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Supporting Students in General Education

Key Topics

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Supports in General Education

Importance of General Education Supports

The need for high-quality instruction in the general education classroom has not been stronger than it is today. More students with high-incidence disabilities (HID) are being educated in general classrooms necessitating appropriate supports for their success. Students at risk for and with disabilities are more successful when teachers (a) apply scientifically based instruction in the general classroom, (b) evaluate student progress to determine whether sufficient learning is occurring, and (c) adjust instruction based on individual needs of students. This chapter is focused on instructional strategies used by general education teachers. Special educators play a critical role as they collaborate with general educators to ensure the best education possible for all students, including those with HID.

Within this chapter, four categories of general education support are discussed: (1) multitiered systems of supports (MTSS) (response to intervention and positive behavior instruction and supports), (2) universal design for learning (UDL), (3) differentiated instruction, and (4) adaptations (modifications and accommodations). Typically MTSS is implemented at the school level, while differentiated instruction and adaptations are applied at the classroom level. UDL can be adopted across any level of implementation. The approach for each is different, but the purpose is the same—to help students be successful academically and socially.

Multitiered Systems of Supports (MTSS)

Multitiered systems of supports (MTSS) is an umbrella term that describes an implementation framework for schools to ensure all students are provided high-quality core instruction and the necessary supports when students are not succeeding. Positive behavior interventions and supports (PBIS) and **response to intervention (RTI)** are structures under MTSS. Neither is a curriculum or a single intervention, but frameworks that incorporate **multitiered interventions** and supports. Both focus on preventing student difficulties as well as intervening quickly when problems do occur. PBIS emphasizes social and behavioral supports, while RTI centers on academic supports. Both PBIS and RTI (a) ensure all students receive highly effective core instruction; (b) identify students who are not achieving their potential under those conditions; (c) provide a continuum of services and interventions, including instruction, for those not performing to their ability; and (d) take a team approach (Young, Caldarella, Richardson, & Young, 2012). This overarching model is called multitiered because when designed and implemented properly, multiple levels of instruction and other supports are provided based on individual student needs.

Positive Behavior Interventions and Supports (PBIS)

Typically both PBIS and RTI involve three tiers. Tier 1 is called the universal or primary tier because all students receive Tier 1 instruction and support. For PBIS, this involves

Learning Objectives

- Defend the use of the response to intervention framework and describe how it is implemented to support students with academic needs.
- Compare and contrast the following: universal design for learning, differentiated instruction, adaptations, accommodations, and modifications. Provide examples of each.
- Describe considerations teachers should make before providing culturally and/or linguistically diverse students supports in the general education classroom.

schoolwide rules and expectations with positive consequences, providing verbal and written praise as reinforcers, and teaching social skills to all students. Tier 2 interventions are provided to students who need more intensive supports based on performance in Tier 1 or through screening instruments designed to identify targeted students, not for special education services, but for general education intervention. Tier 2 involves individualized and specific behavioral interventions based on an ABC assessment (see Chapter 5). Additional social skills instruction may also be part of Tier 2 interventions. Although specific behaviors are targeted for individual students, interventions are often delivered in small groups. Tier 3 consists of similar interventions to those provided in Tier 2. However, the intensity, dosage, and/or individualization provided may be increased.

Although this chapter focuses on RTI because PBIS was addressed in Chapter 3, strong links have been established between behavioral and academic performance suggesting that behavioral and academic data need to be considered simultaneously (Algozzine, Wang, & Violette, 2011; Benner, Beaudoin, Kinder, & Mooney, 2005). While behavioral and academic supports are often presented separately (as is the case with PBIS and RTI), school teams should always consider the whole child in team meetings and consider both behavioral and academic needs.

Response to Intervention (RTI)

The response to intervention framework has been implemented for two major purposes. First, to help identify students as having a learning disability, and second to provide individualized support to all students in the general education classroom based on their specific needs.

Identifying Learning Disabilities

Like PBIS, RTI provides a structure for ensuring all students receive high-quality core instruction as well as interventions for those not progressing under those conditions. Historically, however, one of the first promotions of RTI occurred with professionals desiring to use an alternative method for identifying students with learning disabilities (LD). When first passed, the Individuals with Disabilities Education Act (IDEA) stated that a wide discrepancy between ability and achievement needed to be demonstrated before a student could be identified as having LD and receive special education services (see Chapter 1). This resulted in having to wait until the student became further and further behind academically in order to qualify for and receive additional support, sometimes referred to as the “wait-to-fail” or discrepancy model.

The reauthorized IDEA now allows states to use an RTI model to identify students with LD. That is, students who receive additional, more intensive, and/or more frequent instruction but do not make adequate progress may qualify as having LD. Some states (e.g., Colorado and Delaware) have made RTI a requirement for identifying LD (Shapiro et al., 2012). Many experts in the field, however, believe that RTI alone should not be used for identifying LD (Hale et al., 2010). Rather, multiple sources of data, including a comprehensive neuropsychological assessment, should be used.

RTI has been characterized as solving many problems associated with the discrepancy model because struggling students can access help more rapidly in the general education classroom, and they can be given additional instruction based on their

individual needs. RTI also has the potential of reducing the number of students inappropriately referred to special education and identified as having disabilities (Orosco & Klingner, 2010). However, including RTI as an option for identifying LD does not necessarily mitigate the wait-to-fail problem. Critics of RTI assert that it takes too long for students to receive intensive services and, while educators take a lot of data on student performance, students are not making adequate progress. In response to these criticisms, researchers such as Stephanie Al Otaiba et al. (2014) have looked at implementing intensive interventions sooner based on screening and baseline data. Findings suggest improvements in student academic performance providing some evidence for the need to “fast-track” some students to more intensive interventions.

Implementing RTI for All Students

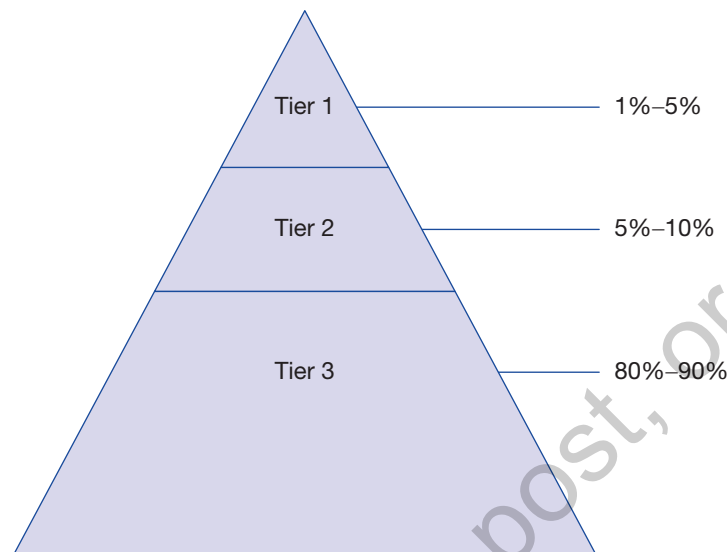
When designing and implementing RTI, five core components need to be included: (1) multitiered interventions, (2) data-based decision-making, (3) alignment of curriculum and evidence-based intervention, (4) team collaboration, and (5) implementation fidelity. In addition, consideration should be given to whether RTI is being designed for an elementary or secondary school.

Multitiered implementation. RTI is a multitiered system of support typically consisting of three tiers, often depicted visually as a triangle with the majority of students falling in Tier 1 at the base of the triangle and the fewest number of students needing Tier 3 supports at the top of the triangle (Figure 7.1). Varying and increasing levels of supports exist in the three tiers. Tier 1 supports include core instruction and are provided to all students in general and special education. Strategies such as differentiated instruction, which will be discussed in more detail later in the chapter, are a hallmark of Tier 1 instruction. Typically, 80% of students are able to access the general curriculum with only Tier 1 supports. If less than 80% of students achieve grade-level benchmarks or maintain adequate progress, changes should be made to core instruction.

When students continue to struggle (i.e., not meeting benchmarks or falling below 25% of the normative sample on standardized tests), Tier 2 supports may be implemented. These are small-group interventions that typically occur one to two times a week in the content area where the student is struggling. Tier 2 supports do not replace, but supplement Tier 1 instruction. Typically, 10% to 15% of students will need Tier 2 supports.

Building on these supports, Tier 3 interventions are the most intensive and are typically administered in a one-on-one setting four to five times per week. While some researchers conceptualize Tier 3 as special education services, others believe that there should be a fourth tier to capture students identified with disabilities (Averill, Baker, & Rinaldi, 2014; Jenkins, Schiller, Blackorby, Thayer, & Tilly, 2013). Regardless, it is important to note that all students have access to all three tiers of support depending on student need and that a certain amount of flexibility and fluidity is built into tiered supports. For example, students cannot (and should not) be labeled as “Tier 3” or “Tier 2” students. A student may need Tier 3 supports in reading, Tier 2 supports in writing, and Tier 1 supports in math and science. In addition, as the student responds to intervention, supports should be faded from Tier 3 to Tier 2 or from Tier 2 to Tier 1 as the student progresses. Conversely, if the student starts to struggle more academically based on progress monitoring data, more supports may be added.

FIGURE 7.1 Multitiered Systems of Support Model



Note: Percentages represent the approximate percentage of students receiving academic (RTI) or behavior/social (PBIS) in each tier.

The support team at Ignacio Elementary have designed a response to intervention program to identify students who are struggling with typical classroom instruction and provide them the support they need to be successful. They design three levels of support as follows. Tier 1 represents evidence-based instructional practices in the general classroom. The teachers undergo professional development to ensure that they have the skills necessary to implement teaching methods and strategies that are known through research to be effective. Students receiving Tier 2 supports are divided into small groups consisting of

three to six students meeting two times a week for 30 minutes. In Tier 3, students receive interventions in a one-on-one setting 5 days a week for 50 minutes. Specific interventions vary by content area. One of the evidence-based interventions adopted by the education team is Peer-Assisted Learning Strategies (PALS), a peer tutoring intervention that targets reading and math. This intervention is offered as both a Tier 2 and a Tier 3 intervention depending on the amount of time the student receives the intervention and the setting in which the intervention is received (i.e., small group or one on one).

Data-based decision-making. A core component of RTI is using student performance data to make decisions regarding educational placement, instruction, and interventions. Teams should use multiple sources of data including considerations of teacher judgment when making decisions (Shapiro et al., 2012). Data may include curriculum-based assessments or standardized assessments. As these measures were discussed in depth

in Chapter 5, they will only be mentioned here. Educators may also consider conducting “can’t do/won’t do assessments” to determine if student difficulties are a skill deficit or a problem with motivation (Benner, Kutash, Nelson, & Fisher, 2013).

TEACHER TIP #7.1

CAN’T DO/WON’T DO ASSESSMENT

A simple way to conduct a can’t do/won’t do assessment is to ask students to complete a short task two times, once with and once without built in motivation. For example, a student may read a 1-minute fluency probe to see how many words correct per minute she can read. Next, she reads the 1-minute fluency probe but this time, she’s provided an incentive (e.g., selecting a prize out of a treasure box)

for exceeding her words correct per minute. If the student is able to significantly improve her performance on the task, interventions to target motivation should be considered. If the student is not able to significantly improve her performance on the task, skill-deficit interventions to target reading fluency should be considered.

Universal screening, or collecting data on all students to assess risk status, can help determine which level of tiered supports a student needs in an academic area (Shapiro et al., 2012). Progress monitoring or collecting data throughout the school year, is used to assess student progress. Typically, data are collected for all students three times a year, biweekly for students receiving Tier 2 supports, and weekly for students receiving Tier 3 interventions. When data are collected more frequently, teams can respond efficiently by making necessary adjustments without too much time passing with an intervention that is not working. Responding to these data means making adjustments to instruction or interventions when students are not making adequate progress or continuing with services as designed if students meet goals or demonstrate appropriate progress. Teams may find it helpful to chart or graph student data with goal and trend lines as a means of comparison.

At Ignacio Elementary School, Mrs. Clark’s students, JuliAnne, Sebastian, and Asher, receive both Tier 1 (effective instruction) and Tier 2 (PALS peer tutoring) interventions. They are tested twice a month in the materials they are learning. JuliAnne reached the preselected benchmarks so she discontinues participating in peer tutoring. Sebastian is making progress, but has

not reached the benchmarks, so he continues in the peer tutoring sessions. Asher also did not reach the benchmarks, but he is not making adequate progress, so he receives additional instruction and support as a Tier 3 intervention (one-on-one instruction and increased peer-tutoring time), while continuing to receive Tier 1 and Tier 2 interventions.

