

Differentiating Instruction for Students with Special Needs

by Dr. David J. Chard

Since passage of the Individuals with Disabilities Education Act in 1975 (20 U.S.C. Sect. 1401 et seq.), students with disabilities have been entitled to individual educational programs that address their unique needs. Approximately 10% of students in public schools are identified as having disabilities that have a detrimental effect on their education. The past 25 years of research and practice have focused on developing approaches to provide effective academic and social instruction to students experiencing a broad spectrum of disabilities in least restrictive environments. In the context of particular educational expectations, students with disabilities often experience learning difficulties. The purpose of this paper is to describe the characteristics of students with disabilities that are most relevant to teaching and learning. Additionally, this paper addresses effective ways of differentiating instruction to meet the needs of the broadest range of students with disabilities.

Characteristics of Students with disabilities

For students to be eligible to receive special education, they have to be identified as having one of 13 disabilities that adversely effects their education (34 C.F.R. Part 300. 7). These 13 disabilities include: mental retardation, hearing impairments including deafness, speech or language impairments, visual impairments including blindness, emotional/behavioral disorders, orthopedic impairments, autism, traumatic brain injury, other health impairments, specific learning disabilities, deaf-blindness, or multiple disabilities. These categorical distinctions are used to determine whether or not students are to receive special education. Despite this categorical approach to identifying students for special education, students with special needs represent a varied group of learners. Some students with disabilities do well in school without any specific attempt on the part of the teacher to differentiate instruction. Still other students with disabilities experience difficulties in learning due to sensory or cognitive impairments. While many of these impairments are unique to the particular individual, most learning difficulties result from differences in memory, strategy knowledge and use, vocabulary knowledge, and language coding (Baker, Kame'enui, & Simmons, 1998).

Many students with disabilities experience difficulties in remembering and retrieving verbal information (Mann & Brady, 1988). It is believed that these difficulties result from learners' ability to make salient connections between abstract verbal information (e.g., concepts) by organizing the information and developing links between related information.

Related to difficulties with memory, students with disabilities often experience difficulties learning and using strategies commonly employed by more experienced learners. Successful learners develop routines for learning new information and integrating it with previously learned information. For example, when presented with a new story, proficient readers nearly automatically map the story's features to features they remember from previous stories. Evidence suggests, however, that developing and using these stories poses difficulties for students with disabilities because they use the strategies inefficiently, are unable to adjust the strategies under new contexts, and often do not recognize when to apply strategies (Wong, 1991).

Do in part to the difficulties they experience with memory and strategy use, research suggests that students with disabilities also have difficulties in vocabulary development. Because vocabulary is dependent on memory skills, many learners are unable to learn the meanings of words and retrieve those meanings in the context of reading. Difficulties with reading generally and with vocabulary in particular often result in less reading and less exposure to text. The result is even less opportunity to learn new words.

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Finally, students with disabilities often experience difficulties coding language. While average and above average achievers code language based on its sound or phonology, many students with disabilities code language based on meaning or semantics (Torgesen, 1985; Wagner, 1988). It seems that the phonological coding of words is more efficient and generalizable than the semantic coding and, consequently, students with disabilities experience further difficulties language use.

These characteristics have often lead educators and parents to advocate for a separate system and approach to instruction for students with disabilities.

Traditional treatment of students with disabilities

Traditionally, students with disabilities have received instruction designed to address their academic weaknesses. This approach, while well intentioned, failed to help reduce the gap between students with and without disabilities and served as a barrier to more complex cognitive thinking.

In 1997, the Individuals with Disabilities Education Act was adjusted to provide students with disabilities with meaningful access to the general education curriculum. In practice, this means that students with special needs must now receive instruction in the same curriculum offered to students without disabilities. Additionally, students with disabilities must be included in the system of accountability employed to determine whether students are making progress in that curriculum. In order to provide access to and progress in the general education curriculum to the broadest range of learners, teachers must consider a variety of ways to design and deliver instruction that addresses the characteristics described earlier.

Four general areas that are associated with effectively providing access to the curriculum include design of instruction, formative assessment linked to instruction, differential pacing of instruction, and instructional grouping. Each of these areas is discussed below.

Designing instruction. For many students with disabilities, carefully designed instruction plays an integral role in successful learning. Instructional design begins with prioritization. All 50 states now have a set of content standards that represent what students need to learn. However, not all standards are equal in their importance. For example, in reading and language arts, understanding that different texts types (e.g., narrative, descriptive, compare-contrast) have different text structures is an idea that is considerably more important for all students to learn than specific reading vocabulary (e.g., the meaning of particular story-specific words). Thus, in planning to differentiate instruction teachers need to consider which content standards are of the highest priority and invest more time teaching those standards.

Prioritizing instruction for students with disabilities is, in part, related to learner characteristics. To enhance learners' capacity to retain and retrieve information, teachers should emphasize instruction that (a) explicitly highlights connections between important content, (b) helps learners to categorize information and (c) links new information to what they already know. In order to assist students with disabilities to be more strategic in their learning teachers should emphasize instruction that teaches the necessary prerequisite information for strategy use including all of the steps of the strategy. Moreover, teachers should model how to use learning strategies and when strategies should and should not be applied. For example, a common strategy that many readers employ for understanding text is to predict what the text is going to be about based on salient text features (e.g., title, overview). As proficient readers read, they constantly revise this prediction to

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accommodate new information. Because we know this is an effective strategy employed by skilled readers, teachers should emphasize the use of such a strategy by modeling how and when to use it and giving students ample opportunities to use the strategy across stories and expository text.

