chosen because of its continued and foundational importance in all other aspects of primary and secondary education. Behavior was selected as a focus because “improving the social behavior of students results in more minutes spent in academic instruction.”³⁶ The program emphasizes several triads. First, it takes three years to adequately embed the program in a school’s routine and produce measurable results. Second, MiBLSi is offered as a three-phased program, including implementation, evaluation, and support initiatives. Third, like all RTIs, MiBLSi is based on three levels of support for reading and behavior improvement. These “program levels” are summarized in the figure below.



³⁵ Harms, A. 2010. “So How Are We Doing? A MiBLSi Evaluation Study.” <http://miblsi.cenmi.org/Presentations/ImplementersConference2010.aspx>

³⁶ “Why an integrated approach to behavior and reading?” 2010. MiBLSi. <http://miblsi.cenmi.org/Home/WhyBehaviorandReading.aspx>

³⁷ “Implementing a Multi-Tiered Model.” 2010. MiBLSi. <http://miblsi.cenmi.org/MiBLSiModel/Implementation.aspx>

The key features of MiBLSi align with the core elements of an RTI model, as outlined below:³⁸

- ❖ *A school-wide, multi-level instructional and behavioral system for preventing school failure*
 - Team Approach
 - Establish Information Systems
 - Establish Commitment
 - Establish Team

- ❖ *Data-based decision making*
 - Evidence-based Practices
 - Data-based Decisions
 - Conduct Audit of Existing Implementation Status

- ❖ *Screening*

- ❖ *Progress Monitoring*
 - Progress Monitoring
 - Develop Action Plan
 - Implement Plan
 - Collect and Analyze On-going Data
 - Revise/Modify Plan

Identifying the Needs of Students with Disabilities

The “touchstone” of special education law “remains the Individualized Education Plan (IEP), which is a document detailing the range and intensity of services and supports intended for each eligible student with a disability.”³⁹ However, now the content of a student’s standards-based IEP should be “tied directly to providing the student access to the same challenging state standards that peers without disabilities are receiving.”⁴⁰

Following the 2004 reauthorization of IDEA, the “IEP now **formalizes the collaborative relationship between general and special education** and also aligns the general curriculum with specially-designed instruction and other support structures necessary for enabling access to the curriculum.”⁴¹ For instance:

Some support structures relate to **how instruction accommodates a student’s disability without altering standards** (e.g., extra time allotted for task completion, Braille in place of print). Other supports may involve

³⁸ Adapted from MiBLSi website. <http://miblsi.cenmi.org>

³⁹ Jackson, R. Op. cit., x.

⁴⁰ “Teaching Matters.” Op. cit.

⁴¹ Jacobs, Malinda Baird. Op. cit., 1.

curriculum modifications that adjust performance levels or entry points but continue to address standards' content domain or framework. Accommodations or modifications stipulated in an IEP to adjust instruction or adapt curriculum for a student also apply to the administration of state- and district-level assessments. For students with significant developmental delays, **accommodations alone may be neither sufficient nor appropriate.**⁴²

The Virginia Department of Education believes that “all students need to be a part of their IEP meetings after being provided with direct instruction, accommodations, and opportunities to practice or role play their participation.”⁴³ Moreover, “all students, regardless of age or disability, can be involved in the development of their own IEP.”⁴⁴

The IEP helps students distinguish goals and according to the Individuals with Disabilities Education Act 2004, “the IEP must focus on the student’s preferences, interests, needs and strengths.”⁴⁵ The table below highlight “tips to remember” when developing an IEP with elementary aged children.

Elementary
Consider the child’s age when determining the length of time the child will participate;
Ask all team members to use language that the child will understand;
Praise the child for their participation.

Source: Virginia Department of Education’s Self-Determination Project

As with younger children, it is important for secondary school aged children to participate in their IEP meetings because they will “know more about their disability, rights, goals and accommodations.”⁴⁶

The Standards-Based IEP

Traditional IEPs have “focused on a student acquiring basic academic access and/or functional skills and have had little relationship to a specific academic area or grade-level expectations.”⁴⁷ However, **the Standards-Based IEP is “directly tied to the**

⁴² Ibid.

⁴³ “Student Involvement in the IEP.” Virginia Department of Education’s Self-Determination Project. https://php.radford.edu/~imdetermined/index.php?option=com_content&view=article&id=9&Itemid=24

⁴⁴ Ibid.

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ “IEPs & Instructional Services.” Special Education. Virginia Department of Education. http://www.doe.virginia.gov/special_ed/iep_instruct_svcs/index.shtml

State’s content standards”⁴⁸ and provides students with access to the general curriculum.⁴⁹ According to the Virginia Department of Education,

Both the student’s present level of performance and some of the annual IEP goals are aligned with and based on the state’s grade-level standards which creates a program that is aimed at getting the student to a proficient level on the state standards. The **change to using standards-based IEPs** has been supported by the 2004 reauthorization of the Individuals with Disabilities Education Act (IDEA) that **emphasizes access to the general education curriculum for students with disabilities**; and the federal assessment regulations issued in 2007 under the Elementary and Secondary Education Act (ESEA) that permit states to implement an alternate assessment based on modified academic achievement standards (AA-MAS).⁵⁰

Virginia requires that all IEPs describe the student’s current academic achievement level – known as the present level of performance (PLOP) – as well as the goals statement, accommodations and/or modifications, and service statements.⁵¹ Notably, **in a “standards-based IEP, the PLOP and some or all of the annual goals are connected to the specific grade-level standards of learning (SOL).”**⁵² As a result, this establishes guidelines for elevating “the student to a proficient level on state standards in addition to addressing functional and/or behavioral needs of the student, as needed.”⁵³

If properly implemented, a standards-based IEP has the potential to provide students with “specifically designed instruction linked to the general educational curriculum for the enrolled grade and appropriate accommodations to support achievement of grade-level expectations.”⁵⁴ At the moment, a standards-based IEP is required only of those students who are being considered for or meet the “criteria to participate in one or more Virginia Modified Achievement Standards Test (VMAST).”⁵⁵ However, the Virginia Department of Education claims that “best practice would suggest that a standards-based IEP would be beneficial for all students.”⁵⁶

Some academic literature argues that crafting a standards-based IEP lays the foundation for an instructional program ensuring access to the general education curriculum. A standards-based IEP is both “a process and document that is framed by the state standards and that contains goals aligned with, and chosen to facilitate

⁴⁸ Ibid.

⁴⁹ Wright, P. 2010. “Standards-based Individualized Education Program (IEP).” Commonwealth of Virginia Department of Education, 6. http://www.doe.virginia.gov/special_ed/iep_instruct_svcs/stds-based_iep/stds_based_iep_guidance.pdf

⁵⁰ “IEPs & Instructional Services.” Op. cit.

⁵¹ Wright, P. Op. cit., 9.

⁵² Ibid.

⁵³ Ibid.

⁵⁴ Ibid., 10.

⁵⁵ Ibid.

⁵⁶ Ibid.

the student's achievement of, state grade-level academic standards.”⁵⁷ The intention of standards-based IEPs is to construct a specialized instruction program by analyzing student data from both formative and state assessments in relation to the impact of the student's disability to determine what the student has learned and needs to learn. The results of this data analysis inform:⁵⁸

- ❖ How the student will participate in State assessments, and if the student needs accommodations
- ❖ The writing of IEP goals to teach the student learning and thinking strategies that reflect the areas of learning affected by the disability
- ❖ The program modifications, supports, and assistive technologies that the student will need and where the acquisition of these strategic goals and objectives can occur

The strategy-based learning goals then become the focus for instruction by the general education classroom teacher as well as special education and related services personnel. To write standards-based IEPs, **all team members, including parents, need a good understanding of the State's grade-level content standards and accountability assessment system that is aligned with these content standards.**⁵⁹

⁵⁷ Ahearn, E. 2006. “Standards-based IEPs: Implementation in Selected States.” NASDSE Project Forum. <http://www.projectforum.org/docs/Standards-BasedIEPs-ImplementationinSelectedStates.pdf>

⁵⁸ Hall, S. Op. cit.