Aligned curriculum and evidence-based interventions. A strong core curriculum and evidence-based interventions are necessary for RTI to be successful. Evidence-based interventions have demonstrated evidence of effectiveness through research and are based on strong theoretical principles. While no intervention is without its faults, choosing an evidence-based intervention means that educators are giving themselves the highest probability for success. In addition, these interventions are often structured or even scripted, helping to save educator time in planning. In addition to being evidence-based, all RTI interventions must (a) have a plan for implementation, (b) include criteria for acceptable performance, and (c) provide means for monitoring progress (Averill et al., 2014).

Technology Spotlight #7.1

Accessing Evidence-Based Interventions Online

A number of online databases exist that include evidence-based interventions for academic and behavioral concerns. These websites often provide background information on the evidence base as well as recommendations for adaptations and progress monitoring.

Best Evidence Encyclopedia: www.bestevidence.org

Florida Center for Reading Research: www.fcrr.org

Intervention Central: www.interventioncentral.org

National Center on Intensive Intervention: www.intensiveintervention.org

What Works Clearinghouse: ies.ed.gov/ncee/wwc/

Team collaboration. RTI is a systemic approach to prevention and intervention for student learning and as such, requires a team-based approach to collaboration and decision-making. Schools that implement RTI often have weekly team meetings to discuss individual at-risk students. These team meetings may be referred to as teacher assistance teams, instructional support teams, prereferral intervention teams, problem-solving teams, mainstream assistance teams, or instructional consultation teams (Kovaleski & Black, 2010). Typically involved in these meetings are administrators, intervention specialists, general education teachers, special education teachers, school psychologists, school counselors, and speech language pathologists. Parents may also be included in these meetings. As a team, decisions such as how to modify instruction, when to refer for an evaluation for special education eligibility, and when to increase or fade services are determined. These meetings are most effective when the strengths and weaknesses of the student are considered and the focus of the meeting is on school-based factors that can reasonably be controlled to improve student outcomes. Common pitfalls of these meetings include blaming outside or home factors, complaining about the student, not using data to make decisions, and not selecting evidence-based interventions to help the student (King Thorius, Maxcy, Macey, & Cox, 2014).

In addition to team meetings focused on individual students, schools may also consider having periodic grade-level team meetings to assess the effectiveness of Tier 1

supports (Harlacher, Potter, & Weber, 2015). In these meetings, data are analyzed to see if the core curriculum is appropriate for the majority of students (i.e., 80% of the students reach proficiency). If gaps exist in the majority of students' performance, adjustments to Tier 1 instruction across the grade level are implemented.

TEACHER TIP #7.2

TEAM MEETINGS

Team meetings are most effective and efficient when teachers come prepared with some data already collected on a student. Often schools will have requirements about what is necessary to bring to these meetings; however, if no guidelines are provided, keep in mind that teachers have a lot of data that can be useful in making team decisions and most of it is already being collected as part of the daily school routine.

Information such as attendance, end-of-level test scores, reading benchmarks, in-class work samples, English language proficiency scores, anecdotal behavior logs, on-task/off-task data, and grades can all be helpful in team meetings. Putting together a small folder of student data before the meeting can help streamline the process and provide solid evidence for academic concerns.

When making team decisions, two models have become the most prominent in schools: the problem-solving model and the standard protocol model (Faggella-Luby & Wardwell, 2011; King Thorius et al., 2014; Spear-Swerling & Cheesman, 2011). The problem-solving model is characterized by four steps: (1) problem identification (What is the problem?), (2) problem analysis (Why is the problem happening?), (3) plan identification and implementation (What are we going to do about it?), and (4) plan evaluation (did the solution work?). In this model, interventions are designed on a case-by-case basis and the team collects data to see if the intervention worked. Adjustments are made accordingly and the process is conceptualized as a cycle that educators may go through multiple times. In the standard protocol model, school teams establish standard interventions to be implemented to address a particular need.

Implementation Fidelity

Implementation fidelity (or treatment fidelity) refers to a measure of whether the intervention was delivered as it was designed to be implemented. Interventions are more effective when implemented with fidelity (Nelson, Oliver, Hebert, & Bohaty, 2015), so an element of RTI is ensuring that educators implement interventions with adequate integrity. This means that the intervention is delivered as it was designed to be implemented. Educators may have difficulty assessing fidelity given time constraints and the fact that empirically developed measures to effectively measure implementation integrity continue to be researched and developed (Noltemeyer, Boone, & Sansosti, 2014). Currently, schools most often have educators self-report on a checklist or may occasionally assign outside observers to assess the elements of the intervention (Averill et al., 2014).

Elementary versus secondary schools. RTI implementation can be very different for elementary than for secondary schools. Elementary schools are the most researched setting for RTI because of the impact and focus on early intervention and prevention. In addition, implementation may be easier in elementary given that students are generally assigned to just one classroom. Although the logistics of implementation differ in secondary schools (Vaughn & Fletcher, 2012), research has demonstrated positive effects in secondary settings as well (Faggella-Luby & Wardwell, 2011; Fisher & Frey, 2011). Douglas Fisher and Nancy Frey (2011) describe a case study of RTI implementation in a high school setting. At the participating school, block times were established across the school for interventions to be implemented in various content areas simultaneously. Developing a plan for implementation that works within the school structure is essential for the systemic changes that RTI requires.

TEACHER TIP #7.3

USING AN INTERVENTION BLOCK

Many schools are designating time during the day (e.g., 20 to 30 minutes) in an intervention block where Tier 2 and Tier 3 interventions can be administered to all students needing them. Use the following tips in designing an intervention block.

- Identify assessment and intervention resources available (e.g., curricular materials, professional training of staff).
- Identify areas of student weakness and provide professional development for faculty in those areas (e.g., workshops on reading comprehension or math problem solving strategies).
- Capitalize on personnel resources (i.e., identify which personnel will be involved and determine how to use them to get the most leverage).
- Build time into the schedule for interventions that engage all students and allows for teacher collaboration.
- Maximize the use of space and time (e.g., consider furniture configuration, move teachers instead of students when possible). (Averill et al., 2014)

Models for Supporting Students in General Education

Given the increased number of students with disabilities and those at risk for school failure in the schools today, universal design for learning (UDL) introduced in Chapter 1 can provide the structure teachers need to ensure that all students in their classroom have access to the curriculum. However, no curriculum or materials will ever be totally universally designed. Some adaptations for specific students will always be necessary and thus, teachers will need to know how to best accommodate the needs of their individual students.

Three instructional design and delivery models can be implemented to allow students with HID access to the general curriculum—namely, UDL, differentiated instruction,

and adaptations. All three have the same purpose, which is to optimize teaching and learning for all students. All three are also considered Tier 1 interventions in the RTI framework. In addition, all three require preplanning in anticipation of potential problems students may encounter. At the same time, differences among these three models occur at the preplanning stage. Universal design attempts to address all potential difficulties all students will encounter including those with sensory impairments, learning disabilities, multiple disabilities, and so forth. Planning for differentiated instruction considers typical difficulties clusters of students will encounter in their general education classroom. And adaptations are planned at the individual student level, based on the needs of an individual student.

Universal Design for Learning

The concept of UDL began with architecture and engineering. In response to the passage of the Americans with Disabilities Act (ADA) in 1990, public space in the United States began changing. Ramps, elevators, and wider doorways became commonplace. Most buildings needed to be retrofitted which was often expensive and unattractive. Over time, buildings were built with embedded accessibility as part of the plan. Expenses decreased while attractiveness increased. The phrase, *universal design*, was created to represent systems that consider and are designed from the beginning, to be accessible to the broadest range of individuals possible (Pisha & Coyne, 2001).

Universal design for learning is achieved by creating flexible curricular materials and providing built-in alternatives within the instructional design of the materials. Add-on adaptations do not meet the universal design definition. In most cases when teachers have access to universally designed materials, they can use the materials without having to plan adaptations for students with special needs.

Universal design improves systems for both those with and without disabilities. For example, restaurants and department stores that adjust their furniture and racks to permit access to wheelchair users also make accessibility easier for individuals pushing young children in strollers. Cut-down curbs make sidewalks more accessible not only to those in wheelchairs, but to those riding bicycles or skateboards or persons pushing a hand truck. Similarly, universally designed curriculum enhances the compatibility of the materials for learners with diverse needs, including those with and without disabilities. The basic premise is that curricular content should be available in a transformable format or in multiple ways which makes it accessible to all. Universally designed curriculum makes the teacher's job less burdensome by reducing the number of adaptations that need to be made. Outlines principles of UDL with a few examples.

Possible examples of UDL are endless. Below are a few examples from the literature that demonstrate how UDL may be manifested in the classroom. Most of these examples use technology which has enhanced our ability to create universal design for learning.

- Enhanced notebook with text-to-speech features and multimedia opportunities for responses
- Content acquisition podcasts
- Multimedia with narration, video, and animation

- Sets of scaffolded practice problems
- Self-management strategies embedded into the curriculum
- Computer-based read-aloud testing (Kennedy, Thomas, Meyer, Alves, & Lloyd, 2014; King-Sears et al., 2015; Roa, Ok, & Bryant, 2014)

TABLE 7.1 Principles of Universal Design for Learning

| Principles | Checkpoints | Examples |
|---|---|---|
| Provide options for perception | <p>Offer ways of customizing the information presentation.</p> <p>Offer alternatives for auditory information.</p> <p>Offer alternatives for visual information.</p> | <p>Customize with size of text, color used for emphasis, speed of simulations.</p> <p>Provide visual diagrams, written transcripts, captions for videos.</p> <p>Provide auditory cues; use touch equivalents for key visuals.</p> |
| Provide options for language, mathematical expressions, and symbols | <p>Clarify vocabulary and symbols.</p> <p>Clarify syntax and structure.</p> <p>Support decoding text, mathematical notions, and symbols.</p> <p>Promote understanding across languages.</p> <p>Illustrate through multiple media.</p> | <p>Preteach vocabulary and symbols; highlight how complex words or equations are composed of simpler ones.</p> <p>Provide links between ideas in a concept map; highlight transition words in reading materials.</p> <p>Allow the use of text-to-speech; provide a list of key terms.</p> <p>Make all key information in dominant language; embed visuals for vocabulary clarification.</p> <p>Present key information in two ways (e.g., text with a video or math equation with animation).</p> |
| Provide options for comprehension | <p>Activate or supply background knowledge.</p> <p>Highlight patterns, critical features, big ideas, and relationships.</p> <p>Guide information processing, visualization, and manipulation.</p> | <p>Activate prior knowledge with visual imagery, use advanced organizers, and preteach critical concepts through demonstration.</p> <p>Use outlines, graphic organizers, multiple examples and nonexamples; highlight key elements in text, graphics, diagrams, and formulas.</p> <p>Embed strategies for learning within the content; provide scaffolding opportunities.</p> |

Source: Adapted from CAST (2011).

Technology Spotlight #7.2

UDL Resources

The best source for technology support of UDL materials is CAST, a nonprofit education, research, and development organization that focuses on expanding learning opportunities for all individuals through UDL. A description of their major projects follows. Although all of these learning tools are free, some of the pages require users to create a free account to access. For more information about CAST, see www.cast.org/about#.VYmwPEa2Ulo.

- **UDL Guidelines¹** (www.udlcenter.org/): This website discusses the principles of UDL and includes definitions and guidelines, as well as advocacy and research resources. Video clips demonstrating the use of UDL in the classroom are also available.
- **UDL Book Builder²** (bookbuilder.cast.org/): Book Builder enables the user to create, share, publish, and read digital books to engage and support diverse learners' needs, interests, and skills.
- **UDL Curriculum Toolkit³** (udl-toolkit.cast.org/home): This Web-based platform allows the development and publication of Web-based curricula and other content built using the principles of UDL.
- **UDL Exchange⁴** (udlexchange.cast.org/home): The exchange pages allow educators to create and share instructional resources aligned to the Common Core and based on UDL.
- **UDL iSolveIt⁵** (isolveit.cast.org/home): iSolveIt is a mobile digital learning environment that includes a collection of innovative, researched, tablet-based puzzles that use UDL principles and teach essential math reasoning and problem-solving skills.
- **UDL Studio⁶** (udlstudio.cast.org/): On this site, you can discover projects created by others and work on your own projects. The site also provides tips and resources that include information about text (e.g., free, public domain text sources), audio (e.g., converting audio files to mp3 format), video (e.g., video editing), images (e.g., free online image editors), and animation (e.g., free public domain animations).

