

Learning to Achieve

A PROFESSIONAL'S GUIDE TO EDUCATING
ADULTS WITH LEARNING DISABILITIES

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Preface

Approximately 3 million adults attend a variety of federally funded adult education and training programs. A noticeable number of these individuals have either diagnosed or undiagnosed learning disabilities (LD). For some, their adult education experience, based on effective instruction and respectful relationships, provides the preparation they need to move forward with their lives. The goal of the *Learning to Achieve* program is to expand the ability of adult service providers to work effectively with adults with LD.

Learning to Achieve is a comprehensive project developed by the National Institute for Literacy to provide adult service providers with research-based information. The project's foundation is *Learning to Achieve: A Review of the Research Literature on Serving Adults with Learning Disabilities*,¹ which identifies and describes research relevant to adults with LD attending adult education programs. The six topics covered in the literature review are assessment for reading disabilities, English language learners, accommodations, teaching methods, transition and impact of LD.

The project also developed a set of face-to-face and online training modules entitled *Learning to Achieve: A Research-Based Training on Serving Adults with Learning Disabilities*. This component involves both an intense five-day face-to-face training-of-trainers program and the follow-up training conducted by participants in the five-day program. The training modules are designed to help adult education and vocational training practitioners, social workers and other human service provid-

ers understand LD in adults and learn how to actively support adults with LD in educational and workplace settings. The *Learning to Achieve* program also includes four online modules. The topic areas of the online modules are accommodations, learning disabilities and English language learners, and neuroscience and a professionals' guide.

This document, *Learning to Achieve: A Professional's Guide to Educating Adults With Learning Disabilities*, is both a companion guide to the training and a stand-alone resource for professionals who work with adults with LD and have not taken the training. The six chapters reinforce and extend the content of the training modules. The chapters provide information on relevant characteristics of adults with LD matched with descriptions and examples of practical intervention strategies. A major theme in research and practice focused on adults with LD is that effective interventions for this heterogeneous group are appropriate for all individuals who struggle with learning. Thus, the information provided in this guide is relevant to adult educators' work with a broad spectrum of individuals enrolled in adult education programs.

This guide is the result of the work of a number of individuals. Special thanks to Debi Basu, the National Institute for Literacy's program officer for education and learning disabilities, and Patricia Bennett, Associate Director of programs, who provided guidance and feedback throughout the process of developing this guide. Shannon Peters and Sarah Campbell from TATC Consulting were instrumental in developing the format and structure of the guide and provided input at crucial points in the guide's development. Finally, this guide

¹ <http://lincs.ed.gov/publications/pdf/L2ALiteratureReview09.pdf>

reflects the research and development efforts of myriad researchers and practitioners. The success of adult education is based on the expertise and care of diverse professionals who are committed to working with some of our most vulnerable adults.

Introduction

There are two things you must understand that are extremely important when working with people with learning disabilities: patience and care. People with learning disabilities tend to get frustrated very easily, and a lot of times do not have high self-esteem. The teacher needs to make them feel that they are equal to everyone else. Often, this means more hands-on-learning with the individual. The teacher must take the time to find out what the individual's strengths and weaknesses are, and how long one's attention span is. The sooner an educator figures out what a student's capabilities are, they can teach them to be better learners.

People with learning disabilities normally have a minimum vocabulary, so teachers must be sure to ask the student if they comprehend what has been said. While a word may seem common to the average person, it is not the case for everyone. Simple misunderstanding of the meaning of a word, or not even knowing it at all, can be the difference between understanding an assignment and completely failing. This is why I say that hands-on-learning is so important. Good communication with students is key to making sure they fully understand. Educators should be very specific when teaching and very clear. The more specific you are, the more likely it is that an assignment or topic will be understood. If you (the teacher) are reading something to a student, you may want to ask the student if they want you to read it again. Every time you come across a big word that you think the student may not know, you may want to ask the student if they know what that word means. A student may not be bold enough to admit they don't understand, but they will accept the additional explanation if given the opportunity.