⁵⁹ Ibid.

Best and Recommended Practices for Serving Students with Disabilities

There are many different recommendations and practices suggested for serving students who have been identified as needing special education services. However, a commonality among these practices is the fact that they all emphasize the importance of making schools more accessible and inclusive for students with special needs. This emphasis is known as the **“Inclusive School” movement**.

Definitions abound for the term “inclusive school.” Common definitions state that an inclusive school is one where curricula and instructional methods are sufficiently flexible to accommodate the diverse educational needs of a school’s entire student population. This includes accommodating students with diagnosed physical and cognitive disabilities. **The goal is to allow as many students as possible to fully participate in the general education curriculum.** The Inclusive Schools Network (ISN), an online resource and forum that promotes inclusive educational practices, claims inclusive schools:

- ❖ Make sure each and every student feels welcome and is learning
- ❖ Embrace the understanding that every student is unique and, therefore, learns differently
- ❖ Understand that all children – students with and without disabilities, English language learners, those with special talents – learn better if teaching is tailored to their abilities and interests
- ❖ Collaborate with families
- ❖ Hold high expectations for student success
- ❖ Keep improving⁶⁰

In his article entitled *Champions of Inclusion*, Bill Henderson, principal of Patrick O’Hearn Elementary School in Boston, Massachusetts, offers educators a list of general recommendations for creating an inclusive educational environment. According to Henderson, “champions” of inclusion:

- ❖ Connect with students who have disabilities as individuals who are contributors first
- ❖ Communicate enthusiasm and act comfortably around students with disabilities
- ❖ Challenge students with disabilities to work their best toward high standards

⁶⁰ “Characteristics of Inclusive Schools.” Inclusive Schools Network.
http://www.inclusiveschools.org/characteristics_inclusive_schools

- ❖ Creatively adapt and utilize appropriate strategies and materials to help students with disabilities learn and succeed
- ❖ Collaborate with others to maximize students' development⁶¹

Though the above suggestions offer educators a general idea of what inclusiveness in the context of K-12 education entails, they lack a strong conceptual foundation. Recent literature has cast support behind the **universal design for learning (UDL) – a framework for effectuating greater inclusivity grounded in the principles of universal design**. The principles of UDL will now be discussed in greater detail.

The Universal Design for Learning and Inclusive Schools

Originally applied to architecture, universal design intends “to promote the design of products and environments that would appeal to all.”⁶² According to the North Carolina State University Center for Universal Design, universal design is guided by the following seven principles and corresponding guidelines:

- ❖ *Equitable use*
 - Provide the same means of use for all users: identical whenever possible; equivalent when not
 - Avoid segregating or stigmatizing any users
 - Provisions for privacy, security, and safety should be equally available to all users
 - Make the design appealing to all users.
- ❖ *Flexibility in use*
 - Provide choice in methods of use
 - Accommodate right- or left-handed access and use
 - Facilitate the user's accuracy and precision
 - Provide adaptability to the user's pace
- ❖ *Simple and intuitive use*
 - Eliminate unnecessary complexity
 - Be consistent with user expectations and intuition
 - Accommodate a wide range of literacy and language skills
 - Arrange information consistent with its importance
 - Provide effective prompting and feedback during and after task completion
- ❖ *Perceptible information*
 - Use different modes (pictorial, verbal, tactile) for redundant presentation of essential information

⁶¹ “Champions of Inclusion.” InclusiveSchools.org, 2006, 1-4.
http://www.inclusiveschools.org/files/Champions%20of%20Inclusion_0.pdf

⁶² Jackson. Op. cit., 2.

- Provide adequate contrast between essential information and its surroundings
- Maximize “legibility” of essential information
- Differentiate elements in ways that can be described (i.e., make it easy to give instructions or directions)
- Provide compatibility with a variety of techniques or devices used by people with sensory limitations
- ❖ *Tolerance for error*
 - Arrange elements to minimize hazards and errors: most used elements, most accessible; hazardous elements eliminated, isolated, or shielded
 - Provide warnings of hazards and errors
 - Provide fail safe features
 - Discourage unconscious action in tasks that require vigilance
- ❖ *Low physical effort*
 - Allow user to maintain a neutral body position
 - Use reasonable operating forces
 - Minimize repetitive actions
 - Minimize sustained physical effort
- ❖ *Size and space for approach and use*
 - Provide a clear line of sight to important elements for any seated or standing user
 - Make reach to all components comfortable for any seated or standing user
 - Accommodate variations in hand and grip size
 - Provide adequate space for the use of assistive devices or personal assistance⁶³

UDL Defined

Based on the principles outlined above, the Center for Applied Special Technology (CAST) developed the universal design for learning as a framework for achieving greater inclusiveness in schools. According to the National Center on Universal Design for Learning (NCUDL): “Universal design for learning is a set of principles for designing curriculum that provides all individuals with equal opportunities to learn.”⁶⁴ A 2005 report from the National Center on Accessing the General Curriculum (NCAC) lists the fundamental principles of UDL as: “**multiple means of representation, multiple means of expression, and multiple means of engagement,**” which together contribute to “the development of flexible teaching approaches and curriculum resources.”⁶⁵ Each principle is meant to communicate

Universal design for learning ensures that all students have equal opportunities to learn.

⁶³ “The Principles of Universal Design: Version 2.0.” The Center for Universal Design, North Carolina State University, April, 1, 1997. http://www.design.ncsu.edu/cud/about_ud/udprinciplestext.htm

⁶⁴ “What is UDL?” National Center on Universal Design to Learning. <http://www.udcenter.org/aboutudl/whatisudl>

⁶⁵ Jackson. Op. cit., 6-7.

with specific brain networks. Multiple means of representation are meant to support each student's **recognition network**, multiple means of expression are meant to support each student's **strategic network**, and multiple means of engagement are meant to support each student's **affective network**.⁶⁶ Effective approaches to implementing UDL practices are presented in the sub-section that follows.

Implementing UDL

UDL principles are meant to guide decisions regarding accommodations and curricular modifications, which allow students with disabilities to participate in the general curriculum. According to CAST: "UDL principles help educators customize their teaching for individual differences in each of these three brain networks [recognition, strategic, affective]."⁶⁷ The NCAC report suggests that UDL-inspired modifications should be integrated into the design of curricula rather than undertaken as a reaction to inaccessible educational practices. The report notes: "The extent to which accommodations and modifications are designed into curriculum at the outset of the planning process can have an enormous impact upon access, participation, and progress for students with disabilities."⁶⁸

The extent to which universal design is applied at the outset of curriculum development has significant impact on "access, participation, and progress" for students with physical and learning disabilities.

As mentioned previously, UDL calls for educators to provide multiple means of representation, expression, and engagement to support diverse learning needs. The NCAC report provides examples for each principle:

Representation

- ❖ Provide multiple and flexible means of presenting information, for example:
 - Lecture
 - Digitized text
 - Activity-based exploration
 - Demonstration

Expression

- ❖ Provide multiple and flexible means and tools through which students can demonstrate understanding of knowledge
- ❖ Allow students to respond in various formats, for example:
 - In writing
 - Orally
 - A slide show

⁶⁶ Ibid., 117-118.

⁶⁷ "What is Universal Design for Learning?" Center for Applied Special Technology. <http://www.cast.org/research/udl/index.html>

⁶⁸ Jackson. Op. cit., 90.