¹UDL Guidelines is a registered trademark of the National UDL Center at CAST.

²UDL Book Builder is a registered trademark of the National UDL Center at CAST.

³UDL Curriculum Toolkit is a registered trademark of the National UDL Center at CAST.

⁴UDL Exchange is a registered trademark of the National UDL Center at CAST.

⁵UDL iSolveIt is a registered trademark of the National UDL Center at CAST.

⁶UDL Studio is a registered trademark of the National UDL Center at CAST.

Differentiating Instruction

Although UDL allows for easier access to the curriculum, not all UDL-based curriculums will meet all students' needs. Additionally, published UDL-based materials are not prominently available necessitating innovative UDL development at the local level.

Differentiated instruction is more common than UDL for general classrooms. Teachers using differentiated instruction acknowledge and build upon student commonalities and differences by proactively planning and implementing a variety of strategies to match instructional content, process, and product to student differences in readiness, interest, and learning needs (Tomlinson, 2014). Teachers who differentiate their classrooms look for clusters of student needs and adjust instruction accordingly (see Table 7.2). This differs from the concept of individualized instruction where the instructional plan is based on the individual student's needs (Tomlinson & McTighe, 2006). As described by Carol Ann Tomlinson and Jay McTighe, "differentiated classrooms support students who learn in different ways and at different rates and who bring to school different talents and interests. More significantly, such classrooms work better for a wide range of students than do a one-size-fits-all setting" (p. 13).

Mr. Thimm is an exceptional seventh- and eighth-grade math teacher. After Mr. Thimm received a state award for best math teacher of the year, a local newspaper reporter spent a day in his classroom. Below is an excerpt from the reporter's article:

As I walked into the classroom, I thought the principal had given me incorrect directions. This couldn't be Mr. Thimm's classroom. Students were not sitting in desks neatly lined in a row. Instead they were working in small

groups. Others were working alone. And two students were seated at a small table being instructed by an adult, who I assumed was the teacher. As I watched, waiting for the teacher to free himself to speak to me, my perspective of what I observed changed. At first I saw disorganization and chaos. Within a few minutes, however, it became clear that each student had an academic task on which he or she was working. Some of the tasks were the same, others were different. Maybe this was Mr. Thimm's classroom after all.

TABLE 7.2 What Differentiated Instruction Is and Is Not

| What Differentiated Instruction Is NOT: | What Differentiated Instruction IS: |
|---|---|
| <ul style="list-style-type: none"> • The same as individualized instruction • Chaotic • Just another way to provide homogeneous grouping • A new label for an old process | <ul style="list-style-type: none"> • Proactive • More qualitative than quantitative • Rooted in assessment • Multiple approaches to content, process, and product • Student centered • A blend of whole-class, group, and individual instruction • Dynamic |

Source: Tomlinson (2001).

As described throughout this book, student bodies are becoming more and more diverse. Even so, teachers can find commonalities as well as differences in every group of students. Mr. Thimm's classroom looked chaotic. Yet, upon further examination, it wasn't chaotic; rather it was a differentiated classroom with instruction designed to meet the needs of each student in the class.

Mr. Thimm gave the reporter the freedom to speak with the students as he roamed the classroom. The reporter learned that some students were working alone and others by themselves to solve a complex mathematical problem. One student was given a written sheet with prompts about how to solve the problem. He also noted that the complexity of the problem varied across groups and individuals. Some students had the problem printed on green paper,

which was different from the problem printed on blue paper. Two students working together told him they were allowed to use manipulatives or calculators and that they will be explaining their solution orally rather than in writing. As he interviewed the teacher, he learned that the two students working with him were being instructed in a simpler mathematical concept than the problem-solving exercise being completed by their classmates.

Differentiated instruction may be conceptualized as adjustments in instruction based on content, process and/or product (Tomlinson, 2014). Mr. Thimm was using all three. He adjusted the content by varying the type and complexity of the mathematical problem. He used process differentiation by providing some students manipulatives, calculators, and written prompts to help them solve the problem, as well as by allowing students to choose to work independently or in groups. Last, he used product differentiation by allowing two students to demonstrate their understanding orally rather than in written work.

Content

Content refers to what students should know, understand, and do as a result of instruction (Tomlinson, 2014). Adapting what is taught may include completely different curriculum (substitute curriculum) or adaptation of the curricular goals (alternate goals). Content changes may also involve the amount or difficulty level of the work to be achieved. One strategy for dealing with content accommodations is to select the core concepts each student must master. From there, teachers can adjust the complexity as needed (Nordlund, 2003).

Teaching the “big ideas” or the major ideas, concepts, or principles rather than detailed information is another example of content adaptation. Not all instructional objectives are equally important to academic development. Focusing on big ideas is essential for students with academic disabilities who have less time left in school to master content than their peers who are not already academically behind. Also, understanding the big ideas help learners connect facts and concepts they have learned (Coyne, Carnine, & Kame'enui, 2011).

Process

Process centers on how the content will be taught and learned. Process accommodations involve how the teacher instructs, how much support is provided to the student,

how much time is allotted to instruction, the degree of sophistication of the instruction, and the degree to which the student participates in the task. When modifying instruction, teachers vary activities and strategies needed by individual students. Some students, for example, may require more directed instruction (Nordlund, 2003).

The following are a few examples of process adaptations that could be provided to students with specific learning needs:

- Provide written materials to help focus conceptual understanding and relevant information.
 - Guided notes where student fills in the missing words while reading or listening to a presentation
 - Graphic organizers that visually display the relationship between concepts being taught
 - Study guides with questions student answers
 - Written outline of the lesson
- Include visual aids within lessons to emphasize concepts being taught.
- Check for understanding frequently to ensure the student isn't misunderstanding or practicing errors.
- Allow students to use technology, such as recorders or word processors, during instruction.
- Provide short breaks for physical movement so students don't need to attend for long periods of time. (Carter, Prater, & Dyches, 2009)

Product

Product refers to the manner in which the student will be evaluated in terms of depth, amount, or independence of products usually in the form of tests, projects, written work, or oral presentations (Nordlund, 2003). Use of oral or dictated responses is a common product adaptation for students with writing difficulties.

When teachers use large-scale projects as product outcomes, Tomlinson (2001) suggests avoiding the “poster-report-mobile rut of products” (p. 88). Product possibilities are only limited by the teacher's and students' imaginations. Students could, for example, create a series of illustrations, make a video, complete a demonstration, write a song, develop a collection, conduct a debate, create an exhibit, and so forth.

Tomlinson (2001) provides guidelines for projects such as these:

- Ensure the product allows the students to demonstrate what they know, understand, and/or can do.
- Determine expectations for quality in the content (e.g., information), process (e.g., research), and product (e.g., size).
- Consider the students' readiness, interest, and learning profile.

- Use products that help students see the real-world application of knowledge and skills being taught in school.
- Use check-in dates for particularly difficult or lengthy projects.
- Ensure your students have the production skills before assigning the product.
- Use formative and summative peer and self-evaluation based on agreed-upon criteria.
- When possible, arrange for others besides the teacher to view the product.

Adaptations, Modifications, and Accommodations

Differentiated instruction as a label and concept has its roots in general education. General education teachers are taught to apply differentiated instruction to all students in their classroom. Conversely, the concept of adapting curriculum and instruction for students with disabilities stems from the field of special education, and focuses on individualizing instruction to meet the needs of the student with disabilities. Despite these differences, the process and outcome are similar.

While interviewing Mr. Thimm, the reporter became more and more intrigued with the notion of differentiated instruction. He asked questions to better understand and in doing so he learned the following. Mr. Thimm has five students with Individualized Education Programs (IEPs) in his math class: Thelma, Terence, Noah, Keenan, and Walter. Thelma needs visual prompts to help her recall and process information. Otherwise, she can keep up with her classmates. Thelma completes the same homework assignments as the other students except her math textbook and any other individual assignment sheets have handwritten prompts she has been taught

to decipher (e.g., arrows indicating which operation to complete first). Terence and Noah have writing difficulties. They understand mathematical concepts, but have difficulty transferring their understanding to paper. Thus, Mr. Thimm allows Terence and Noah to dictate their responses to a peer or to use the classroom computer when appropriate. Keenan and Walter are behind their classmates academically. Mr. Thimm, in consultation with their special educator, implements different curriculum material for them. He relies on classmates, through his peer-tutoring activities, to continue and extend his instruction for Keenan and Walter when needed.

Based on the requirements of IDEA, students with disabilities are to be provided an individualized education, at least to some extent. **Adaptation** is the overarching term that encompasses both modifications and accommodations. **Modifications** refer to changes in the curriculum or standard. Keenan and Walter are receiving modifications because Mr. Thimm is teaching them a different curriculum than their peers. **Accommodations** are adaptations that make the general curriculum and assessment accessible to the student without changing the standard or curriculum. Thelma, Terence,

and Noah are receiving accommodations in Mr. Thimm's class because they are working on the same curriculum as their peers, but need some assistance in learning the same content and meeting the same standard.

Selecting Adaptations

Ideally, the differentiated classroom is designed to meet the educational needs of all of the students in the classroom. However, not all teachers design differentiated instruction, and depending upon the subject matter, not all curriculums allow for easy implementation of differentiated instruction. To provide appropriate support for students with disabilities in general education classrooms, IEP teams specify which accommodations and/or modifications a student with disabilities may need. Jeanne Shay Schumm (1999) created eight principles for making adaptations in the general education classroom and organized them using the acronym FLEXIBLE, which stands for **F**easible, **L**ively, **E**liminated, **E**xplicit, **I**ntentional, **B**eneficial, **L**imelight, and **E**valuated. Questions to ask before selecting potential adaptations accompany each principle and sample questions may be found in Table 7.3.

TABLE 7.3

The FLEXIBLE Principle: Questions to Ask Before Selecting Potential Adaptations

| Principle | Sample Questions |
|-------------|--|
| Feasible | <ul style="list-style-type: none"> • How feasible are the potential adaptations? • How easily can they be incorporated into the general education classroom? |
| Lively | <ul style="list-style-type: none"> • How will the adaptations keep students actively engaged? • Will they help make learning interesting, motivating, and fun? |
| Eliminated | <ul style="list-style-type: none"> • How easy will it be to fade the accommodation over time? • Will the student be able to generalize the skill? |
| Explicit | <ul style="list-style-type: none"> • What is the purpose of the adaptation and how will I communicate the purpose to the student? • Who else needs to know about the adaptation? |
| Intentional | <ul style="list-style-type: none"> • How does this accommodation fit with goals on the student's IEP? • How does this accommodation fit with district or state standards? |
| Beneficial | <ul style="list-style-type: none"> • How does this adaptation benefit the targeted student? • Will other students benefit as well? |
| Limelight | <ul style="list-style-type: none"> • How can the adaptation be implemented and not place undue attention on the student with the disability? |
| Evaluated | <ul style="list-style-type: none"> • How will I evaluate the effectiveness of the adaptation? • How will the evaluation inform changes in the adaptation? |

Source: Adapted from Schumm (1999).

TEACHER TIP #7.4

SELF-IDENTIFIED ACCOMMODATIONS

To help students identify which accommodations they prefer, try these two strategies:

- Provide students with a blank sheet of paper with the following written at the top: *What my teacher can do to help me learn*. If necessary, read and explain the sentence to the students. Ask them to draw or write something that shows how you or another teacher can help them learn.
- Create a certificate of accommodations, similar to a contingency contract. Ask the students to write the classroom accommodations they would prefer. Once the accommodations have been finalized, ask the student, parents, and teachers involved to sign the certificate. (Blazer, 1999)

Technology Spotlight #7.3

Accessing Levelled Learning Material on the Internet

Special educators are often challenged to create curriculum accommodations and modifications for students with disabilities. Indeed, this is a challenging task under the best circumstances. However, most special educators have inadequate background in the subject and have too little time to create accessible learning materials.