I have always been relatively interested in history. I remember that I had a hard time at school comprehending all of the information about a place and time. While I enjoyed learning in school about history, it wasn't until I actually visited a country that it sunk in. I have been fortunate enough to travel a bit, and my parents made sure that our trips included sightseeing and tours of historic sites. While not everyone is able to travel, visuals can also be a good tool in helping people to understand what's being taught.

Taking notes always may seem like a lot of work, but whenever you are using a chalk board to explain the student what you are talking about, tell them to take notes. The catch here is to remember that people process information at different speeds. When they are taking notes, always make sure that the student is caught up with your writings and teachings. People with learning disabilities may need more time to take notes. Again, be patient. I remember when I was in boarding school, particularly in my biology class, the teacher moved so fast that sometimes I wouldn't even get a chance to finish what he wrote on the board. He would also ask me a question while I was in the middle of taking notes, and I would have no idea what he was talking about. I felt terrible because I didn't know the answer and couldn't keep up. If the teacher had simply slowed down and made sure I had the information before moving onto another topic, I would have been much better off. I realize now that it wasn't my fault, it was his. If he had been given the proper tools to teach me, we both would have been more successful in that class.

The Formula

A student feeling embarrassed is the worst thing you want in your class when you are teaching people with learning disabilities. Embarrassment = low self-esteem; low self-esteem = feeling stupid; feeling stupid = not wanting to come to school and that = no education; no education = a good chance of turning to drugs or living on the streets. The point here is that if students don't feel embarrassed by their learning abilities, they are less likely to fail. Teachers have the ability to make sure the students do well and leave with a good understanding of what was taught. Given the right amount of help, every student can succeed.

Feeling Embarrassed

I remember when I was in a teenager, attending a school that was specifically for kids with LD, I was sure I was in an environment that was going to be good for me. I thought I could ask any question at this, "school for the gifted," and not have to worry about being embarrassed. Well I was wrong. I asked a question and the teacher told a student to kick me! I guess the teacher thought my question was dumb. I was appalled. I couldn't believe the school would have any tolerance for that kind of behavior; a teacher telling a student to kick another student. I was scared and embarrassed, which is a little bit of the same thing. An experience like this leaves you feeling uncomfortable participating in class. Then I felt like that my grades were going to drop, and it would get worse from there. Embarrassment can happen from simply not knowing the answer to something, and not being confident enough to ask for help. If the teacher can recognize when a student needs more encouragement and makes sure they get positive reinforcement, it will make all the difference. If not, things like this can lead to negative thoughts for young adults because they feel that they aren't doing anything right. There were times when I thought, "what is the point of trying."

The right approach to handling this is trying to figure out what the student is having trouble with and why he is having trouble with it. We want to help stu-

dents succeed so they can end up helping the world and the people of the world. If we let them feel sorry for themselves, and possibly give up, that is a step further away of the people and the planet being helped.

When I was in college, I had a psychology teacher who worked with me one-on-one. Sometimes, I would feel like the work was too much and just want to quit. My teacher encouraged me to try and finish my work so that I would not have more to do the next day. Afterward, I felt good that I had stayed and completed my work. It meant I would not feel overwhelmed the following day. Students with learning disabilities can be easily overwhelmed, because everything seems so hard at times. Managing the workload is helpful. When you can convince a student to finish their work, they may be tired but they are going to feel much better at the end and proud of the accomplishment. When they feel that they are succeeding in their work, they will want to try harder. It worked for me.

Teaching a student with learning disabilities or any child is easy, but making it fun for student to learn is amazing. When I was in my math class, I had a very hard time at the beginning. The teacher noticed that I really didn't understand anything he was teaching. Luckily, this teacher was also a guidance counselor, and he was willing to work with me. He recognized that I needed extra attention and let me know he was there to help. By the end of the year, I was given an award for mathematics, a subject that seemed unmanageable at the beginning. It's not that I wasn't capable of learning the subject, I just needed extra help. I graduated with honors, far better than anyone thought I would be able to do.