- With a video
- With a drawing

Engagement

- ❖ Provide multiple and flexible means for students to engage with work assignments, for example:
 - Free selection rather than forced assignment
 - Allow students to select an area within a topic to research or study⁶⁹

In addition to instructional methods, UDL principles can be applied to assessment mechanisms. The NCAC report states:

Designing assessment systems from the ground up to be accessible would remove or reduce many of the impediments to obtaining accurate and valid measures of student performance. **Digital assessments** would permit multiple and flexible modes of item presentation, multiple and flexible means of responding to item prompts, and a variety of ways of engaging students in the assessment process.⁷⁰

While high-tech solutions such as digital assessments are an integral part of UDL, instructional methodologies such as cooperative learning and peer-mediated instruction play an equally important role.

As the preceding passage suggests, digital and high-tech solutions are often cited as effective mechanisms for implementing UDL principles. Indeed state-of-the-art assistive technologies – such as word prediction and graphic organizer software programs – have made significant contributions to breaking down barriers to learning in recent years. However, the NCAC report notes how **instructional methodologies can also be used to support UDL goals**. Examples include:

- ❖ Cooperative learning
- ❖ Flexible grouping
- ❖ Peer-mediated instruction
- ❖ Thematic learning⁷¹

In the sub-sections that follow, we review additional practices recommended by the literature that may align with this inclusive classroom framework.

Co-Teaching

Co-teaching involves two educators sharing responsibility for planning, teaching, and assessing students in a classroom. Co-teaching blends the general educator's expertise

⁶⁹ Ibid., 118.

⁷⁰ Ibid., 125.

⁷¹ Ibid., 121.

in pedagogy and content areas with the special educator's expertise in strategic instruction and practices to adapt instruction and instructional materials to increase access to grade-level content for all students.

To be effective, the co-teaching team must establish roles and responsibilities, a common planning time, and a way to communicate. In secondary schools, it is recommended that special education teachers reside in the department areas in which they co-teach to increase opportunities for consultation with general education teachers and enhance their own understanding of grade-level content expectations.⁷²

Collaboration between General and Special Education

Related to recommendations for the co-teaching practice model are recommendations for collaboration between general and special educators. Some academic articles and non-profit advocacy groups argue for greater collaboration between general and special education professionals. Weiner and Murawski argue that as more students with disabilities are included in the “least restrictive environment” (LRE), there is an opportunity for general and special educators to unite, and for a new collaborative system of serving students with disabilities to be established. However, without a common language, a shared vision, a set of guiding principles, and powerful intervention strategies a unified system of education is, at best, difficult.⁷³

Schools Attuned is a professional development program designed around the work of Dr. Mel Levine and implemented through the All Kinds of Minds Institute.⁷⁴ Embedded into the *Schools Attuned* service delivery program are nine principles:⁷⁵

- ❖ View the learner's neuro-developmental diversity in a positive way
- ❖ Value and stress the developmental nature of the learner's profiles
- ❖ Be specific in understanding the learner's strengths and weaknesses
- ❖ Avoid labeling and emphasizing the phenomena that the learner exhibits
- ❖ Collaborate among all the stakeholders in the learner's life, including the professional, the parents, and the learner
- ❖ Reinforce the learner's strengths and affinities and remediate the learner's weaknesses

⁷² Hall, S. 2007. “NCLB and IDEA: Optimizing Success for Students with Disabilities.” *Perspectives on Language and Literacy*, 33:1. Available from Proquest.

⁷³ Weiner, I. and Murawski, W. 2005. “Schools Attuned: A Model for Collaborative Intervention.” *Intervention in School and Clinic*, 40:5. Available on Proquest.

⁷⁴ www.allkindsofminds.org

⁷⁵ “Using Schools Attuned to Support Early Intervening Services and Response to Intervention.” All Kinds of Minds. <http://www.allkindsofminds.org/library/library/reach-more-learners/rti-sa-crosswalk.pdf>

- ❖ Make the learner aware of his or her learning challenges, as well as strengths and affinities
- ❖ Instruct the learner about how he or she learns while engaged in academic subjects
- ❖ Help the learner see his or her potential for a productive and gratifying life

Engaging in dialogue around these principles is a first step to ensuring that all persons involved in collaboration and inclusion are sharing a common vision for their school in terms of the way students are viewed, treated, and taught.

Weiner and Murawski argue for **inclusion**: focusing on students' strengths rather than focusing primarily on students' areas of weakness is emphasized. Additionally, teachers may be reassured that all children learn in different ways and powered by that knowledge, the training, and the additional strategies, faculty can work with all students to enhance their learning, rather than immediately refer and place students in special education for remediation or retention. Demystification, a process by which faculty work to help students understand their own learning processes, may also be useful.

General and special education faculty can also engage in **collaborative dialogue** regarding all students, both with and without disabilities, increasing the consultative aspects of the special educator's role and allowing him or her to assist more students through this type of indirect collaborative support. General education faculty can be more open to this type of consultative interaction as they will be informed participants in the shared conversation, rather than recipients of the special education teacher's advice and dictates.⁷⁶

Weiner and Murawski propose that *Schools Attuned* be viewed as a three-tier model with teachers responding at various levels of intervention based on individual students' needs to establish a collaborative intervention model with three levels of intervention. Some characteristics of the model include:⁷⁷

- ❖ General and special education faculty **adopt the shared principles, language, vision, and basic strategies** in the first tier of intervention.
- ❖ **General education teacher meetings** with a team of individuals (e.g., Schools Attuned specialist; special education teacher; student, when appropriate; family members; school psychologist) to discuss the concerns of the teachers. These meetings would be prime opportunities for general education teachers to work collaboratively and proactively with a colleague trained as a *Schools Attuned* specialist.

⁷⁶ Weiner and Murawski. Op. cit.

⁷⁷ Ibid.

- ❖ A **comprehensive assessment**: the team adjusts the current plan of intervention (developed at the secondary support meeting). Because attuning a student can be time-intensive, not every student with mild learning or behavioral concerns will make it to this tertiary tier.
- ❖ Moving to a **formal referral** to the student study team (or pre-referral team) so additional strategies can be suggested in yet another collaborative venue. That team could also decide if additional assessments are necessary to determine if special education services are warranted. If so, the student would participate in additional psycho-educational assessments and, if justified, would be referred for special education services.

Using a three-tier model based on the *Schools Attuned* training and principles may enable faculty to engage in the type of collaborative discourse often missing in schools. North Carolina and Oklahoma have both adopted *Schools Attuned* as statewide initiatives. However, the program lacks sufficient scientific and empirical data to have been proved effective beyond doubt.

Finally, Geltner and Leibforth argue for the **inclusion and collaboration of school counselors in the IEP process**. School counselors have the opportunity to emphasize the strengths of the student, highlight environmental strengths, stress strength promotion over problem reduction, and promote positive development within the IEP process. They claim that the school counselor working as leader and consultant can assist in changing the process to address positive qualities in individuals and within the system. Working proactively as a liaison, advocate, collaborator, and consultant between parties, school counselors have the potential to improve the IEP experience for all.⁷⁸

General Education Classroom Time

Increasingly and under the inclusive classroom framework, students with disabilities are being held “to the same high standards as their general education peers.”⁷⁹ As a result, the majority of students with disabilities are “expected to participate and progress in the general education curriculum, and to participate in the state assessments, with accommodations as necessary.”⁸⁰ Students who have significant cognitive disabilities are also “expected to participate in the standards-based system via alternate assessments and IEP goals that reflect the state standards.”⁸¹

⁷⁸ Geltner, J. and Leibforth, T. “Advocacy in the IEP Process: Strengths-Based School Counseling in Action.” *Professional School Counseling*, 12:2. Available from Proquest.

⁷⁹ “Teaching Matters.” Op. cit.

⁸⁰ Ibid.

⁸¹ Ibid.

For those special education students who are enrolled in mixed special education and regular education, the amount of time spent in the general education classroom varies significantly from state to state.