Recognizing the need to respond to classroom diversity, instructional designers are exploring how technology can personalize the presentation of information and engage readers in learning about a topic. Visit the following websites to obtain a glimpse of the future by exploring how rich instructional content can be presented at tiered levels so that students can decide which level is most appropriate for them.

- Ben's Guide to US Government for Kids (bensguide.gpo.gov/): Ben's Guide provides information about our nation and system of government. You can access information written for kindergarten through 12th-grade students.
- Windows on the Universe (www.windows.ucar.edu/): Available at this site is information on a number of topics including computers, health, and social science. For each topic, information is written at beginner, intermediate, or advanced levels.

Teachers clearly have a responsibility for creating accessible instructional units and lessons. Some resources to explore

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to facilitate planning for curriculum accommodations and modifications include the following:

- 4 Teachers (www.4teachers.org/): When you visit this site, click on the equity index and you can access resources and tools

for addressing diversity in your classroom.

- TeAch-nology (www.teach-nology.com/themes/): A number of teacher resources are available at this site including lesson plans, organizers, rubrics, and worksheets.

MARCIE model. Another way of conceptualizing adaptations is the use of the MARCIE model, originally the CRIME model (Prater, 2003). The MARCIE model extends adaptations beyond instruction to also examine classroom rules and the environment. The acronym MARCIE stands for

- **M**aterials
- **A**ssessment
- **R**ules
- **C**urriculum
- **I**nstruction
- **E**nvironment

Materials. The first category, materials, encompasses all materials and equipment available to the teacher including classroom supplies, textbooks, supplementary materials, computers, calculators, and so forth. Just as teachers use assessment information to plan instruction, teachers can use assessment information to determine what type of material support students with disabilities may need. If a student's primary disability is reading, then the student may need support that allows the student to access information without having to read grade-level material. Audio-recorded materials, videos, computerized text readers, and simplified versions of the classroom text can address reading problems. Students with information processing problems may need graphic organizers and study guides to enable them to identify important information. Supplemental text materials that define new vocabulary, or outline chapter information can also be helpful. Some students have difficulty completing and turning in assignments. In such cases, self-monitoring checklists and assignment sheets may enhance performance.

Wally has difficulty reading his 11th-grade science, history, and literature textbooks. His special education teacher has acquired

copies of the books on CDs. Wally listens to the CDs at home to keep up with the required reading.

Assessment. The second category is assessment. Students with HID may qualify for standardized assessment accommodations. Similarly, they may require accommodations in the classroom assessment processes as well. Assessment in this context refers to the manner in which the student will demonstrate their knowledge and against which the student will be evaluated. Assessment accommodations can vary greatly. The three forms of differentiated instruction include content, process, and product. Assessment adaptations can be represented by any of those forms. For example, the content may be simpler (e.g., easier or fewer spelling words), the process may be adjusted (e.g., allowed to use a number line), or the product may change format (e.g., demonstrate knowledge through tests with short, written answers rather than essays written in full sentences).

Marilyn's driver education teacher, Mr. Brewster, uses multiple-choice tests to assess basic driving knowledge. He uses assessment sheets where students have to fill in the bubble corresponding to their

answer. Marilyn has difficulty tracking and aligning the bubbles to fill in her answers. So, she writes the letter corresponding to her answer on a piece of paper instead of using the bubble sheets.

Rules. All classrooms need rules. Rules that are stated by the teacher and posted in the classroom are explicit rules. As described in Chapter 3, these rules should be observable, measurable, positive, stated in positive terms, and so forth. Consequences for keeping or breaking rules should also be well defined, understood, and delivered consistently.

In addition to explicit rules, implicit rules also exist in classrooms. Implicit rules are those that are unexpressed. For example, a teacher may not have explicit rules about submitting homework assignments or arriving to class on time, yet she may be a very punctual person with the same expectations for her students. She consciously or subconsciously punishes students who are late. Another teacher may be more laid back when it comes to punctuality and willing to allow students more leeway. Students with disabilities are less likely to discern these distinctions between teachers and act accordingly. Therefore, teachers must become conscious of implicit rules operating in their classrooms, particularly the implicit rules that impact students with special needs and make them explicit for students.

Adaptations for rules may involve explicit and/or implicit rules. One good strategy for rule accommodation is the use of contingency contracts (see Chapter 3). A set of rules may apply to all students in the classroom with the exception of the student who has a contingency contract with appropriate adjustments in those rules. These differences in expectation need to be explained to the other students in the classroom.

Abdul has high-functioning autism and doesn't understand implicit rules. Mrs. Coombs, his special education teacher, has worked with all of his eighth-grade teachers and helped them identify the implicit rules for their classroom and consequences for keeping and breaking the rules. A list of the

rules for each teacher is listed in Abdul's notebook. He has learned to refer to the list each time he enters a different teacher's classroom and check off the rules he followed at the end of the class period which the teacher signs. Mrs. Coombs administers the consequences.

Curriculum. Curriculum refers to the content being taught, but may also include state- or districtwide standards students are expected to achieve and goals and objectives identified on student IEPs. Teachers should identify content critical to achieving goals and objectives and eliminate unnecessary content from their curriculum. Once teachers have selected essential content, teachers should select curriculum materials designed to maximize student learning. The overall curriculum design should incorporate effective teaching practices such as assessing student performance, presenting information in a logical and sequential manner, teaching at an instructional level, providing a model, monitoring progress, and incorporating systematic reviews.

In addition, teachers can identify skills necessary for success with a specific subject and include skill instruction in the curriculum. For example, in high school English classes, writing skills are necessary for classroom success. Instruction on how to write a basic paragraph can be included in the curriculum, as well as instruction on how to plan and write literary response papers.

Teachers can also plan to incorporate learning strategies in the year's curriculum. Strategy instruction teaches students how to complete a task, and facilitates learning. In science and social studies classes, students must learn new vocabulary and concepts. Mnemonic strategy instruction teaches students how to remember terms by connecting new information with known information. The benefit of strategy instruction is that students learn new information, and learn how to improve their ability to learn.

Fifth-grader Suri has difficulty understanding all of the concepts from Mr. Wilkinson's science lessons. So Mr. Wilkinson identified in advance the "big ideas" of his lesson that she will be responsible to learn.

He provides her a simplified version of the reading materials and makes certain she is involved in all of the small group projects at the level in which she can participate.

Instruction. Instructional needs of students with disabilities vary. Formal and informal assessment information can help teachers determine the best instructional adaptations for their students. Teachers should identify weaknesses that may hinder learning, and adapt instruction accordingly. The possible types of instructional adaptations are unlimited, but include categories such as the manner in which instruction occurs (e.g., cooperative learning groups vs. directed instruction), the modality of instruction (e.g., visual, auditory), and the amount of time or support provided to the student. For example, students with attention deficits focus attention better when instruction is fast paced and interactive, while incorporating visual prompts and varied audiovisual materials in instruction benefits students with auditory processing problems. Students who process information slowly may require more teacher time and attention than other students. After adapting instruction to meet the needs of students with disabilities, the teacher must constantly monitor student progress to verify that the instructional accommodations implemented are appropriate and effective.

Mrs. Haller has three students with HID in her sixth-grade classroom who learn best when they have one-on-one attention and instruction. Rather than singling them out, she decides that for 20 minutes a day, all of the students in her class will engage in

either peer tutoring or enrichment activities. Performance on daily quizzes determines who will receive which activity. She ensures that the students with disabilities are given an opportunity to participate in enrichment activities as well.

Environment. The learning environment includes the physical outlay of the classroom, the number and grouping of students, and other physical environmental elements such as temperature, time of day, light, and noise. When examining their classrooms, teachers should consider accessibility to materials, equipment, and other people, as well as reduced distraction areas. Modifications may include seating arrangements, flexible scheduling, and instructional grouping.

Cameron has difficulty staying on task during seatwork. His teacher noticed that he spends a lot of time staring out the

window. So she moved him to a desk where he can't see the window and now he is more focused.

Table 7.4 shows the similarities between differentiated instruction and adaptations. Included are the three differentiated classroom categories suggested by Tomlinson (2001), the six categories of the MARCIE model (Prater, 2003), and nine types of accommodation methods recommended by Sandi Cole et al. (2000). *Time* is listed twice because

TABLE 7.4 Differentiated Instruction and Making Adaptations

| Differentiated Instruction (Tomlinson, 2014) | MARCIE Model (Prater, 2003) | Accommodations (Cole et al., 2000) | Examples |
|--|-----------------------------|---|--|
| Content | Curriculum Materials | Size —Amount of content the learner is expected to learn | Reduce the number of vocabulary or spelling words to be learned at one time. |
| | | Difficulty —The difficulty level of a skill or activity | Allow student to use a calculator. Simplifying directions |
| | | Alternate Goals —Adapting the goals or outcome expectations for the student while using the same materials | Adapt the goal of matching states and capitals to recognizing state names. |

(Continued)

TABLE 7.4 (Continued)

| Differentiated Instruction (Tomlinson, 2014) | MARCIE Model (Prater, 2003) | Accommodations (Cole et al., 2000) | Examples |
|--|------------------------------|---|--|
| | | Substitute Curriculum —Using different instruction and materials to meet the student's goal | Provide lower vocabulary reading materials. |
| Process | Instruction Materials | <p>Input—The manner in which instruction is delivered</p> <p>Level of Support—The amount of assistance the student receives</p> <p>Time—The amount of time allowed to complete learning</p> <p>Participation—The extent to which the learner is actively involved in the task</p> | <p>Use visual or auditory prompts.</p> <p>Involve student in project.</p> <p>Provide additional structure to the lesson.</p> <p>Use personal assistance such as a peer tutor or paraeducator.</p> <p>Provide additional materials such as manipulatives, visual aids, audio-recorded books.</p> <p>Decrease the pace of instruction.</p> <p>Assign different roles in cooperative learning groups.</p> |
| Product | Assessment | <p>Time—The amount of time allowed to complete assignments or testing</p> <p>Output—The manner in which the student demonstrates knowledge and skills</p> | <p>Increase the amount of time for completing an exam.</p> <p>Use weekly quizzes instead of end-of-unit exams.</p> |
| | Rules | | <p>Make implicit rules explicit.</p> <p>Use contingency contracts.</p> |
| | Environment | | <p>Provide study carrels.</p> <p>Change time of day instruction is provided.</p> |

it fits under both process and product categories. Definitions of the Cole et al. model are provided in the table because they are not described elsewhere in the text.

Mary Anne Prater (2003) provides a framework in which the MARCIE (formally CRIME) model can be used by general and special educators collaborating to meet the needs of students with disabilities in the general classroom. This framework is also an acronym which spells SHE WILL SUCCEED and is presented in Figure 7.2.

FIGURE 7.2 The SHE WILL SUCCEED Process

The SHE WILL SUCCEED Process

Increased number of students with disabilities and those identified as at risk for school failure are being educated in the general education classroom. This necessitates that general and special educators work collaboratively to ensure that the education each student receives is appropriate (see Chapter 2). Below is a 14-step process to assist teachers in making these accommodations to instruction, curriculum, and the learning environment based on individual student's needs.

S Show concern for the targeted student. When teachers are genuinely concerned about students and communicate those concerns, students begin to believe in themselves. Show appropriate and genuine concern.

H Have faith in yourself and your targeted student. Students who have a history of school failure often expect to fail and become dependent on others to solve their problems. Help the student connect skills and effort to success and failure. Let the student know that you believe she or he can succeed.

E Examine your classroom. Using the MARCIE elements discussed in the text, write down statements relating to each category as it relates to your classroom.

| MARCIE | My Classroom |
|-------------|--------------|
| Materials | |
| Assessment | |
| Rules | |
| Curriculum | |
| Instruction | |
| Environment | |

W Write down the targeted student's strengths and limitations AND

I Include skills, learning preferences, and behaviors specific to your classroom. Identify the student's strengths and limitations in context of your classroom using the three categories of skills, learning preferences, and behaviors.

| Categories | Strengths | Limitations |
|----------------------|-----------|-------------|
| Skills | | |
| Learning Preferences | | |
| Behaviors | | |

(Continued)

FIGURE 7.2 (Continued)

L Line up student and classroom characteristics as those that facilitate, provide barriers, or are neutral for the individual student's learning success. Create a matrix using the description of your classroom elements (MARCIE) down the first column and the categories of facilitators, neutral, or barriers to learning across the first row. Fill in the cells with examples of student's strengths and weaknesses where they best fit.

| | Facilitators | Neutral | Barriers |
|-------------|--------------|---------|----------|
| Materials | | | |
| Assessment | | | |
| Rules | | | |
| Curriculum | | | |
| Instruction | | | |
| Environment | | | |

L List one to three classroom characteristics you could modify and/or skills you could teach. Once you have identified the student's characteristics as facilitators, barriers, or neutral based on your classroom elements, identify classroom characteristics that you would be willing to modify to accommodate the student.