When a student is getting frustrated with their studies, a quiet place is always nice to have. I am fortunate enough to have a place like this. It is my place of Zen to go to when I am feeling down or frustrated. I was recently working on a documentary about kids with learning disabilities. There was a student who needed to be alone whenever he got frustrated, so he went into the school Principal's office and just walked around a

table for a while. It helped him calm down. Little things like this are very important. Talk to the students and see what their needs are. Figure out solutions to their learning difficulties, and they will become more ready to learn while you are teaching.

Everyone is capable of being successful. It is the job of educators to find ways to make sure everyone does as well as they possibly can. Patience is the best thing a teacher can give a student. Taking time to work with students and find out how to help them can mean the difference between them learning to read or to do math, or not learning at all. Teachers should look for clues as to whether the students are keeping up with the lessons. If a student doesn't know the answer, find out why. The sooner you learn what works, the more successful the class will be.

Quinn Bradley,
Adult Learner

Chapter 1

Definition and Legal Issues

Setting the Context

What does it mean to say that a person has a learning disability? This condition is easily misunderstood, and is one professionals are still working to define clearly. One reason for this difficulty is that the identification of specific learning disabilities (LD) as a distinct disabling condition is relatively recent. This term was introduced to educators in the 1960s based on the realization that some individuals who fail to achieve in school do not match standard patterns of exceptionality such as intellectual limitations or emotional disabilities. Another reason for differing definitions is the interdisciplinary nature of the field. Practitioners in the fields of medicine, psychology, speech/language, and education use different vocabulary (e.g., perceptual disorder, minimal brain dysfunction, asphia) to describe and define what it means to have LD (Hardman, Drew, & Egan, 2008, p. 163). Finally, the hidden nature of LD compared with physical and sensory disabilities (e.g., cerebral palsy, blindness) means that LD may go undiagnosed, making it difficult for individuals with the condition to determine the causes of the resulting problems they face. This “hidden” disability can lead others to misinterpret the individual’s performance problems. Thus, individuals with LD face challenges in both self-understanding and the misperceptions of others.

Individuals with diagnosed LD have legal rights, which can translate into services in preschool through high school (P-12). Upon school exit, individuals with

LD may still be able to access disability-related services, but the conditions for accessing services change, and the need for self-advocacy increases. Individuals with undiagnosed LD do not have the benefit of these legal protections. When undiagnosed adults suspect that they have LD, they must decide whether to seek (and usually pay for) a diagnosis.

Many individuals who enroll in adult education and training programs have either diagnosed or undiagnosed LD (Kirsch, Jungeblut, Jenkins, & Kolstad, 1993; Ryan & Price, 1993; U.S. Department of Labor, 1991). The National Assessment of Adult Literacy, which surveys a national sample of U.S. adults, indicates that 6 percent of the individuals surveyed reported having LD. The challenging effect of their LD is evidenced by their lower prose, document and quantitative literacy skills compared with adults without self-reported LD (Kutner et al., 2007, p. 30). It is not surprising that adult education and training programs serve a high percentage of adults with LD (Corley & Taymans, 2002). For example, welfare-to-work programs report serving a large number of individuals with low literacy levels; 25 percent to 35 percent of their participants are considered to have LD (National Governors Association, 1998).

There is no single common profile for an adult education student with LD; age, formal diagnosis and high school completion are documented sources of variability. A recent study of adult education program partici-

pants found that middle-aged individuals (ages 46 to 55) were more likely to identify themselves as learning disabled than were younger participants (Mellard & Patterson, 2008). Younger adult students are more likely to have a formal diagnosis than are older students because of the trend toward improved identification during the P–12 school years. Programs serving dropouts can expect youth with LD, because their dropout rate is two to three times that of their non-disabled peers (U.S. Department of Education, 2008; U.S. General Accounting Office, 2003). In the past, lax grad-

uation standards allowed many individuals with LD to exit high school with diplomas despite having significant literacy needs. Today, this is less likely because of increased accountability and more rigorous graduation standards. This increased accountability may lead some to drop out. Regardless of specific individual circumstances, living with a learning disability has the potential to be a major life stressor (Mellard & Patterson, 2008). Even though formal learning environments can be stressful, many adults with LD seek out adult education programs as a means to improving their lives.