The table below presents data from 2007 that tracks time spent in the general education classroom by special education students from the ages of 3 to 5. Time spent in the general classroom is divided into three categories: the vast majority (greater than 80%), a significant percentage (between 40% and 79%) and a minority (Less than 40%).

Ages 3-5 – Percentage of Time Spent in Regular Classroom⁸²

State	The Vast Majority (Greater than 80%)	A Significant Percentage (Between 40%-79%)	A Minority (Less than 40%)
Alabama	87%	6%	7%
Alaska	72%	15%	14%
Arizona	59%	12%	29%
Arkansas	89%	6%	6%
California	68%	3%	30%
Colorado	92%	4%	4%
Connecticut	85%	10%	5%
Delaware	79%	15%	7%
Florida	60%	5%	36%
Georgia	67%	19%	14%
Hawaii	28%	25%	47%
Idaho	77%	14%	9%
Illinois	78%	10%	12%
Indiana	86%	6%	8%
Iowa	75%	17%	8%
Kansas	84%	16%	0%
Kentucky	96%	2%	2%
Louisiana	84%	5%	10%
Maine	86%	8%	6%
Maryland	58%	33%	9%
Massachusetts	79%	13%	8%
Michigan	95%	1%	4%
Minnesota	66%	23%	11%

⁸² Note: The percentage is calculated as the amount of time per week that the child spends in a regular childhood program divided by the total number of hours the child spends in a regular childhood program plus any time the child spends receiving special education and related services outside of a regular early childhood program. The result is multiplied by 100. Numbers are rounded and may not sum to 100%.

State	The Vast Majority (Greater than 80%)	A Significant Percentage (Between 40%-79%)	A Minority (Less than 40%)
Mississippi	87%	3%	10%
Missouri	77%	16%	7%
Montana	75%	13%	12%
Nebraska	77%	6%	17%
Nevada	70%	13%	17%
New Hampshire	N/A	N/A	N/A
New Jersey	56%	10%	34%
New Mexico	68%	15%	18%
New York	74%	9%	17%
North Carolina	93%	2%	4%
North Dakota	76%	20%	5%
Ohio	82%	14%	4%
Oklahoma	83%	8%	10%
Oregon	76%	15%	9%
Pennsylvania	79%	9%	13%
Rhode Island	76%	17%	7%
South Carolina	78%	6%	16%
South Dakota	76%	19%	6%
Tennessee	73%	12%	16%
Texas	48%	21%	31%
Utah	69%	7%	24%
Vermont	N/A	N/A	N/A
Virginia	72%	11%	17%
Washington	64%	11%	25%
West Virginia	91%	4%	5%
Wisconsin	78%	13%	9%
Wyoming	93%	7%	N/A
D.C.	57%	N/A	43%
BIE schools	100%	N/A	N/A
Total: USA⁸³	76%	10%	15%

Source: Data Accountability Center – Individuals with Disabilities Act Data.⁸⁴

⁸³ Includes the 50 states, D.C., and the Bureau of Indian Education Schools (BIE)

⁸⁴ Table 2-1. Children ages 3 through 5 served under IDEA, Part B, by educational environment and state: Fall 2007. Available online at: www.ideadata.org/TABLES31ST/AR_2-1.htm

Nationally, **76 percent of students aged 3-5 spend the vast majority of their instructional time in the general education classroom.** This is also true by state and district, although data is incomplete for some states. The highest percentage is in Kentucky where 96 percent of students spend 80 percent of their time in the general education classroom. Hawaii has a national low of 28 percent of students spending more than 80 percent of time in a general education classroom. The next table presents data from 2007 that tracks time spent in the general education classroom by special education students from the ages of 6 to 21.

Ages 6-21 – Percentage of Time Spent in Regular Classroom

State	The Vast Majority (Greater than 80%)	A Significant Percentage (Between 40%-79%)	A Minority (Less than 40%)
Alabama	82%	12%	6%
Alaska	57%	25%	18%
Arizona	56%	28%	16%
Arkansas	54%	33%	13%
California	55%	21%	24%
Colorado	66%	21%	12%
Connecticut	75%	18%	7%
Delaware	57%	24%	20%
Florida	64%	17%	19%
Georgia	62%	21%	17%
Hawaii	19%	49%	33%
Idaho	64%	27%	10%
Illinois	52%	28%	20%
Indiana	67%	19%	14%
Iowa	63%	29%	8%
Kansas	64%	28%	8%
Kentucky	71%	19%	10%
Louisiana	63%	21%	16%
Maine	58%	30%	12%
Maryland	69%	14%	17%
Massachusetts	60%	24%	16%
Michigan	56%	26%	18%
Minnesota	64%	26%	11%
Mississippi	65%	20%	15%
Missouri	61%	28%	11%
Montana	52%	36%	12%
Nebraska	74%	19%	7%
Nevada	62%	25%	13%
New Hampshire	N/A	N/A	N/A

State	The Vast Majority (Greater than 80%)	A Significant Percentage (Between 40%-79%)	A Minority (Less than 40%)
New Jersey	50%	32%	18%
New Mexico	54%	27%	19%
New York	60%	14%	27%
North Carolina	66%	18%	16%
North Dakota	80%	15%	5%
Ohio	56%	30%	14%
Oklahoma	60%	30%	10%
Oregon	71%	17%	11%
Pennsylvania	55%	33%	12%
Rhode Island	76%	8%	16%
South Carolina	58%	21%	21%
South Dakota	70%	24%	6%
Tennessee	58%	28%	14%
Texas	65%	23%	12%
Utah	54%	31%	16%
Vermont	N/A	N/A	N/A
Virginia	59%	24%	17%
Washington	52%	34%	14%
West Virginia	69%	23%	8%
Wisconsin	55%	33%	12%
Wyoming	60%	31%	9%
D.C.	25%	47%	28%
BIE schools	65%	26%	9%
Total: USA	60%	24%	16%

Source: Data Accountability Center – Individuals with Disabilities Act Data.⁸⁵

Once again, more than half (60 percent) of students aged 6-21 spend the vast majority of their time in general education. However, the ratio is much smaller and a far greater percentage of students spend less than 80 percent of their time in the general education classroom. At 82 percent, Alabama has the highest percentage of students aged 6-21 spending 80 percent of their time or more in the general education classroom.

Interestingly, according to the Virginia Department of Education's Special Education Performance Report for Arlington County Public Schools (APS) for the 2008-2009 school year, **APS did not meet the state targets regarding time inside regular**

⁸⁵ Table 2-2. Children ages 6 through 21 served under IDEA, Part B, by educational environment and state: Fall 2007. Available online at: www.ideadata.org/TABLES31ST/AR_2-2.htm

classrooms, known as Least Restrictive Environment (LRE). Indicator five of the performance report measured the “percent of children aged 6 through 21 with Individualized Education Programs (IEPs) that were in the regular class more than 80 percent of the day; in the regular class than 40 percent of the day; and served in public or private separate schools, residential placements, or homebound or hospital placements.”⁸⁶

APS Time in Classroom

	2008-2009 Division Performance	2008-2009 State Target	State Target Met
80% or More of Time Inside Regular Classroom	48%	64%	No
40% or Less of time Inside Regular Classroom	20%	10%	No
Served in Separate Public or Private School, Residential, Home-Based or Hospital Facility	3.95%	<1%	No

Source: Virginia Department of Education

In comparison, **Franklin County Public Schools** met all three state targets for the abovementioned LRE performance indicators for the 2008-2009 school year.