S Select and implement adaptation(s) and goal(s). Once potential adaptations and/or goals have been selected, you are ready to begin implementation.

U Use effective teaching principles to teach goals. If you are going to teach a new skill, be certain to use effective teaching principles (see Chapter 6).

C Collaborate with others as needed. Seek out others, such as a special education teacher or the student's family members, to assist you with making appropriate accommodations (see Chapter 2).

C Change adaptations and instruction as necessary AND

E Evaluate results. Teachers don't always "get it right" the first time. Thus, change may be necessary. Continuously evaluate whether the accommodations were successful, and if not, make appropriate adjustments (see Chapter 5).

E Exit here OR

D Do again. If the accommodations were successful, then more changes may not be necessary. If the student is, however, still struggling, repeat the process focusing on the same barrier for learning or selecting a different barrier, depending on the student's needs.

Source: Prater, M. A. (2003). She will succeed! Strategies for success in inclusive classrooms. *TEACHING Exceptional Children*, 35(5), 58-64.

Lesson Plan Spotlight #7.1

An Example Lesson Plan With Accommodations

Lesson Objective

Following instruction, students will write one paragraph with no convention errors (e.g., spelling, punctuation), describing five possible causes of dinosaur extinction and accurately identify which one has the most scientific support.

Materials

Paragraph graphic organizer for each group, computer, and projector

Anticipatory Set, Review, and Prerequisite Check

Ask who remembers what you've been studying in science and what you've learned thus far. Teach any vocabulary students do not know: *extinction*, *volcanic eruptions*, *meteor*, *supernova*, *radiation*, and *climate*. Include a brief review of how to write a paragraph using the paragraph graphic organizer.

Purpose

Explain that students will work in their cooperative learning groups to read about the five possible causes of dinosaur extinction. They will then discuss the five possible causes and decide which one has the most scientific support. Students will be individually responsible for writing a paragraph describing these causes. Explain that this information will help prepare them for the field trip to the dinosaur museum next week and that they might even create some additional questions to ask while they're at the museum.

Instruction and Modeling

Model reading one paragraph in the textbook. Ask the following questions and write the answers on the blackboard:

1. "What possible cause for the dinosaur extinction is presented?"
2. "What are some words I would use to describe this possible cause?"
3. "How strong is the scientific support?"
4. "Using the information on the board, what sentence can I write about this possible cause?"
5. "Now that I've written sentences about a possible cause, I will use the paragraph graphic organizer to organize the sentences into a paragraph." (Write the example paragraph on the computer.)

Guided Practice

Remind students to use their assigned roles as they work in their cooperative groups. Ask them to read the next paragraph and answer the same questions you answered. Start with the first question. Prompt them to find the answer. Ask the groups to share their answers. Provide corrective feedback as needed and prompt the groups to continue to respond to the questions and then write their sentence. Monitor the groups and provide corrective feedback as necessary.

(Continued)

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Independent Practice

Explain that now they have their individual sentences, they need to write them up as a paragraph. Give each group the paragraph graphic organizer. Students independently write their own paragraphs.

Specific Accommodations

Materials

Provide Harold and Gerry a copy of the vocabulary words with definitions.

Instruction

Assign Judy and Quentin to roles other than reading in their cooperative learning groups.

Assessment

Assign Harold and Gerry to work together in writing their individual paragraphs.

As one writes each sentence, the other provides corrective feedback.

Allow Judy to compose her paragraph on the class computer and use spell-check.

Assign Quentin to draw pictures representing each possible extinction cause and then orally describe his answer.

Resource Information

Five possible causes of dinosaur extinction:

1. Giant meteor hits the earth—has the most scientific support
2. Volcanic eruptions
3. Changes in climate
4. Radiation from a nearby supernova
5. Disease

Other Adaptations

Some teachers rely heavily on students accessing information through textbooks. This is prominent primarily at the secondary school level. Students with HID are often excluded from the general classroom, not because they are unable to understand the concepts, but because they cannot adequately read the textbook and/or the assessment tools aren't designed to adequately measure what they know and can do. Grading is also a particularly difficult issue for teachers working with students with disabilities. A discussion with suggestions related to making textbook, assessment, and grading adaptations follows.

Textbook adoption, instruction, and adaptations. Students vary in their reading ability. As students progress in school, instruction shifts from mastering reading skills to mastering content presented in textbooks (Boyle et al., 2003). When teachers rely heavily on textbook materials, students with poor reading skills have difficulty demonstrating their knowledge of content.

The first strategy to assist students with HID to succeed is to select an appropriate textbook. Sometimes policy requires that teachers use a particular textbook. But if teachers are serving on a selection committee or have individual choice in the matter, care should be taken to ensure the textbook meets appropriate standards and can be adapted for students with disabilities.

Before adopting textbooks, professionals should evaluate them carefully in terms of content, familiarity, interest, and text structures. Readers who have prior knowledge

about the content they are reading will comprehend the text better than readers who do not. This familiarity includes both vocabulary and content. How interesting the reader finds the material also impacts comprehension. Specific features such as fast action, concrete details, personal pronouns, analogies, examples, sidebars, and novelty can increase reader's interest levels. This interest, however, must be integral to the text, not an interest-creating feature that is only trivial detail. Text structure also impacts comprehension. The text structure needs to follow a predictable pattern and the structure must be communicated explicitly to the reader. The inclusion of effective strategies within the text structure, such as graphic organizers, also facilitates comprehension. Organizational aids, such as preview statements, outlines, and graphic organizers, aid student learning and are also important considerations in selecting textbooks for diverse learners (Bruhn & Hasselbring, 2013) (see Table 7.5).

Design elements of textbooks can influence students' understanding of content. One study discovered that students with learning disabilities improved their history content acquisition and engagement when using a textbook that used "big ideas" designed primarily around cause/effect, problem-solving, cooperative, and group-success structures. These curricular design principles significantly improved student performance when compared to those using a traditional textbook (Harniss, Caros, & Gersten, 2007).

Given that teachers, particularly in secondary schools, rely heavily on textbooks, they need to know how to use them effectively as well as how to teach students to use them effectively. Teachers often assume students are fluent in using textbooks, but most, even those without disabilities benefit from explicit instruction in this area. Such instruction should first introduce the textbook and then prepare students to read the textbook. Students who use textbooks effectively understand the book's features. Each textbook will vary in what features are included, but standard ones include the table of contents, headings and subheadings, figures and graphs, chapter introductions and summaries, glossary, and index. Other features may include use of color or bold to highlight specific information, sidebar boxes, appendices, learning objectives, review questions, and so forth. After students are initially taught to access the text's features, reviews and reminders need to be provided throughout the year.

Students can be taught to *steal* information from the text by using the THIEVES strategy for previewing texts:

Title
Headings
Introduction
Every
Visuals and **V**ocabulary
End-of-chapter questions
Summary (Manz, 2002)

Students first examine the **T**itle of a chapter then the **H**eadings. Students then string headings together to create a summary of the chapter prior to reading the chapter.

The next step is to read the **I**ntroduction to determine the framework of the chapter. Then they read **E**very first sentence in important paragraphs. Next, students look for the **V**isuals and **V**ocabulary. Translating pictures and illustrations into words and understanding key vocabulary enables students to comprehend the material prior to reading. Finally, they examine the **E**nd-of-chapter questions and **S**ummary (Manz, 2002).

TABLE 7.5 Checklist for Textbook Adoption

| | |
|-----------------------|---|
| Content | <ul style="list-style-type: none"> • Is the content aligned with state/district standards? • Is the content accurate and up to date? • Does the book include a clear sense of purpose with a scope and sequence of material in a logical fashion? • Do the materials focus on the big ideas? • Does the content connect to real-life experiences that students can understand and apply? • Does the book embed accurate and nonstereotypical multicultural representations (e.g., disability, gender, religion, ethnicity)? • Are cultural representations (e.g., disability, ethnicity) accurate and nonstereotypic? • Does the content help conceptualization by relating it to the real world? • Does the text develop ideas fully so as to promote student understanding? • Is the text material written in clear and concise language? |
| Familiarity | <ul style="list-style-type: none"> • How familiar are the students with the content already? • How much prior knowledge is needed to understand the content? • How complex and how many new vocabulary words are included? |
| Interest | <ul style="list-style-type: none"> • How engaging is the material? • Are concrete and detailed examples provided? • How novel is the content? • Is the content developmentally appropriate? |
| Text Structure | <ul style="list-style-type: none"> • Is the text structure logical and consistent? • Is the content previewed and summarized? • How many and how effective are the strategies included (e.g., graphic organizers, highlighted information, concept maps, tools for studying)? • How conspicuous are the strategies included? • Do the materials provide mediated scaffolding? • Is judicious review included? • Are supplemental materials provided (e.g., assessments, online resources, CDs)? |

Source: Adapted from Bruhn & Hasselbring (2013); Carter et al. (2009); Dyck & Pemberton (2002); King-Sears & Duke (2010).

TEACHER TIP #7.5

USING A TEXTBOOK SCAVENGER HUNT

Use a textbook scavenger hunt to teach students how to use their textbook. Create a series of questions about the structure and content of the book. A range of 10 to 20 questions should be asked with at least one question linking the students' personal experience to the textbook content (Conderman & Elf, 2007). Have students complete the hunt either individually or in pairs. The goal of the scavenger hunt is not to see who can complete it first, but for students to complete it accurately (Bruhn & Hasselbring, 2013). A sample of the types of questions follows:

- On what pages do the table of contents, the glossary, and the index start?

Norma Dyck and Jane Pemberton (2002) suggested a model for making text adaptations. First, teachers assess whether the student can read and comprehend the selected text. If the student has adequate skills to read and understand the text, adaptations are not necessary. However, if the student will have difficulty learning from the text, the teacher should select another text or provide supports that will enable the student to meet the goals and objectives of the class.

If a student can understand the text when the text is read to him or her, bypass reading is an option (Dyck & Pemberton, 2002). Bypass reading may involve (a) reading the text aloud to the class, (b) allowing a peer to read the text to a student, (c) providing audio versions of the text, or (d) implementing computer text-to-speech technology. Elizabeth Boyle et al. (2003) studied whether secondary students with high-incidence cognitive disabilities improved classroom performance when they listened to audio textbooks. They found that students who used the audio textbooks demonstrated greater improvement in classroom test scores than students who read the textbooks. They concluded that audio textbooks enabled students with mild cognitive disabilities to access high-level content material.

For students who can decode the text, but are not fluent readers, decreasing the amount of material the student is expected to read is an option. A teacher can identify critical portions of the text, and assign the student to read only the selected material. Additionally, the teacher can select an alternative text that covers the same content, but is less demanding for a student with poor reading ability. Textbook publishers often provide parallel textbooks, which may be an appropriate accommodation for some students.

Even with decreased reading demands, some students may fail to comprehend the text. Supported reading, organized reading, and guided reading are options teachers can

When would you choose to use one over another?

- Why are some words bolded in the text? How could this feature help you learn the material?
- How can the headings and subheadings be helpful to you?
- What are the definitions of *zoology*, *radiology*, and *anthropology*? What do these words have in common? Where did you find the definitions?
- Based on the graphic describing the food chain, describe it in your own words.

employ to facilitate comprehension (Dyck & Pemberton, 2002). Sometimes students can read a textbook, but fail to comprehend the material due to the vocabulary demands of the text. Supported reading includes adding definitions of key terms to the margins of a text, and adding cues and questions to help the student focus attention on relevant material. Questions can be written in the margins, or on sticky notes to encourage the student to stop, reflect, and respond to the reading material. These supports placed within the text can increase comprehension.

Another means of improving comprehension is using organized reading supports such as providing graphic organizers of material presented in reading selections or chapters (see Chapter 9) (Dyck & Pemberton, 2002). Visual illustrations can convey essential information in a concise simplified format, which is easier for students with disabilities to process. Hierarchical trees can illustrate main ideas and show how information in the text supports the main idea. Compare and contrast charts can help students perceive similarities and differences between concepts and ideas; and goal maps, which contain information on characters and relationships, can assist students in drawing conclusions and making inferences.