What are Learning Disabilities?

Individuals with LD are an extremely heterogeneous group. One can point to well-respected professionals who are highly successful and competent but are slow readers and poor spellers compared with their peers. One can also find individuals who can barely read and write but are eloquent in their oral expression. There are individuals who excel in reading and struggle in math. The combinations of strengths and needs and how individuals use their strengths to compensate for their areas of need are almost endless. This great variability makes it difficult for educators to understand when a learner's struggles are based on this organic condition or when they are based on other factors, such as a lack of prior schooling or emotional problems. To complicate matters, for some the challenges are a result of more than one issue.

Disability definitions, including LD, are social constructs that reflect current understandings and beliefs. Thus, definitions may change as understanding of the disability develops (NRCLD, 2007, p. 5). The U.S. Department of Education's Office of Special Education Programs (OSEP) developed the Specific Learning Disabilities (SLD) Initiative to address the scientific and broader political issues of definition and identification.

As part of the SLD Initiative, OSEP convened 10 organizations that represented parents, state and local practitioners, researchers and policy developers to construct consensus statements to describe the nature of LD. The group provided an overall defining statement regarding the definition (Figure 1).

This definition can be divided into six consensus statements that describe the nature of LD.

Figure 1. SLD Consensus Statement

Strong converging evidence supports the validity of the concept of SLD. This evidence is particularly impressive because it converges across different indicators and methodologies. The central concept of SLD involves disorders of learning and cognition that are intrinsic to the individual. SLD are specific in the sense that these disorders each significantly affect a relatively narrow range of academic and performance outcomes. SLD may occur in combination with other disabling conditions, but they are not due primarily to other conditions, such as mental retardation, behavioral disturbance, lack of opportunities to learn, or primary sensory deficits.

Source: NRCLD (2007), p. 2

Consensus Statement 1: The Concept of Specific Learning Disabilities Is Valid and Is Supported by Strong Converging Evidence

Simply stated, LD are real. Researchers across areas of specialization in LD research attest to a strong evidence base supporting the existence of LD (Bradley, Danielson, & Hallahan, 2002). Although there is lack of consensus on how to define and measure LD, it is well documented that an individual with LD faces great challenges in learning, and for many this is associated with lack of success in both secondary and postsecondary education. Students with LD are the largest group of individuals with identified disabilities served by special education, comprising almost 50 percent of students with disabilities and about 5 percent of the total school-age population. One attribute of LD is that areas of weakness can be remediated, but those areas will remain a relative weakness compared with areas of strength (Bradley, Danielson, & Hallahan, 2002). Thus, the prevalence rates for school-age children provide some indication of the prevalence in adults.

Consensus Statement 2: SLD Are Neurologically Based and Intrinsic to the Individual

Although difficult to measure, it is widely accepted that LD have a neurological base. This means that the way a person’s brain functions sets up a predisposition for one or more weaknesses related to key learning processes that comprise reading (word recognition and spelling, comprehension, fluency and automaticity), math (computation and problem solving) and written expression (handwriting, spelling and composition) (Fletcher, Lyon, Fuchs, & Barnes, 2007). These weaknesses result in performance problems that affect how an individual functions in learning situations. For example, neuroimaging research is providing a growing evidence base indicating differences in brain structure and function between dyslexic and skilled readers. In addition, LD are now thought to have a genetic basis. LD often run in families. If there is a family history of LD, the probabil-

ity of having LD is significantly increased (Shaywitz, Morris, & Shaywitz, 2008).

Consensus Statement 3: Individuals With SLD Show Intra-Individual Differences in Skills and Abilities

Intra-individual differences are a hallmark of LD. This means that there is a noticeable difference between what one would expect an individual to achieve based on his or her general ability and what the individual is actually able to do. LD is also evident in marked differences across areas of performance important for school, work and independent living. The Rehabilitation Services Administration, an office within the U.S. Department of Education, has defined specific areas of functioning that can be assessed as part of LD identification (Figure 2). The Rehabilitation Services listing is much broader than what current researchers recommend for outlining areas affected by LD (see Figure 3). Whatever the indicators chosen, an adult diagnosis of LD must be based on a distinct profile of significant differences across areas of functioning.