To address difficulties students often experience in vocabulary development, teachers should strategically identify words that are critical to understanding instructional texts. These words should be taught directly and encouraged to utilize the words in other appropriate contexts. Teachers can also categorize and teach words as those that students need to know at a basic level (i.e., those that may appear infrequently in texts but are important to understanding a story or an expository passage), and those that need to be understood at a deeper level (i.e., those that are likely to appear frequently in children's texts and are likely to be encountered often).

Finally, teachers should capitalize on the amassing evidence that coding language phonologically is important for successful reading development (Snow, Burns, & Griffin, 1998; National Reading Panel, 2000). Being able to manipulate the phonemes or individual sounds in words facilitates word analysis which, in turn, leads to more fluent reading. While fluent reading does not guarantee successful comprehension, it does increase the likelihood that a learner will enjoy reading, read more, and develop a richer vocabulary and more sophisticated reading strategies (Baker, Kame'enui, & Simmons, 1998).

In addition to prioritizing instruction, several principles of instructional design and delivery play an important role in providing curricular access. First, teachers should consider the scaffolds that can be put in place to assist students in their learning of new materials. Generally, scaffolds can be thought of in two forms, material or personnel. Material scaffolds are tools that help the learner successfully employ a strategy or part of a strategy that they might not otherwise be able to successfully use. For example, in using the writing process, many students with disabilities are unable to plan effectively for writing. One material scaffold that assists them in this process are "think sheets" (Englert). This tool is structured with the elements of the type of text students are expected to generate (e.g., narrative) so that students can plan for their writing. Personnel scaffolds, teachers and peers, provide more proficient models and prompts to less proficient students as they develop their independence. For example, peer-assisted reading has been used successfully to assist students to enhance their reading fluency and comprehension (Arreaga-Meyer, Simmons).

As a consequence of their persistent memory difficulties, many students with disabilities profit from extended opportunities for practice, additional examples, and carefully planned opportunities for review. For example, after modeling how skilled readers summarize their reading of an expository text passage, all students need opportunities to apply this strategy when they read in other passages. For many students with disabilities these opportunities need to be carefully planned with ample practice soon after the strategy has been taught. Additionally, ongoing feedback to help learners refine their use of the strategy, and sufficient review opportunities to ensure that the strategy eventually becomes part of the learner's repertoire.

Linking assessment to instruction. Formative evaluation of students' progress on important learning objectives is associated with positive student outcomes (cite). If the evaluations are closely aligned with the instructional objectives, the information gleaned will help guide teachers' instructional decisions. Many students at the middle level experience difficulties with fluent reading. Evidence suggests that if these students

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are frequently monitored on measures of reading fluency in text at their reading level, teachers can better assess the specific reading objectives that will enhance their fluency development. It is generally held that students with more significant learning difficulties need more frequent progress monitoring.

Pacing of instruction. Historically, when students with disabilities experienced difficulties learning particular information, teachers slowed down their instruction based on the assumption that slower delivery of information would assist student learning. However, research on effective teaching suggests that the pace of instruction within a lesson must remain brisk in order to maintain student engagement (Brophy & Good, 1986). Therefore, to give students ample time to practice and apply new strategies and skills as well as review previously learned knowledge while maintaining brisk instructional delivery, the pace of introducing new information must be carefully considered. Rather than teaching many areas of knowledge and skills superficially, it is more important to prioritize important instructional objectives and teach them thoroughly.

Flexible grouping. The use of whole class instruction as the dominant organizing approach to classrooms has been well-documented (Elbaum, Schumm, & Vaughn, 1997; McIntosh, Vaughn, Schumm, Haager, & Lee, 1993; Zigmond & Baker, 1990). While many teachers find it easier to teach to a large group rather than preparing and orchestrating multiple activities simultaneously, recent research suggests that small group instructional formats result in better outcomes for all children including students with disabilities (Elbaum, Vaughn, Hughes, Moody, & Schumm, 2000). If teachers plan their grouping based on their instructional goals, they'll find that there are times when whole-group instruction is the most reasonable approach (e.g., when introducing a topic, doing a read-aloud), times when small-group instruction is more effective (e.g., specific decoding instruction), and times when peer pairing is most effective (e.g., fluency building and application of comprehension strategies). Additionally, in each grouping format, there are documented effective tools for optimizing student outcomes. For example, at the end of a whole group lesson in reading, teachers can use lesson reminder sheets to assist those learners most likely to confuse relevant and irrelevant information (Vaughn, Hughes, Moody, & Elbaum, 2001).

Teaching Differently to Make a Difference

Many teachers believe that working with students with disabilities means making extensive accommodations to their instruction. While a few students with disabilities present very unique learning needs, they are by far the exception. Most students who are identified for special education share similar learning characteristics, difficulties with memory retention and retrieval, strategy use, vocabulary development, and language coding. As students transition to the middle level, the need to address these areas of difficulty grow increasingly important. By carefully designing instruction of priority areas supported by scaffolds and ample practice and review we can maximize student understanding. In addition, by differentiating instruction in terms of the pace of newly introduced material, frequent monitoring of student progress, and flexible grouping, the majority of students with disabilities can access the general education curriculum meaningfully and maintain their knowledge and skills. Meeting this goal will make all the difference.