Finally, guided reading supports help students focus on important information in textbooks (Dyck & Pemberton, 2002). Study guides are used to preview material, organize and summarize information, and assist students as they work through the material. Previews are overviews of the reading material, and provide students with a summary of main ideas, key terms, and relevant background knowledge necessary for understanding the selection. Giving a student a blank graphic organizer to complete as he reads can assist the student in organizing the information while reading. Structured

TABLE 7.6 Possible Textbook Adaptations

| Student Characteristics | Possible Adaptations |
|---|--|
| Student cannot read the textbook but can understand the material when read to him or her. | <ul style="list-style-type: none"> • Teacher reads text to all students. • Peer reads text to student. • Student listens to audio recording of text. • Student listens to computer text-to-speech version. |
| Student can decode the textbook, but not fluently. | <ul style="list-style-type: none"> • Decrease the amount of reading expected. • Select an alternative text. |
| Student can decode, but has difficulty comprehending the material. | <ul style="list-style-type: none"> • Add definitions of key terms to margins. • Write cues and/or questions in the margins or with sticky notes throughout the text to help student focus on relevant material. • Provide graphic organizers. • Add visual illustrations. • Provide study guides or structured notes. |

notes (also discussed in Chapter 9) are used to show the student how to integrate the material from the text with the teacher's lectures.

Alternative texts. In addition to explicitly teaching students the features of their textbook, alternative texts may be considered. Examples of alternative texts include magazines (e.g., *Muse Magazine*, *Weekly Reader News*), newspapers, and trade books (e.g., *Landmark Books*). Alternative texts must be selected carefully ensuring that the content, readability, and interest are appropriate for the student and the curriculum standards. In fact, a team, including the special educator, a content area teacher, and a curriculum or literacy specialist should work together to select, plan, and implement alternate texts. Appropriate reading materials would be selected based on the text connecting to content curriculum. Readability level would also be examined to ensure it matches the students' reading level. When computing readability levels, care must be taken to include text samples throughout the book and to use more than one formula for comparison purposes because results may vary depending on the formula used (King-Sears & Duke, 2010). In addition, teachers should strive to access information about text difficulty levels beyond just readability formulas because readability formula results can vary greatly. For example, in one study researchers found the Dale-Chall formula to be the most reliable one but only for Grades 3–5 (Begeny & Greene, 2014).

Test accommodations. Tests administered to all students for the purpose of determining who graduates, who is promoted to a certain grade, or which school is the strongest in the district are referred to as *high-stakes tests*. In the past, students with disabilities have generally been excluded from participating in state- and districtwide high-stakes tests. That is no longer the case. As discussed in Chapter 1, IDEA mandates that students with disabilities be included in state and districtwide assessment programs. The IEP team has the authority to select individual accommodations needed for students with disabilities to participate in these tests. If the team determines that the student will not participate in a particular assessment or part of an assessment, they must state how the student will be assessed (Lovett & Lewandowski, 2015).

As described in Chapter 5, tests can be standardized or curriculum based. Issues related to making accommodations to standardized tests are complex because any change in procedures can influence the interpretation of test scores. On the other hand, without accommodations, students with disabilities may not demonstrate their full potential. For some individuals with disabilities, test scores underrepresent what they know and can do. The most common types of accommodations for standardized tests are providing extra time, having the test items read aloud, or allowing oral responses.

Grayson, a third grader with high-functioning autism, is required to take the statewide high-stakes exam. Part of his disability is high levels of distraction. The IEP team concluded that he would complete the exam in a separate room and allowed extra time

only if he becomes distracted and cannot complete the exam in the same amount of time as his peers. A paraeducator will keep an eye on Grayson and will intervene with routines already established if he becomes distracted and stops attending to the test.

Accommodations for classroom tests should also be determined as part of the IEP process. The goal is the same as with standardized testing, that is, providing accommodations to offset the student's disability. In the classroom, teachers use a variety of tests to assess student learning. The IEP team should determine which accommodation is appropriate based on the subject, the nature of the test, and the skill or knowledge being tested.

Accommodations are not intended to change the nature of the construct being measured; instead, they are meant to lessen the impact of the disability so that the test scores are as accurate as possible (Lai & Berkeley, 2012). Test accommodations refer to changes in the way the test is administered, while test modifications reflect changes in the content of the test (Lovett & Lewandowski, 2015).

Seventh-grader Levi has a learning disability and the IEP team anticipates he will have difficulty reading and writing responses to essay questions on his tests in the general education classes. A reader is assigned to

Levi and trained to only read the test, not interact with Levi in other ways. Levi is also allowed to use a speech-to-text function on the computer, rather than handwrite his answers to the essay questions.

Unfortunately, research has demonstrated that accommodation selection is not always based solely on the student's disability, but rather on factors such as the student's comfort level or self-esteem. When IEP teams determine appropriate test accommodations, they must evaluate the student's "inability to access a test because of disability-related functional impairments" (Lovett & Lewandowski, 2015, p. 15). For example, students who have impaired processing speed as diagnosed and demonstrated in classroom work, could be appropriately assigned extra time to complete tests. Extended time is one of the most commonly used test accommodations, but should be used cautiously and only if the student truly needs more time to compensate for his or her disability (Thurlow, Elliott, & Ysseldyke, 2003). Any accommodation should be documented and justified on the IEP and then provided for classroom and high-stakes tests. Table 7.7 lists examples of possible test accommodations.

When selecting test accommodations, IEP teams should follow these guidelines:

- Explicitly identify the knowledge and skills to be measured. Ensure that proposed accommodations do not interfere with the assessment of those skills. For example, if the intent of a writing test is to measure the expression of thought, a scribe would be appropriate. If, however, the intent is to measure handwriting, a scribe would not be appropriate. If the proposed accommodation alters the validity of the test, the adjustment would be a modification, not an accommodation.
- Make certain the accommodation is based on the specific need of the student, not the type of disabling condition or professional judgement alone. Gather data on student performance before making the decision.
- Ensure that the accommodation is necessary and does not provide an advantage to the student over his peers.

TABLE 7.7 Examples of Test Accommodations

| Type of Accommodation | Examples |
|--|---|
| Setting: Change the conditions of the testing situation. | <ul style="list-style-type: none"> • Small group • Study carrel • Adaptive furniture |
| Format: Change the format of the test. | <ul style="list-style-type: none"> • Print size • Braille • Number of items per page |
| Timing: Change the amount of time or when the test is administered. | <ul style="list-style-type: none"> • Extended time • Flexible schedule • Frequent breaks |
| Presentation: Alter how the test is presented. | <ul style="list-style-type: none"> • Read directions to student. • Provide audio recorded prompts. • Clarify directions. |
| Response: Adjust how the student responds to the test questions. | <ul style="list-style-type: none"> • Mark in a book. • Use a scribe. • Use pencil grips. |
| Scheduling: Schedule the test to accommodate the needs of the student. | <ul style="list-style-type: none"> • Specific time of day • Across multiple days • Schedule short testing segments. |

Sources: Carter et al. (2009); Thurlow et al. (2003).

- Consider whether the student could adapt or be taught skills that would enable him to take the test without accommodations.
- Choose accommodations that are the least intrusive. As an example, if a student cannot write responses, the use of a keyboard and word processor would be less intrusive than a scribe (Bolt & Thurlow, 2004; Lovett, 2010).

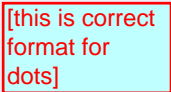
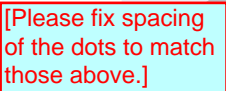
In addition to those guidelines, the checklist in Table 7.8 asks important questions to consider when making accommodation decisions.

The following guidelines should be applied by teachers and other school personnel as they prepare for and implement testing accommodations:

- Ensure that the instructional and assessment accommodations align. That is, prior to testing, students should have had opportunities to apply the accommodation during instruction.

- Train those who administer accommodations. Those who act as scribes or readers need prior preparation and instruction, such as making it clear that scribes write down verbatim responses.
- Anticipate and be prepared for challenges associated with accommodations. For example, if tests are reformatted with large print, the tests may cause items to be split across pages.
- Monitor the effects of accommodations on students. In some circumstances, accommodations can be detrimental to the student's performance. (Bolt & Thurlow, 2004)

TABLE 7.8 Checklist for Classroom Test Accommodations Decision-Making

| Questions | | Yes | No |
|---|--|-----|----|
| Can the student complete the same test . . .  | 1. At the same level as peers? | | |
| | 2. With altered or simpler directions? | | |
| | 3. With adapted expectations? | | |
| | 4. With a different delivery system? | | |
| | 5. With different time constraints? | | |
| | 6. With flexible scheduling? | | |
| | 7. With additional math learning tools? | | |
| | 8. With additional written language learning tools? | | |
| | 9. With additional memory tools? | | |
| | 10. If the language level is varied? | | |
| Can the student complete objective tests if . . . | 11. The multiple-choice items are adapted? | | |
| | 12. The matching items are adapted? | | |
| | 13. The true/false items are adapted? | | |
| | 14. The completion items are adapted? | | |
| Can the student ...  | 15. Respond to essay questions if adaptations are made? | | |
| | 16. Complete part or specific items of the same exam? | | |
| | 17. Respond appropriately with an example provided? | | |
| | 18. Be held to the same course content if the type of assessment is varied to suit the individual learner's style? | | |
| Does the student ... | 19. Demonstrate emotional reactions to test taking that need to be considered? | | |
| | 20. Need alternative assessment? | | |

Source: Adapted from Reetz, Ring, & Jacobs (1999).

Grading. Ideally, grades communicate information to students and their parents about a student's achievement, progress in the curriculum, and effort expended on learning (Carter et al., 2009). In practice, however, traditional grading practices may reflect a student's disability more than effort and advancement. Research indicates there are five common problems associated with grading students with disabilities. First, students included in general education classrooms generally receive low or failing grades. Students who constantly receive low grades can be demoralized. This is particularly true of students with disabilities who are included in general education classes and their work is being compared to those of their nondisabled peers. Second, grades serve different purposes for teachers, parents, and students. If effort and individual progress are used to grade students with disabilities this may communicate the wrong message to students and their parents who interpret grades as representations of knowledge and skills attained. Third, teachers feel pressured to give passing grades to students with disabilities because they recognize the work is difficult for students with disabilities. Fourth, the grading system may not be aligned with the adaptations that the student is receiving in the classroom. And fifth, students and parents typically have little to no input into how students will be assigned grades. For students with disabilities, selecting grade adaptations should be done collaboratively with general and special educators, parents, and, if appropriate, the student (Silva, Munk, & Bursuck, 2005).

Grading adaptations can be modifications or accommodations. Modifications are made when the learning objectives on which a student's grade is based are different than the student's peers. If the learning objectives are the same as other classmates, but how the student demonstrates achievement differs, then the grading adaptation is an accommodation.

Grades can be adapted in many ways including the following:

- **Adjust grade weights.** Teachers can adjust the percentage activities or products count toward a final grade. For example, the weight for performance on a written exam could be reduced from 50% to 25%, while individual assignments and projects increased from 50% to 75%.
- **Adapt grades to reflect progress on meeting IEP goals.** When teachers write IEPs, they can specify the curriculum the student will be expected to master, and then include an explanation that the student will be graded on mastery of the curriculum.
- **Modify the syllabi.** With a contract and a modified course syllabi, a student with disabilities can progress through course material at a rate appropriate for the student's skills and abilities.
- **Include improved performance in the grade calculation.** Teachers can track student performance, and award extra points for improvement in academic and self-management behaviors.
- **Add written comments.** To minimize confusion and misperception, teachers can write comments on report cards to clarify their grading criteria.

- **Grade products and performance.** In addition to a letter or number grade representing academic achievement, teachers can give students grades for effort and progress made during a term.
- **Assign pass/fail grades.** Although students with disabilities rated many grade adaptations as unfair, in one survey, low achievers felt a pass/fail grading system was less judgmental than number or letter grades. In order to implement a pass/fail grading system, the teacher would have to determine the criteria for passing the class and communicate the criteria to the student.
- **Use checklists.** Teachers can develop a competency checklist from the student's IEP goals and objectives and attach the checklist to the student's report card. Checklists can allow the student and the parents to see which skills the student mastered during a term: math facts, grammar, addition and subtraction procedures, map work, and so forth.
- **Prioritize content or learning objectives and calculate grade based on those priorities.** Students with disabilities can be evaluated according to the most important content for that student to learn. This may mean the student will not complete full units or not be held accountable for all assignments. (Carter et al., 2009)

TEACHER TIP #7.6

USE PRETESTS

In courses that lend themselves to written exams, instead of administering only post-tests, give the same test as a pretest before instruction begins. Then compare student

results on the pre- and the posttest to determine whether progress was made. Use this information to help determine grades earned (Gregory & Chapman, 2002).