Franklin County Public Schools Time in Classroom

	2008-2009 Division Performance	2008-2009 State Target	State Target Met
80% or More of Time Inside Regular Classroom	70%	64%	Yes
40% or Less of time Inside Regular Classroom	10%	10%	Yes
Served in Separate Public or Private School, Residential, Home-Based or Hospital Facility	.61%	<1%	Yes

Source: Virginia Department of Education

⁸⁶ “Arlington County Public Schools.” 2010. Special Education Performance Report. Virginia Department of Education. http://www.doe.virginia.gov/special_ed/reports_plans_stats/special_ed_performance/division/2008-2009/arlington.pdf

The Department of Special Programs and Services at Franklin County Public Schools “provides instructional support for approximately 1,370 students with disabilities who meet the criteria to receive these services.”⁸⁷ The department provides “an array of services” including the following: speech, occupational therapy, physical therapy, counseling and etc.⁸⁸

Franklin County Public Schools offer special education services from age two through age 21, inclusively. Students who have been “evaluated and determined to have a disability through the Eligibility Process are eligible for special education services.” Finally, the purpose of special education services are to help students access the curriculum.

The following staff contributes to the special education services at Franklin County Public Schools:

- ❖ Teachers of Students with Disabilities
- ❖ Paraprofessionals
- ❖ Speech and Language Pathologists
- ❖ Contracted Occupational Therapist
- ❖ Certified Occupational Therapists Assistants
- ❖ Licensed School Psychologists
- ❖ Visiting Teachers
- ❖ Hearing Impaired Teachers
- ❖ Interpreters for the Hearing Impaired
- ❖ Autism Specialist

Other information about Franklin County’s special education program was unavailable.

Parental Involvement

The literature also asserts the importance of involving parents in the special education process. One organization that provides special education information is the Division for Early Childhood (DEC) of the Council for Exceptional Children. DEC developed its *Recommend Practices* to “bridge the gap between research and practice, offering much needed guidance to parents and professionals who work with young children with disabilities.”⁸⁹ DEC’s primary goal with this resource was to “identify

⁸⁷ “Special Programs & Services.” Franklin County Public Schools.

http://www.frco.k12.va.us/support_depts/Special%20Services%20Programs.html

⁸⁸ Ibid.

⁸⁹ “Recommended Practices: Improving Practices for Young Children with Special Needs and their Families.” The Division for Early Childhood, 1.

http://www.decsped.org/uploads/docs/about_dec/recommended_practices_tools/Overview%20of%20DEC%20Recommended%20Practices%20%20%20page.pdf

practices that result in better outcomes for young children with disabilities.”⁹⁰ DEC based the practices on two key sources: “the **scientific literature** on effective practices for young children with disabilities, their families, and the personnel who work with them;” and “the **knowledge and experience** of those who work with young children and their families.”⁹¹

DEC provides Recommended Practices for parents “to help evaluate programs for their young children with special needs.”⁹² The DEC parent checklist is compiled from two reports:

- ❖ DEC Recommended Practices in Early Intervention/Early Childhood Special Education (Sandall, McLean, & Smith, 2000)
- ❖ DEC Recommended Practices: A Comprehensive Guide for Practical Application in Early Intervention / Early Childhood Special Education (Sandall, Hemmeter, Smith & McLean, 2005)

The questions listed below are “meant to provide parents with a general overview of a program by highlighting some of the salient practices.”⁹³ Within the checklist, “the term service provider is used to refer to child care providers, teachers, home visitors, therapists, classroom assistants, and others who work with children and families.”⁹⁴

Parent Checklist
How does the program determine the strengths and needs of my child and family?
How do service providers work together with me to meet the needs of my child?
How do my child’s different environments support his/her learning?
How do the service providers in my child’s environments support my child’s learning?
What are the policies of the program, and how are they communicated to families?

Source: DEC Recommended Practices in Early Intervention / Early Childhood Special Education

The overall focus of DEC’s Recommended Practices guides are to identify

...the **specialized supports and teaching strategies** that are required in order to meet the needs of children with extraordinary needs – those for

⁹⁰ Ibid.

⁹¹ Ibid.

⁹² Hemmeter, M. and P. Salcedo. “Parent Checklist.” DEC Recommended Practices in Early Intervention / Early Childhood Special Education, 277. http://www.dec-sped.org/uploads/docs/about_dec/recommended_practices_tools/Parent%20Checklist.pdf

⁹³ Ibid.

⁹⁴ Ibid.

whom teachers, families, caregivers, and other professionals need to design an individualized learning environment.⁹⁵

When parents and guardians were interviewed regarding their satisfaction with their child's transition, a large majority stated that they **prefer a checklist** to help with the transition process and to guide visits to the receiving environments. When checklists and timelines are followed, all parties are systematically informed, involved, and prepared for events such as school district assessments and IEP meetings.⁹⁶

Professional Development

It is critical that special and general education teachers, related service providers, and paraprofessionals participate in **ongoing professional development** to increase their understanding of the state's content standards, assessment program, and local curriculum for reading, mathematics, science, and other content areas. Without this understanding, it is doubtful that the IEP goals will support grade-level instruction, or that instruction and classroom assessments will align with the content standards and intended curriculum.⁹⁷

Special educators and related service providers must have a good understanding of reading and mathematics content standards as well as those content areas in which they may teach. They should be included in all content training in classes in which they teach or are responsible for content instruction. Personnel at the secondary level should attend content department meetings at their school to be certain they have current information on curriculum and assessments. Special education teachers and related service providers also must acquire the skills to provide the strategies-based instruction mandated on the standards-based IEP.⁹⁸

As general education teachers are increasingly more involved in educating students with special needs, their professional development is relevant to this study. We outline aspects of successful teacher professional development that can be applied to the training of both general and special education teachers. Professional development design is most successful when it focuses on five important aspects: active learning, alignment with district standards, duration, focus on subject matter knowledge and subject matter instruction, and transfer to the classroom.

Teacher professional development is most successful when it focuses on five important aspects: active learning, alignment with district standards, duration, focus on subject matter knowledge/instruction and transfer to the classroom.

⁹⁵ "Recommended Practices: Improving Practices for Young Children with Special Needs and their Families." Op. cit., 1.

⁹⁶ Brandes, J., Ormsbee, C., and Haring, K. 2007. "From Early Intervention to Early Childhood Programs: Timeline for Early Successful Transitions." *Intervention in School and Clinic*, 42:4. Available from Proquest.

⁹⁷ Hall, Op. cit.

⁹⁸ Ibid.

Active Learning

Engaging teachers in a professional development activity is almost always preferable to discussion-only sessions. Activities that elicit the most active engagement from participants have a better chance of altering participant behavior which, in turn, is what alters student performance.

Learning strategies that impact teacher behavior and student outcomes incorporate **hands-on, experiential learning**. These activities include observing and being observed while teaching, planning time, giving presentations, producing written works,⁹⁹ simulating classroom experiences, and collaborating in pairs or teams. Active learning activities may call on participants to use higher order thinking skills, engaging them intellectually.

Alignment with School or District Standards

Professional development should be **directly connected to state and local standards**. All activities should be aligned with school improvement efforts that are tied to real student needs as well.

The American Education Research Association's (AERA) summary of major research concludes that teachers are "more likely to change their teaching practices when professional development is directly linked to the program they are teaching and the standards and assessments that they use."¹⁰⁰ Similarly, the American Federation of Teachers' standards for professional development state, "The content of professional development should be aligned with the standards and curriculum teachers use."¹⁰¹

Duration and Training Hours

Both the duration (over time) and the number of hours spent in development are important. Teachers need **repeated exposure** before they implement something new. The majority of teachers receive eight hours of development training or less per year, according to NCES statistics, which is the equivalent of one day per year.¹⁰² It is generally believed that this is not nearly sufficient, and one review indicates that significant behavior change may require *eighty* hours of professional development. Other estimates are more conservative but send the same message of increasing hours. According to a recent report from NSDC, rigorous studies indicate that intensive professional development efforts that offer an average of about fifty hours

⁹⁹ "Teaching Teachers: Professional Development to Improve Student Achievement." *Research Points*, 2005, 3:1. http://www.era.net/uploadedFiles/Journals_and_Publications/Research_Points/RPSummer05.pdf

¹⁰⁰ Ibid.