Consensus Statement 4: SLD Persist Across the Life Span, Though Manifestations and Intensity May Vary as a Function of Developmental Stage and Environmental Demands

LD are a lifelong condition. Even when identified and remediated, they will continue to cause uneven development and be a source of relative deficit compared with areas of performance not affected by the LD. LD can be identified at any point along the developmental contin-

Figure 2. Manifestations of SLD Defined by the Rehabilitation Services Administration

Attention	Writing
Reasoning	Spelling
Processing	Calculation
Memory	Coordination
Communication	Social competence
Reading	Emotional maturity

Source: U.S. Department of Education (2005)

uum. Infant, toddlers and preschoolers with persistent delays in development may be referred for screening and evaluation in order to provide early intervention. Although it is too early to diagnose LD at that age, it is possible to begin to identify children who have persistent delays despite early intervention. As these children move into elementary school, some will eventually be identified as having LD (NJCLD, 2006).

Other children appear to progress normally until they face the academic demands of elementary school. As they fall behind in reading or math they may be referred for targeted interventions or diagnostic testing. For some, this will result in an LD diagnosis. Other children, who have learned how to cope and compensate for their areas of need, are able to make their way through elementary school but are unable to continue compensating for the added content-learning demands of secondary school. For others, problems in postsecondary education and employment bring forth the possibility that performance problems may be rooted in LD. Thus, when and how individuals learn that LD are a source of their learning, work or daily living problems can vary widely.

The key to any diagnosis is the self-insight it can produce. A good diagnostic process results in clearly presented information and recommendations that offer a profile of the individual's strengths and needs as well as recommendations for learning and work. This identification of strengths is key to successful living for any adult but is particularly important for adults with LD, who must learn how to compensate for the areas of functioning negatively affected by the disability.

Although genuine LD are a lifelong condition, the difficulties and stress experienced by school-age students with LD may lessen over time. Adulthood can bring a welcome relief from the rather narrow range of academic behaviors important in secondary school. Adult life holds a far greater range of ways to be productive and successful. Yet, adult life is complex and demands working with information in various forms across a range of circumstances. Thus, successful individuals with LD find a way to match their home, education and work demands to their profile of strengths and needs (Reiff, Gerber, & Ginsberg, 1997).

Consensus Statement 5: SLD May Occur in Combination With Other Disabling Conditions, But They Are Not Due to Other Conditions

Individuals may experience LD in combination with other disabilities. For example, it is possible to have LD and attention-deficit/hyperactivity disorder. It is also possible to have LD and mental health issues or physical disabilities. Likewise, some individuals enter adulthood with academic deficits resulting from attending failing schools, irregular attendance patterns, or limited experience with academic English. By definition, LD cannot be caused by these “exclusionary” factors. One issue is that current identification procedures are not perfect in distinguishing causation from co-occurrence, creating a situation where individuals may be erroneously included in or excluded from the LD category on the basis of co-occurring conditions. This situation is further complicated because many of the “excluded” conditions are correlated with the lack of development

Figure 3. Research-Recommended SLD Profiles

An individual with SLD would show discrepancies either within one profile or across profiles.

SLD reading disabilities: Problems in one or more of the component skills necessary for competent reading:

- Word recognition and spelling
- Fluency and automaticity
- Comprehension

SLD writing disabilities: Problems in one or more areas necessary for competent writing:

- Handwriting
- Spelling
- Composition

SLD math disabilities: Problems in one or more areas necessary to use math:

- Computation
- Problem solving

Source: Fletcher, Lyon, Fuchs, & Barnes (2007)

in cognitive and linguistic skills associated with LD (Fletcher et al., 2007).

Consensus Statement 6: SLD Are Evident Across Ethnic, Cultural, Language and Economic Groups

LD can occur in any cultural or economic group. Cross-cultural research indicates that individuals exhibit characteristics associated with LD across the world (Paulesu et al., 2001; Sideridis, 2007). Neuroscience research shows that learning to read in either an alphabetic (e.g., English) or symbolic (e.g., Chinese) language is based on adequate functioning of language-based skills. Children identified with dyslexia across languages have a common difficulty manipulating the sounds in words, as evidenced by problems in rhyming or counting the number of syllables in words. These problems are based on the under-activation of brain functions that support reading associated with reading disabilities (Goswami, 2008).