Implications for Culturally and/or Linguistically Diverse Students

Response to Intervention

One may assume that culturally and/or linguistically diverse (CLD) learners would benefit from RTI as a method for identifying students with learning disabilities, as well as a method for determining interventions for all students. RTI does hold promise for

accurately identifying CLD students as having learning disabilities (Haager, 2007). An RTI approach eliminates the need for standardized tests which have traditionally shown bias against this population. Additionally, RTI doesn't require the CLD student to wait to fail before receiving individualized services based on the student's needs. At the same time, RTI is often implemented as a one-size-fits-all approach, which fails to consider the uniqueness of CLD students.

Care must be taken when making any RTI decisions for CLD learners. First, teachers cannot assume that the evidence-based practices selected for Tier 1 intervention have been validated with CLD students. Failure to progress in Tier 1 may be more a reflection of the inappropriate match of the intervention to the student, rather than the CLD student's ability. Second, the experience and knowledge base of the teachers should be considered. In order to provide highly effective instruction, teachers need strong groundings in culturally responsive instruction and second language acquisition. In addition, they must understand the values, beliefs, and practices of CLD students (Orosco & Klingner, 2010).

Socioeconomic status (SES) must also be considered. Students living in poverty may have untreated health problems or move frequently, which impacts their attendance and academic progress (Finch, 2012). In one study of over a million students, students who were receiving free and reduced lunch performed below similarly identified students on all measures of literacy regardless of being an English learner (EL) or having a learning disability (Solari, Petscher, & Folsom, 2014). Although these researchers did not study RTI per se, they documented the significant and critical role SES plays in achievement. School personnel who are aware of these difficulties may need to implement Tier 2 or Tier 3 more quickly with low-SES students than with other students.

Some research has documented that when implemented properly, RTI can be effective for ELs at risk for reading disabilities. Effective interventions have included peer-assisted learning strategies; small-group interventions in Spanish; and explicit, systematic, and intensive interventions in reading (Orosco & Klingner, 2010). Much, however, still needs to be learned about the effectiveness and implications of RTI for CLD students (Haager, 2007).

Supports in General Education

When it comes to providing supports in the general education classroom, students have personal learning preferences. Some students learn best when they are allowed to move around; others prefer to stay in one spot to concentrate. Some students like a "busy" environment, while others find such situations distracting. Some students prefer to learn by reading a passage on their own, while other students learn best when someone reads the passage to them. In addition to personal learning preferences, our cultural background affects how we learn. Culture can influence, for example, whether students

- view time as fixed/rigid or flexible/fluid.
- are more effusive or reserved.
- learn best through a whole-to-part or part-to-whole approach.

- prefer to work in groups or individually.
- value creativity or conformity.
- are more reflective or more impulsive. (Tomlinson, 2001)

Teachers cannot manipulate all personal learning and cultural preferences all of the time. They can, however, recognize that students have different learning approaches and try to incorporate these within the classroom. Effective teachers understand the range of learning and cultural approaches that exist in their classrooms and make the classroom flexible enough to meet these varied approaches to learning (Tomlinson, 2001). For example, they can create a classroom with different “looks” in different corners of the room. One corner may have desks and materials designed for independent work, while another corner has a round table and chairs with group-work materials. When appropriate, students can be given the choice of where they prefer to work.

Teachers in differentiated classrooms have been described as being “more in touch” with their students than other teachers (Tomlinson, 2014). Part of being “in touch” is understanding the cultural and linguistic backgrounds of their students. When determining appropriate accommodations, teachers should consider whether specific accommodations are compatible with a student’s cultural heritage and language skills.

For example, the written word is emphasized in Western cultures more than in cultures where oral-language traditions are valued (Chamberlain, 2005). Immigrant children or those who live in poverty may not have had the same exposure to books and other printed materials as their classmates, and therefore have not experienced learning from text materials. English learners (ELs) may have good English-speaking and oral-comprehension skills, but do not read English at the same level. Teachers can promote learning through strategies such as providing supplemental or replacement audiovisual materials, providing materials from which students can access information (e.g., magazines, library books), and teaching students how to preview books and make predictions (Carter et al., 2009).

Students who are not English proficient will need additional supports in aspects of instruction that rely on language (i.e., listening, speaking, reading, and writing). Two general adaptations can be provided. First, ELs benefit from more time spent in oral expression. They may need more opportunities to discuss ideas and explore new concepts than teacher-directed instruction provides. Integrating interactive questions and discussion in small groups or pairs will help build language skills. Second, ELs need to be taught academic language. Academic language differs in structure and vocabulary from everyday spoken language. Academic language is used in formal reading materials like textbooks, as well as on formal tests. Classroom teachers also use academic language orally during instruction. Understanding academic language is critical to success in formal educational settings.

The main barrier to understanding academic language is poor academic vocabulary. Academic vocabulary is both generic and content specific. Many academic words are used across disciplines (e.g., *estimate*, *evaluate*, *analyze*, *summarize*). Other words pertain to specific disciplines (e.g., *angle*, *ratio*, *rectangle* for math; *syntax*, *semantics*, *expository* for English). Strategies suggested for strengthening academic language include building students’ background knowledge; connecting instruction to prior knowledge

and real-life experiences; using texts that are engaging, age appropriate, and comprehensible; explicitly teaching about academic language; and providing opportunities to practice academic language through speaking and writing (Fitts & Bowers, 2013).

Virtually all of the differentiated and adapted strategies presented in this chapter apply to CLD students. The keys are to ensure the culture of the student is considered in making those instructional adaptations and that students who are ELs are provided additional language support. Suggested adaptations for ELs are outlined in Table 7.9.

TABLE 7.9 Suggested Adaptations for English Language Learners

| Type | Adaptation |
|-------------------------|---|
| Instructional Support | <ul style="list-style-type: none"> • Provide peer tutoring or tutoring before or after school. • Require less quantity in assignments. • Allow extra time. • Pair with a bilingual student. • Use paraeducators to help one on one, when appropriate. • Avoid calling on student in front of others. • Use technology such as text-to-speech software. |
| Information Difficulty | <ul style="list-style-type: none"> • Use visual aids to reinforce concepts being taught. • Label items in the classroom in the student's native language. • Display classroom rules and other important information in multiple languages. • Provide students a vocabulary list of important concepts in the student's native language. • Allow students to draw pictures instead of writing to demonstrate learning. • Allow student to research in the student's native language. |
| Delivery of Instruction | <ul style="list-style-type: none"> • Preteach and reteach concepts. • Break complex sentences into shorter, simpler ones. • Avoid using or explain idiomatic expressions (e.g., <i>as easy as pie</i>, <i>keep an eye on</i>, <i>pop quiz</i>, <i>pulling your leg</i>, <i>make up your mind</i>). • Pause during instruction to give time to process what was heard. • Use simple, everyday language to explain key words. • Request oral responses rather than written responses. • Provide translated materials. • Include student in presentations to encourage and develop oral language skills. • Encourage reluctant talkers by repeating student's response with <i>and</i>. • Focus on content and meaning, not grammar and spelling in written work. • Modify writing assignments. |

Source: Adapted from Carter et al. (2009); Solomon, Lalas, and Franklin (2006).

SUMMARY

Students with HID receive instruction in the general classroom to a greater degree than in the past. Multitiered systems of support (MTSS), universal design for learning, differentiated instruction, and adaptations help facilitate student success in the general classroom. MTSS is an umbrella term that describes an implementation framework to ensure all students are provided high-quality instruction and the necessary supports when they are not succeeding. Positive behavior interventions and supports (PBIS) and response to intervention (RTI) are structures under MTSS. PBIS emphasizes social and behavior supports, while RTI centers on academic supports. One of the first promotions of RTI was as an alternative method for identifying students with learning disabilities. In addition, this framework is used to ensure all students receive high-quality instruction and necessary supports to succeed academically.

Universal design for learning provides built-in alternatives within the instructional design of materials to enhance the compatibility of the materials for all learners. The goal is to make the curricular content accessible to literally all students in the classroom. Sometimes, however, that isn't possible and teachers need to provide differentiated instruction. Differentiated instruction occurs when teachers match the student's readiness, interest, and learning needs with the content, process, and product associated with instruction. Typically, general educators are taught to apply differentiated instruction for all students, whereas the concept of adapting curriculum and instruction for students with disabilities stems from the field of special education. These adaptations are determined on an individual basis through the IEP process and include both modifications and accommodations. Modifications refer to changes in the curriculum or standard, whereas accommodations are adaptations that make the general curriculum and assessment accessible to the student without changing the standard or curriculum. Areas

of consideration for adaptation include materials, assessment, rules, curriculum, instruction, and environment.

Special consideration should be given to textbook adoption, instruction, and adaptations. For example, the readability and features (e.g., highlighted terms, graphic organizers) of a textbook impact student comprehension of the content. Most students benefit from being explicitly taught the features and how to use the textbook. Teachers should use other textbook supports, such as reading or study guides, when needed to help students focus on important information in the textbook. Alternative texts, if available, can also be considered.

Test accommodations may be needed by some students with HID. The most common types of accommodations for standardized tests are providing extra time, having the test items read aloud, or allowing oral responses. Accommodations for tests should be determined as part of the IEP process and based solely on the student's disability. Adaptations for grading may also need to be made. Grading adaptations may include a modification—changing the learning objectives on which a student's grade is based or an accommodation—the learning objective remains the same but how the student demonstrates achievement changes.

All forms of RTI, UDL, differentiation, and adaptations must consider the wide diversity of culture, language, and experience that students bring to the classroom. An RTI approach to LD identification eliminates the need for standardized tests which have traditionally shown bias against this population. Teachers should consider the cultural practices and language skills of students when applying the principles of these general education supports to ensure compatibility with students' culture and language.

REVIEW QUESTIONS

1. Define, provide examples, and then compare and contrast RTI and PBIS.
2. Describe the components of RTI and why they are critical elements to successful implementation.
3. Define UDL and UDL principles. Provide an example for each. Which principles do you think are most realistic?
4. Define *differentiated instruction* including the three categories for differentiating instruction. Provide examples for each.
5. When would teachers use modifications versus accommodations? Provide examples for each using the MARCIE acronym.
6. Compare and contrast UDL, differentiated instruction, and adaptations. Use examples for each in your response.
7. In what ways could comprehending information in grade-level textbooks be challenging for students with HID? Describe how teachers can help.
8. How can teachers determine which testing accommodations are appropriate and which may invalidate the results of particular tests?
9. Why should teachers consider adapting grading practices for students with disabilities? What adaptations are possible? Which do you believe are the fairest?
10. What factors should teachers consider in using RTI and making adaptations for CLD students?

ACTIVITIES

1. Access the following journal issue: Ludlow, B. L. (Ed.). (2014). Data-based individualization [Special issue]. *Teaching Exceptional Children*, 46(4). Select three articles, read and summarize in writing. Embed information from this chapter throughout the summary.
2. Identify a special educator and a general educator who teach at the same school and educate the same student with a HID. Walk them through the MARCIE model ending with the identification of appropriate accommodations for the student. Write up a summary of your experience.
3. Suppose you are teaching a fourth-grade math class that includes two students with disabilities. These students process information slower than other students and have difficulty understanding directions. Write a paper describing accommodations you can provide that will enable these students to access the math curriculum. Explain your reasons for selecting specific accommodations.
4. Based on this chapter and other reliable sources, generate a list of questions to help teachers select adaptations for students from culturally and/or linguistically diverse backgrounds.

Council for Exceptional Children (CEC) Standards

The Council for Exceptional Children (CEC) is a premiere national professional organization comprised of special educators, paraeducators, relative service personnel, parents, and others interested in individuals with disabilities and/or those with gifts and talents. This organization has generated 10 standards for the preparation of special educators. These standards are listed in each chapter as they relate to the content within the chapter. The standards that apply to Chapter 7 are Standards #2, #3, #4, and #5.