¹⁰¹ "Professional Development for Teachers." American Federation of Teachers. <http://www.aft.org/issues/teaching/profdevel/index.cfm>

¹⁰² "Characteristics of Public School Teachers' Professional Development Activities: 1999-2000." NCES, 2005.

of support a year can make a significant impact on student achievement, raising test scores by an average of 21 percentage points.¹⁰³

However, **duration is less important than most of the other factors** identified in this report. It is important to the extent that longer hours allow for more learning. Active learning during the time that educators actually participate in professional development is more important.

Subject Matter Instruction

The **importance of including significant amounts of subject-specific content** is extensively covered in professional development literature and included in many lists of professional development standards as well. Subject-specific professional development should include both subject-area content instruction and teaching strategies specific to the subject. It might also include instruction on how students learn new content in that specific subject.¹⁰⁴

The National Reading Panel concluded that **professional development in reading** not only leads to improved teacher knowledge and practice, but also to improved student achievement.¹⁰⁵ Similar results are found in other fields as well. A national study from Mid-continent Research for Education and Learning found that students whose teachers participated in geography professional development scored better on geography assessments than did students whose teachers had not. The teachers who participated in geography professional development had training in both geography subject matter (knowledge) and geography-related teaching strategies (pedagogy).¹⁰⁶

Transfer to the Classroom

A 2006 study from Wick, Pollack, Jefferson and Flanagan found that fewer than fifty percent of participants apply anything from professional training to their classroom practice.¹⁰⁷ Professional development should be designed in a way that makes it easy for teachers to bring what they learned into their classrooms. Working on helping **teachers integrate what they learned during professional development into**

¹⁰³ “United States Is Substantially Behind Other Nations in Providing Teacher Professional Development That Improves Student Learning; Report Identifies Practices that Work.” National Staff Development Council, February 2, 2009. http://www.nsd.org/about/news/study2_4_09_release.pdf

¹⁰⁴ DiCerbo, K and T. Duran. 2006. “How Can Professional Development Impact Teacher Practice and Student Achievement?: A Literature Review.” Cisco Learning Institute. http://www.ciscolearning.org/files/evaluation_resources/PD_litreview.pdf

¹⁰⁵ “Building Capacity for Student Achievement.” National Council of Teachers of English. <http://www.literacycoachingonline.org/forums/forum8buildingcapacityforstudentachievement.html>

¹⁰⁶ “Teacher Professional Development Results in Significant Improvements in Student Achievement in Geography.” National Geographic. <http://www.nationalgeographic.com/foundation/pdf/McREL-study.pdf>

¹⁰⁷ Wick, C., Pollock, R., Jefferson, A., and R. Flanagan. *The Six Disciplines of Breakthrough Learning: How to turn training and development into business results.* Pfeiffer, 2006.

their daily practices is a crucial part of providing effective training and supporting improvements in student achievement.

Teachers are more likely to change their teaching practices when professional development is directly linked to the program they are teaching and the standards and assessments that they use.¹⁰⁸ Specific techniques to facilitate application of learned content include:

- ❖ Modeling and inclusion of actual instruction materials
- ❖ Goal-setting and planning
- ❖ Providing reminders by mail, email, or telephone
- ❖ Following up with coaching¹⁰⁹

While the program itself provides opportunities for learning, follow-up facilitates the transfer of learned content into the classroom.

Special Educator Professional Development

There is a dearth of literature discussing effective in-house professional development initiatives intended specifically for special education teachers. Instead, some special education professional organizations outline industry standards and offer their own professional development resources.

For instance, the Council for Exceptional Children (CEC) outlines **criteria that special education teachers must satisfy** in order to meet IDEA 2004's definition of a "highly qualified teacher." In brief, the criteria require special education teachers to have passed all state certification or licensing requirements for the position of special educator, not have had certifications or licenses waived, and have earned at least a bachelor's degree.¹¹⁰ The CEC also assesses special education teacher preparation programs against a collection of standards that have been approved by the National Council for the Accreditation of Teacher Education. The CEC standards are divided into the following three categories:

- ❖ Field experiences and clinical practice standards
- ❖ Assessment system standards
- ❖ Special education content standards¹¹¹

¹⁰⁸ Holland, H. 2005. "Teaching Teachers: Professional to Improve Student Achievement." American Educational Research Association, 3:1.

¹⁰⁹ DiCerbo et al. Op. cit., 13-15.

¹¹⁰ "IDEA-Reauthorized Statute: Highly Qualified Teachers." Council for Exceptional Children.

<http://www.cec.sped.org/AM/Template.cfm?Section=Home&CONTENTID=1807&TEMPLATE=/CM/ContentDisplay.cfm>

¹¹¹ Accreditation Standards for CEC/NCATE Approval." Council for Exceptional Children.

http://www.cec.sped.org/Content/NavigationMenu/ProfessionalDevelopment/ProfessionalStandards/EthicsPracticeStandards/CEC_Performance_Base.htm

Often overlooked in special education teacher preparation is training in the supervision of paraprofessionals. As discussed previously in this report, supervising the work of paraprofessionals has become a regular component of special education teachers' job descriptions. However, there is concern that teachers, while trained in instruction and classroom management, are often ill-prepared to train and supervise other adults. In their study on paraprofessional supervision, Wallace et al. assert: "...competency requirements regarding the supervision of paraprofessionals have not been included in most special education and general education certification or endorsement programs."¹¹² The results from the study also suggest seven skill areas that teachers who direct the work of special education paraprofessionals must be knowledgeable in:

- ❖ Communication with paraprofessionals
- ❖ Planning and scheduling
- ❖ Instructional support
- ❖ Modeling for paraprofessionals
- ❖ Public relations
- ❖ Training
- ❖ Management of paraprofessionals¹¹³

As mentioned previously, **professional organizations offer ongoing training and development opportunities** to special education teachers currently in the field. For example, the CEC, the National Association of Special Education Teachers (NASSET), and the American Academy of Special Education Professionals (AASEP) offer conferences and seminars aimed at developing the instructional skills and knowledge base of special education teachers. Through its website, the CEC also provides access to an online library of developmental resources and webinar sessions, and advertises its customized teacher training services.¹¹⁴ The AASEP provides advanced professional development services to teachers pursuing a high level of distinction in the field, offering courses and certification programs designed to enhance knowledge in specific areas of special education to its members.¹¹⁵

Considerations for Special Education Paraprofessional Development

Special education paraprofessionals have assumed a crucial role in providing a free and public education for students with special needs. There is general consensus that

¹¹² Wallace, T. J., Shin, T., Bartholomay, T., and B. Stahl. 2001. "Knowledge and Skills for Teachers Supervising the Work of Paraprofessionals." *Exceptional Children*, 67:4, 522.

<http://www.sbac.edu/~werned/DATA/RESEARCH/journals/Excep%20Children/teachers%20supervising%20paras.pdf>

¹¹³ Ibid., 523.

¹¹⁴ "Professional Development." Council for Exceptional Children.

http://www.cec.sped.org/AM/Template.cfm?Section=Professional_Development

¹¹⁵ "Professional Development." American Academy of Special Education Professionals.

<http://aasep.org/professional-development/index.html>

paraprofessionals have become an integral part of the educational team that serves these students. In order to do so effectively, they must possess certain core competencies and have access to relevant training and professional development opportunities. This sub-section will outline suggested core competencies for paraprofessionals as well as the role of several stakeholders in the professional development of special education paraprofessionals.