Along with the realization that LD exist across languages is the concern that assessment procedures can be culturally biased (Sideridis, 2007). This concern is exemplified by learning disability prevalence rates for school-age children identified through special education assessments in the United States. Among children ages 6 through 21, American Indian/Alaskan Native students and black students are more likely than expected to be identified as having LD, while white (non-Hispanic) students are less likely, on the basis of overall percentages of each ethnic group enrolled in school (Skiba et al., 2008). This concern about assessment is also reflected in cross-cultural research indicating that cultural, linguistic and economic factors can influence who is identified as having LD (Sideridis, 2007). Countering this concern is research on identification of individuals with LD at the community college level suggesting that assessments can be developed that do not result in disproportional representation in terms of race, age or gender (Mellard, 2003).

In summary, these 6 consensus statements identify areas of agreement in how to define LD. Yet, one major

issue for adult education is the identification and assessment of English language learners.

ENGLISH LANGUAGE LEARNERS AND LD

Approximately one million English language learners enroll in adult education classes, comprising approximately 44 percent of the student population.¹ We would project that this group of learners, like any subset of adult education students, would have its representative share of individuals with LD. Unfortunately, we are hampered by a lack of research, theory and practical knowledge to guide the appropriate assessment of this group of individuals for LD (Schwarz, 2009).

A great deal is unknown about how normally developing English language learners acquire English literacy. Not understanding normal language learning development means that it is difficult to determine differences that indicate possible LD. In addition, many English language learners come to adult education with

¹ 2008-2009 statistical data from the National Reporting System (NRS) for Adult Education

Figure 4. Assessment Considerations for English Language Learners

The assessor should provide the following evidence:

- **Comprehensive intake interview**
 - English interview, native language interview
 - Developmental history
 - Academic history
 - Language proficiency with home language
 - Influence of cultural experiences on testing
- **Consideration of the characteristics of the home language**
- **Consideration of the characteristics of the target language**
- **Data to support the language of assessment**
- **Identification of reliable and valid standardized assessment measures given the adult's background**
- **Assessment of important processing areas for identifying LD**
- **Qualifications to make professional judgment, which are critical to any decision making**

Source: Schwarz (2009)

a range of formal education experiences. Researchers are unable to indicate which features of prior schooling affect particular aspects of learning English. Lack of progress in learning English may be due to inexperience with formal learning settings, differences in instructional methods or lack of exposure to English outside the class setting. Finally, there are a range of assessment issues when testing English language learners for LD (Schwarz, 2009):

1. Assessments reflect our culture, not necessarily the culture of origin of the English language learner.
2. The testing process may be unfamiliar, which can depress performance.
3. Assessments are normed on English-speaking populations.
4. When assessments are in English, the test results may be an indication of lack of English language proficiency rather than underlying SLD.
5. The test administrator may not have experience with the adult's culture or origin or may not be fluent in both English and the home language of the examinee.

Given this range of issues, educators should proceed with caution when recommending formal testing for LD. Figure 4 lists important considerations when referring English language learners for testing.

What Federal Laws Are Relevant to People with Learning Disabilities?

Three federal laws are relevant to individuals with LD: the Individuals with Disabilities Education Act (IDEA), the Rehabilitation Act of 1973 and the American with Disabilities Act Amendment Act (formerly known as ADA, as amended known as ADAAA). This section provides a brief overview of each law and how the provisions relate to adults with LD.

THE INDIVIDUALS WITH DISABILITIES EDUCATION ACT

IDEA is a federal law that addresses the needs of children with disabilities from early identification, which can begin at birth, through high school exit, which can extend to age 21. Its purpose is to provide a free, appropriate public education for children with disabilities. Children suspected of having a disability are referred to school personnel for identification and diagnosis. Under IDEA, the school system is responsible for providing diagnostic services. If one or more disabilities are

identified, an intervention plan called an individualized education program (IEP) is developed. An IEP identifies the special education and related services (e.g., speech therapy, occupational therapy) that will be provided at no cost to the family. To support this entitlement of services, IDEA provides direct funding to school systems.