CEC Initial Preparation Standard #2: Learning Environments (partial)

Beginning special education professionals create safe, inclusive, culturally responsive learning environments so that individuals with exceptionalities become active and effective learners and develop emotional well-being, positive social interactions, and self-determination.

- 2.1 Beginning special education professionals through collaboration with general educators and other colleagues create safe, inclusive, culturally responsive learning environments to engage individuals with exceptionalities in meaningful learning activities and social interactions.

CEC Initial Preparation Standard #3: Curricular Content Knowledge (partial)

Beginning special education professionals use knowledge of general and specialized curricula to individualize learning for individuals with exceptionalities.

- 3.3 Beginning special education professionals modify general and specialized curricula to make them accessible to individuals with exceptionalities.

CEC Initial Preparation Standard #4: Assessment (partial)

Beginning special education professionals use multiple methods of assessment and data sources in making educational decisions.

- 4.2 Beginning special education professionals use knowledge of measurement principles and practices to interpret assessment results and guide educational decisions for individuals with exceptionalities.

CEC Initial Preparation Standard #5: Instructional Planning and Strategies (partial)

Beginning special education professionals select, adapt, and use a repertoire of evidence-based instructional strategies to advance learning of individuals with exceptionalities.

- 5.1 Beginning special education professionals consider an individual's abilities, interests, learning environments, and cultural and linguistic factors in the selection, development, and adaptation of learning experiences for individuals with exceptionalities.

REFERENCES

- Algozzine, B., Wang, C., & Violette, A. S. (2011). Reexamining the relationship between academic achievement and social behavior. *Journal of Positive Behavior Interventions, 13*, 3–16.
- Al Otaiba, S., Connor, C. M., Folsom, J. S., Wanzek, J., Greulich, L., Schatschneider, C., & Wagner, R. K. (2014).

To wait in tier 1 or intervene immediately: A randomized experiment examining first-grade response to intervention in reading. *Exceptional Children, 81*(1), 11–27.

Averill, O. H., Baker, D., & Rinaldi, C. (2014). A blueprint for effectively using RTI intervention block time. *Intervention in School and Clinic, 50*(1), 29–38.

- Begeny, J. C., & Greene, D. J. (2014). Can readability formulas be used to successfully gauge difficulty of reading materials? *Psychology in the Schools, 51*(2), 198–215.
- Benner, G. J., Beaudoin, K., Kinder, D., & Mooney, P. (2005). The relationship between the beginning reading skills and social adjustment of a general sample of elementary aged children. *Education and Treatment of Children, 28*, 250–264.
- Benner, G. J., Kutash, K., Nelson, J. R., & Fisher, M. B. (2013). Closing the achievement gap of youth with emotional and behavioral disorders through multi-tiered systems of support. *Education and Treatment of Children, 36*(3), 15–29.
- Blazer, B. (1999). Developing 504 classroom accommodation plans: A collaborative, systematic parent-student-teacher approach. *TEACHING Exceptional Children, 32*(2), 28–33.
- Bolt, S. E., & Thurlow, M. L. (2004). Five of the most frequently allowed testing accommodations in state policy. *Remedial and Special Education, 25*, 141–152.
- Boyle, E. A., Rosenberg, M. S., Connelly, V. J., Washburn, S. G., Brinckerhoff, L. C., & Banerjee, M. (2003). Effects of audio texts on the acquisition of secondary-level content by students with mild disabilities. *Learning Disability Quarterly, 26*, 203–214.
- Bruhn, A. L., & Hasselbring, T. S. (2013). Increasing student access to content area textbooks. *Intervention in School and Clinic, 49*(1), 30–38.
- Carter, N., Prater, M. A., & Dyches, T. T. (2009). *Making accommodations and adaptations for students with mild to moderate disabilities*. Upper Saddle River, NJ: Pearson.
- CAST. (2011). *Universal design for learning guidelines version 2.0*. Wakefield, MA: Author. Retrieved from <http://www.cast.org/our-work/learning-tools.html#VY8s0Ua2VFY>
- Chamberlain, S. P. (2005). Recognizing and responding to cultural differences in the education of culturally and linguistically diverse learners. *Intervention in School and Clinic, 40*, 195–211.
- Cole, S., Horvath, B., Chapman, C., Deschenes, C., Ebeling, D. G., & Sprague, J. (2000). *Adapting curriculum and instruction in inclusive classrooms: A teacher's desk reference*. Bloomington, IN: The Center for School and Community Integration Institution for the Study of Developmental Disabilities.
- Conderman, G., & Elf, N. (2007). What's in this book? Engaging students through a textbook exploration activity. *Reading & Writing Quarterly, 23*, 111–116.
- Coyne, M. D., Carmine, D. W., & Kame'enui, E. J. (2011). *Effective teaching strategies that accommodate diverse learners* (4th ed.). Upper Saddle River, NJ: Pearson.
- Dyck, N., & Pemberton, J. B. (2002). A model for making decisions about text adaptations. *Intervention in School and Clinic, 38*, 28–35.
- Faggella-Luby, M., & Wardwell, M. (2011). RTI in a middle school: Findings and practical implications of a tier 2 reading comprehension study. *Learning Disability Quarterly, 34*(1), 35–49.
- Finch, M. E. H. (2012). Special considerations with response to intervention and instruction for students with diverse backgrounds. *Psychology in the Schools, 49*(3), 285–296.
- Fisher, D., & Frey, N. (2011). Implementing RTI in a high school: A case study. *Journal of Learning Disabilities, 46*, 99–114.
- Fitts, S., & Bowers, E. (2013). Developing academic English with English language learners. In M. B. Arias & C. J. Faltis (Eds.), *Research in second language learning: Academic language in second language learning* (pp. 27–56). Charlotte, NC: Information Age.
- Gregory, G. H., & Chapman, C. (2002). *Differentiated instructional strategies: One size doesn't fit all*. Thousand Oaks, CA: Corwin.
- Haager, D. (2007). Promises and cautions regarding using response to intervention with English language learners. *Learning Disabilities Quarterly, 30*, 213–218.

- Hale, J., Alfonso, V., Berninger, B., Bracken, C., Christo, E., Clark, M., . . . & Yalof, J. (2010). Critical issues in response-to-intervention, comprehensive evaluation, and specific learning disabilities identification and intervention: An expert white paper consensus. *Learning Disability Quarterly, 33*, 223–236.
- Harlacher, J. E., Potter, J. B., & Weber, J. M. (2015). A team-based approach to improving core instructional reading practices within response to intervention. *Intervention in School and Clinic, 50*, 210–220.
- Harniss, M. K., Caros, J., & Gersten, R. (2007). Impact of the design of U.S. history textbooks on content acquisition and academic engagement of special education students: An experimental investigation. *Journal of Learning Disabilities, 40*(2), 100–110.
- Jenkins, J. R., Schiller, E., Blackorby, J., Thayer, S. K., & Tilly, W. D. (2013). Responsiveness to intervention in reading: Architecture and practices. *Learning Disability Quarterly, 36*(1), 36–46.
- Kennedy, M. K., Thomas, C. N., Meyer, J. P., Alves, K. A., & Lloyd, J. L. (2014). Using evidence-based multimedia to improve vocabulary performance of adolescents with LD: A UDL approach. *Learning Disability Quarterly, 37*, 71–86.
- King-Sears, M. E., & Duke, J. M. (2010). “Bring your textbook!” Using secondary texts to assess reading demands and skills required for students with high-incidence disabilities. *Intervention in School and Clinic, 45*(5), 284–293.
- King-Sears, M. E., Johnson, T. M., Berkeley, S., Weiss, M. P., Peters-Burton, E. E., Eymenova, A. S., . . . , & Hursh, J. C. (2015). An exploratory study of universal design for teaching chemistry to students with and without disabilities. *Learning Disability Quarterly, 38*(2), 84–96.
- King Thorius, K. A., Maxcy, B. D., Macey, E., & Cox, A. (2014). A critical practice analysis of response to intervention appropriation in an urban school. *Remedial and Special Education, 35*, 287–299.
- Kovaleski, J. F., & Black, L. (2010). Multi-tier service delivery. In T. A. Glover & S. Vaughn (Eds.), *The Promise of Response to Intervention* (pp. 23–56). New York, NY: Guilford Press.
- Lai, S. A., & Berkeley, S. (2012). High-stakes test accommodations: Research and practice. *Learning Disability Quarterly, 35*(3), 158–169.
- Lovett, B. J. (2010). Extended time testing accommodations for students with disabilities: Answers to five fundamental questions. *Review of Educational Research, 80*(4), 611–638.
- Lovett, B. J., & Lewandowski, L. J. (2015). *Testing accommodations for students with disabilities*. Washington, DC: American Psychological Association.
- Manz, S. L. (2002). A strategy for previewing textbooks: Teaching readers to become THIEVES. *The Reading Teacher, 55*, 434–435.
- Nelson, J. R., Oliver, R. M., Hebert, M. A., & Bohaty, J. (2015). Use of self-monitoring to maintain program fidelity of multi-tiered intervention. *Remedial and Special Education, 36*(1), 14–19.
- Noltemeyer, A. L., Boone, W. J., & Sansosti, F. J. (2014). Assessing school-level RTI implementation for reading: Development and piloting of the RTIS-R. *Assessment for Effective Intervention, 40*(1), 40–52.
- Nordlund, M. (2003). *Differentiated instruction: Meeting the educational needs of all students in your classroom*. Lanham, MD: Rowland & Littlefield.
- Orosco, M. J., & Klingner, J. (2010). One school’s implementation of RTI with English language learners: “Referring into RTI.” *Journal of Learning Disabilities, 43*(3), 269–288.
- Pisha, B., & Coyne, P. (2001). Smart from the start: The promise of universal design for learning. *Remedial and Special Education, 22*(4), 197–203.
- Prater, M. A. (2003). She will succeed! Strategies for success in inclusive classrooms. *TEACHING Exceptional Children, 35*(5), 58–64.

- Reetz, L., Ring, M. M., & Jacobs, G. M. (1999). Examine test modifications. *Intervention in School and Clinic, 35*, 117–118.
- Roa, K., Ok, M. W., Bryant, B. R. (2014). A review of research on universal design educational models. *Remedial and Special Education, 35*(3), 153–166.
- Schumm, J. S. (1999). *Adapting reading and math materials for the inclusive classroom*. Reston, VA: The Council for Exceptional Children.
- Shapiro, E. S., Hilt-Panahon, A., Gischlar, K. L., Semeniak, K., Leichman, E., & Bowles, S. (2012). An analysis of consistency between team decisions and reading assessment data within an RTI model. *Remedial and Special Education, 33*, 335–347.
- Silva, M., Munk, D. D., & Bursuck, W. D. (2005). Grading adaptations for students with disabilities. *Intervention in School and Clinic, 41*(2), 87–98.
- Solari, E. J., Petscher, Y., & Folsom, J. S. (2014). Differentiating literacy growth of ELL students with LD from other high-risk subgroups and general education peers: Evidence from Grades 3–10. *Journal of Learning Disabilities, 47*(4), 329–348.
- Solomon, M., Lallas, J., & Franklin, C. (2006). Making instructional adaptations for English language learners in the mainstream classroom: Is it good enough? *Multicultural Education, 13*(3), 42–45.
- Spear-Swerling, L., & Cheesman, E. (2011). Teachers' knowledge base for implementing response-to-intervention models in reading. *Reading and Writing, 25*, 1691–1723.
- Thurlow, M. L., Elliott, J. L., & Ysseldyke, J. E. (2003). *Testing students with disabilities: Practical strategies for complying with district and state requirement* (2nd ed.). Thousand Oaks, CA: Corwin.
- Tomlinson, C. A. (2001). *How to differentiate instruction in mixed-ability classrooms* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.
- Tomlinson, C. A. (2014). *The differentiated classroom: Responding to the needs of all learners* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.
- Tomlinson, C. A., & McTighe, J. (2006). *Integrating differentiated instruction and understanding by design*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Vaughn, S., & Fletcher, J. M. (2012). Response to intervention with secondary school students with reading difficulties. *Journal of Learning Disabilities, 43*, 244–256.
- Young, E. L., Caldarella, P., Richardson, M. J., & Young, K. R. (2012). *Positive behavior support in secondary schools*. New York, NY: Guilford Press.



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