As paraprofessionals' job responsibilities have grown to include tasks once reserved for certified teachers, experts and educational organizations have weighed-in on the range of competencies modern paraprofessionals ought to possess. The *Minnesota Paraprofessional Guide* stresses the need for schools to ensure that their paraprofessional staff members are provided with **sufficient opportunities to acquire the competencies required to fulfill their responsibilities**, implying that considerations of competencies should not end once a paraprofessional is hired.¹¹⁶ This sub-section will outline suggestions found in the literature regarding core competencies all special education paraprofessionals should possess.

The most detailed and comprehensive recommendations of core competencies all paraprofessionals should possess were uncovered in guidebooks and manuals produced by state departments of education and other public educational institutions. The most commonly cited competencies were those related to: **collaboration, communication, instructional skills, and behavior management.**

The core competencies required for special education paraprofessionals commonly link to: collaboration, communication, instructional skills, and behavior management.

A paraprofessional's initial orientation to his or her work environment will influence the extent and content of ongoing training efforts going forward. Leaving paraprofessionals disoriented, ill-prepared, and feeling overwhelmed can have significant negative implications for paraprofessionals as well as the students and teachers they work with. Giangreco and Doyle assert:

Recent research suggests that **too many paraprofessionals are inadequately oriented and report feeling 'thrown into things.'** Providing multifaceted orientation sends a message of value to paraprofessionals that their work is important. It is also a logical first step toward establishing collaborative relationships with paraprofessionals.¹¹⁷

As Giangreco and Doyle note, it is important for schools to use orientation to make paraprofessionals feel welcome. However orientation also serves as an opportunity to inform them of key issues relevant to their work. The Montana Office of Public

¹¹⁶ Wallace, T., J. Bernhardt, and J. Utermarck. (1999). "Minnesota Paraprofessional Guide." University of Minnesota, Institute on Community Integration, 27. <http://www.eric.ed.gov/PDFS/ED438638.pdf>

¹¹⁷ Giangreco and Doyle. Op. cit., 189.

Instruction's *Paraprofessional Orientation Manual* suggests orientation should begin with an **introduction to the school district**, particularly its policies and procedures.¹¹⁸ Examples of district level policies and procedures paraprofessionals should be made aware of include: vacation and emergency leave, standards of behavior, complaint procedures, and payroll.¹¹⁹

Orientation to the school, its policies, procedures and the paraprofessional's role in it, **should come next**. Schools often have policies and procedures in place that are unique to the building, and it is crucial that paraprofessionals are informed of them as early as possible. Examples of policies, procedures, and materials paraprofessionals should be introduced to during orientation include:

- ❖ Safety and emergency procedures
- ❖ School schedules
- ❖ School handbook
- ❖ Building and grounds map
- ❖ Building discipline manual
- ❖ Lunch and recess procedures
- ❖ Accessing assistance
- ❖ Using building equipment¹²⁰

School administrators, teachers the paraprofessional will be working with, and the paraprofessional him/herself each have a role to play in the orientation process. Ghere and York-Barr advise teachers to play a central role in orienting paraprofessionals not only to the school, but to the students they will be working with as well.¹²¹ They recommend **sharing background information on students they will be working with** (e.g., description of disabilities, intervention techniques, etc.), as well as **discussing paraprofessionals' specific responsibilities with them**.¹²²

Both the Northwest Regional Educational Laboratory and the Montana Office of Public Instruction (OPI) urge paraprofessionals to be proactive in the orientation process. The NWREL report entitled *Working Together for Successful Paraeducator Services* and the Montana OPI's *Paraprofessional Orientation Manual* provide checklists of questions paraprofessionals should ask in their first week on the job. Sample questions from both checklists include:

¹¹⁸ "Paraprofessional Orientation Manual." Montana Office of Public Instruction, 2004, 4.
<http://opi.mt.gov/PDF/CSPD/ParaOrientMan.pdf>

¹¹⁹ Ibid.

¹²⁰ Ibid., 4.

¹²¹ Ghere and York-Barr. Op. cit.

¹²² Ibid.

- ❖ What are my special and regular duties?
- ❖ Who will be my supervisor(s) and when will we meet?
- ❖ Will there be formal evaluations of my work?
- ❖ Am I invited and expected to attend staff meetings?
- ❖ What are the school's policies regarding safety, harassment, and bullying, and am I expected to enforce these policies?
- ❖ What emergency provisions apply to my situations?
- ❖ Where are supplies kept and how are they obtained?
- ❖ What is the line of communication and authority I must follow?
- ❖ What student records do I have access to?
- ❖ How should I respond when parents pose questions about their children's functioning in the classroom?¹²³

A well developed process of paraprofessional orientation is essential in preparing paraprofessionals for their roles and responsibilities, and helps identify appropriate training to follow. The next sub-section will discuss effective approaches to providing paraprofessionals with ongoing professional development opportunities.

Teachers as Trainers

By virtue of their supervisory role and close proximity to paraprofessionals, teachers form a natural corps of trainers that schools can utilize to develop the skills of their paraprofessional staff. Teachers have been formally trained in many of the tasks paraprofessionals are increasingly asked to perform, and utilizing their expertise can prove a cost-effective method of expanding paraprofessionals' competencies. However, as discussed previously, teachers are often ill-prepared to train and supervise adults. **It is thus incumbent upon schools to ensure that formalized teacher-led training of paraprofessionals is conducted by teachers who have been prepared for such a role.**

For teachers who are willing and adequately prepared to assume training responsibilities, Ghore et al. have produced a manual designed to assist special education teachers in training their paraprofessional support staff in skills relevant to their responsibilities. The manual offers strategies for training special education paraprofessionals in four distinct knowledge areas. The knowledge areas and training objectives for each are outlined below:

- ❖ *What is inclusive education?*
 - Paraprofessionals understand what inclusive education is and why it is important for students with disabilities

¹²³ "Paraprofessional Orientation Manual." Op. cit., 6, and "Working Together for Successful Paraeducator Services." Op. cit., 17.

- Paraprofessionals understand their role in implementing programs in inclusive settings
- ❖ *What to teach?*
 - Paraprofessionals understand the importance of connecting learning opportunities across the school day to each student's individualized learning objectives
 - Paraprofessionals are able to identify specific learning opportunities for students with disabilities in inclusive environments
- ❖ *How to instruct?*
 - Paraprofessionals understand how prompting, waiting, and fading can be used to teach new skills and foster student independence
 - Paraprofessionals become familiar with adaptations that could be used to increase student participation in academic, functional, and social situations
- ❖ *How to interact?*
 - Paraprofessionals understand that behavior is influenced by a variety of individual and environmental factors
 - Paraprofessionals recognize the importance of student relationships¹²⁴

Assistive Technology

Finally, assistive technologies play an increasingly large role in best practice recommendations for serving the needs of students with disabilities. Assistive technologies also feature in legal requirements: IEP teams should consider the student's need for an assistive technology device or service. Using assistive technologies helps students circumvent or reduce the impact of their disability while accessing and learning the general education curriculum and demonstrating their learning.

To best ensure assistive technology (AT) recommendations align with a student's actual needs, assessments must be undertaken by an assessment team comprised of **individuals with expertise in certain key areas**. According to a guidebook published in 2009 by the Wisconsin Assistive Technology Initiative (WATI), the following five positions must be represented on any team assessing a student's AT needs:

- ❖ A person knowledgeable about the student. That may be the student and/or parents or other family members

¹²⁴ Ghere, G., J. York-Barr, and J. Sommers. (2002). "Supporting Students with Disabilities in Inclusive Schools: A Curriculum for Job-Embedded Paraprofessional Development. Facilitator Manual and Paraprofessional Handouts." University of Minnesota Institute on Community Integration, 3-6.
<http://www.eric.ed.gov/PDFS/ED468320.pdf>

- ❖ A person knowledgeable in the area of curriculum, usually a Special Education Teacher
- ❖ A person knowledgeable in the area of language, usually a Speech/Language Pathologist
- ❖ A person knowledgeable in the area of motor skills, often an Occupational or Physical Therapist
- ❖ A person who can commit the district's resources, not only for purchase of devices, but to authorize staff training and guarantee implementation in various educational settings, usually an administrator¹²⁵

Assessment teams can follow any number of frameworks for evaluating students' AT needs. Two frameworks in particular – the **SETT Framework and the Quality Indicators for Assessment of Assistive Technology Needs (QIAATN)** – have been heralded in the literature as the preeminent assessment mechanisms. These frameworks and others uncovered in the literature will be discussed below.

Frameworks have been established to facilitate assistive technology (AT) needs assessments for students with disabilities.

The SETT Framework

Developed by special education expert Joy Zabala, the **Student Environment Tasks and Tools (SETT) Framework** serves to guide assessment teams in the selection of appropriate technological aids for students with special needs. It advises assessment teams to analyze the student's current abilities and special needs, the challenges and benefits posed by the student's environment, and the tasks necessary for the student to participate fully in the general education curriculum, before selecting assistive technological tools.¹²⁶ Zabala claims following the SETT Framework will **prevent wasteful acquisitions of underutilized products**.¹²⁷ The framework, including important questions meant to guide discussion amongst assessment teams, is outlined below:

- ❖ *The Student*
 - What does the Student need to do?
 - What are the Student's special needs?
 - What are the Student's current abilities?
- ❖ *The Environment*

¹²⁵ Gierach, J. (2009). "Assessing Students' Needs for Assistive Technology." Wisconsin Assistive Technology Initiative, 5th Ed, 13. <http://www.wati.org/content/supports/free/pdf/ASNAT5thEditionJun09.pdf>

¹²⁶ Zabala, J. (1999). "Get SETT for Successful Inclusion and Transition." LD Online. http://www.ldonline.org/article/Get_SETT_for_Successful_Inclusion_and_Transition/6399

¹²⁷ Ibid.

- What materials and equipment are currently available in the environment?
- What is the physical arrangement? Are there special concerns?
- What is the instructional arrangement? Are there likely to be changes?
- What supports are available to the student?
- What resources are available to the people supporting the student?
- ❖ *The Tasks*
 - What activities take place in the environment?
 - What activities support the student's curriculum?
 - What are the critical elements of the activities?
 - How might the activities be modified to accommodate the student's special needs?
 - How might technology support the student's active participation in those activities?
- ❖ *The Tools*
 - What strategies might be used to invite increased student performance? What no-tech, low-tech, and high-tech options should be considered when developing a system for a student with these needs and abilities doing these tasks in these environments?
 - How might these tools be tried out with the student in the customary environments in which they will be used?¹²⁸

The SETT Framework draws its strength from its simplicity. It effectively organizes the information necessary to make appropriate decisions regarding assistive technology acquisitions. However, it leaves the precise methods used to evaluate the gathered information to the discretion of assessors.

Quality Indicators for Assessment of Assistive Technology Needs (QIAATN) Framework

The Quality Indicators for Assistive Technology Services (QIAT) consortium of AT professionals and experts is considered the standard-bearer in the field of assistive technology. In 2005, QIAT released its Quality Indicators for Assessment of Assistive Technology Needs Framework to guide the work of AT assessment teams. Unlike the SETT Framework, **the seven indicators listed by QIAT can be considered guiding standards for evaluating gathered information, rather than a simple overview of what information must be collected.** The QIAATN standards are outlined below:

- ❖ Procedures for all aspects of assistive technology assessment are clearly defined and consistently applied
- ❖ Assistive technology assessments are conducted by a team with the collective knowledge and skills needed to determine possible assistive technology

¹²⁸ Quoted verbatim from: Ibid.

solutions that address the needs and abilities of the student, demands of the customary environments, educational goals, and related activities

- ❖ All assistive technology assessments include a functional assessment in the student's customary environments, such as the classroom, lunchroom, playground, home, community setting, or work place
- ❖ Assistive technology assessments, including needed trials, are completed within reasonable timelines
- ❖ Recommendations from assistive technology assessments are based on data about the student, environments and tasks
- ❖ The assessment provides the IEP team with clearly documented recommendations that guide decisions about the selection, acquisition, and use of assistive technology devices and services
- ❖ Assistive technology needs are reassessed any time changes in the student, the environments and/or the tasks result in the student's needs not being met with current devices and/or services¹²⁹

The QIAATN framework explicitly recognizes the **need for ongoing assessments of AT needs**. Zabala also discusses this imperative in her article on the SETT Framework, as does the framework presented by the National Center for Technology Innovation (NCTI) and the Center for Implementing Technology in Education (CITE), which will be discussed next. These frameworks support the Wisconsin Assistive Technology Initiative's assertion that AT assessment practices have evolved "from a one shot, separate event to an ongoing, continual part of educational planning."¹³⁰

NCTI/CITE Framework

In 2006, the National Center for Technology Innovation in partnership with the Center for Implementing Technology in Education published a step-by-step process for gathering and assessing information on student AT needs. Though geared toward an early childhood education audience, the framework can just as easily be applied to AT assessments for all students with disabilities. The NCTI/CITE Framework borrows extensively from the SETT Framework but also contributes several original elements – for example **establishing an observation plan and a standard to evaluate AT success**. The components of the NCTI/CITE Framework for gathering and assessing information on student AT needs are outlined below:

¹²⁹ "Quality Indicators for Assessment of Assistive Technology Needs." Quality Indicators for Assistive Technology Services, 2005, 1-2. http://natri.uky.edu/assoc_projects/qiat/documents/2%20QIAT%20QIs%20Assessment.pdf

¹³⁰ Gierach. Op. cit., 12.

- ❖ *Collect child and family information*
 - Begin the discussion about the child’s strengths, abilities, preferences and needs. What strategies have been found to work best?
- ❖ *Identify activities for participation*
 - Discuss the various activities within the environments that a child encounters throughout the day. What is preventing him/her from participating more?
- ❖ *What can be observed that indicates the intervention is successful?*
 - What is his/her current level of participation and what observable behaviors will reflect an increase in independent interactions? What changes (e.g., number of initiations, expression attempts, responses, reactions, etc.) will you look for?
- ❖ *Brainstorm AT solutions*
 - With the activity and desired outcomes established, you are now ready to discuss possible solutions with educators, family members, physical therapists, and other people with whom the child interacts on a weekly basis. Do the child’s needs include supports for movement, communication and/or use of materials? Start with what is available in the environment (what other children use) and consider adaptations to those materials. A range of options that address specific support areas should be considered
- ❖ *Try it out*
 - Determine when the AT intervention will begin and create an observation plan to record how the child participates with the AT supports
- ❖ *Identify what worked*
 - Selecting AT interventions is a continuous learning opportunity. Reflect on your plan and discuss what worked. What didn’t work? What should be done differently? Make modifications as needed and try again. Only by trying the AT can certain factors such as technology placement, amount of force, mounting, number of choices, etc. be determined and adjusted¹³¹

As with the SETT Framework, the NCTI/CITE Framework suggests collecting information on the student, the student’s customary environments, and regular learning tasks before proceeding to AT selection. However, it expands upon the SETT Framework by adding an analytical element, urging assessment teams to log observations and develop standards by which to measure effectiveness. Also, while the QIAATN Framework calls for a reassessment when shortcomings in meeting student needs emerge, the NCTI/CITE Framework stresses **the need to observe both what is and is not working**. Whereas the SETT Framework guides assessment

¹³¹ “Help for Young Learners: How to Choose AT?” LD Online, 2006.
http://www.ldonline.org/article/Help_for_Young_Learners:_How_To_Choose_AT%3F

teams in collecting information and the QIAATN establishes general standards for evaluation, the NCTI/CITE Framework assists assessment teams in undertaking both parts of the AT selection process. Together, these frameworks may be useful in the selection and implementation of assistive technologies in special education.

Project Evaluation Form

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