Of the 13 types of disabilities identified under this law (see Figure 5), the category of LD is the largest, subsuming approximately 2.8 million or a little less than 50 percent of identified students with disabilities ages 6 through 21 (U.S. Department of Education, 2009). IDEA mandates that transition planning be part of the IEP process starting at age 16. One relatively new part of the transition planning process is the development of a Summary of Performance (SOP) document. The purpose of the SOP is to facilitate students' successful movement from secondary school to postsecondary environments by developing a school exiting document. This summary or synthesis identifies the student's accomplishments, goals, needs (including accommodations) and

Figure 5. Categories of Disability under IDEA Law

<i>Disability Category</i>	<i>Definition</i>
Autism	<i>Autism</i> means a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences. Autism does not apply if a child's educational performance is adversely affected primarily because the child has an emotional disturbance, as defined below. A child who manifests the characteristics of autism after age three could be identified as having autism if the above criteria are satisfied.
Deaf-Blindness	<i>Deaf-blindness</i> means concomitant hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational needs that they cannot be accommodated in special education programs solely for children with deafness or children with blindness.
Deafness	<i>Deafness</i> means a hearing impairment that is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification that adversely affects a child's educational performance.
Developmental Delay	<i>Developmental delay</i> means, for a child under 3 years of age (Part C of IDEA) and for a child aged 3 through 9 (Part B of IDEA), a delay in one or more of the following areas: physical development, cognitive development, communication development, social or emotional development, or adaptive development as measured by appropriate diagnostic instruments and procedures.
Emotional Disturbance	<i>Emotional disturbance</i> means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance: a. An inability to learn that cannot be explained by intellectual, sensory, or health factors. b. An inability to build or maintain satisfactory interpersonal relationships with peers and teachers. c. Inappropriate types of behavior or feelings under normal circumstances. d. A general pervasive mood of unhappiness or depression. e. A tendency to develop physical symptoms or fears associated with personal or school problems. Emotional disturbance includes schizophrenia. The term does not apply to children who are socially mal-adjusted, unless it is determined that they have an emotional disturbance.
Hearing impairment	<i>Hearing impairment</i> means an impairment in hearing, whether permanent or fluctuating, that adversely affects a child's educational performance but that is not included under the definition of deafness in this section.
Intellectual Disability	<i>Intellectual disability</i> means significantly subaverage general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, that adversely affects a child's educational performance.
Multiple Disabilities	<i>Multiple disabilities</i> means concomitant impairments (such as mental retardation-blindness or mental retardation-orthopedic impairment), the combination of which causes such severe educational needs that they cannot be accommodated in special education programs solely for one of the impairments. Multiple disabilities does not include deaf-blindness.
Orthopedic Impairment	<i>Orthopedic impairment</i> means a severe orthopedic impairment that adversely affects a child's educational performance. The term includes impairments caused by a congenital anomaly, impairments caused by disease (e.g., poliomyelitis, bone tuberculosis), and impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns that cause contractures).

Other Health Impairment	<i>Other health impairment</i> means having limited strength, vitality, or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment, that— a. Is due to chronic or acute health problems such as asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome; and b. Adversely affects a child's educational performance.
Specific Learning Disability	<i>Specific learning disability</i> means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. Specific learning disability does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage..
Speech or Language Impairment	<i>Speech or language impairment</i> means a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, that adversely affects a child's educational performance.
Traumatic Brain Injury	<i>Traumatic brain injury</i> means an acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that adversely affects a child's educational performance. Traumatic brain injury applies to open or closed head injuries resulting in impairments in one or more areas, such as cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem-solving; sensory, perceptual, and motor abilities; psychosocial behavior; physical functions; information processing; and speech. Traumatic brain injury does not apply to brain injuries that are congenital or degenerative, or to brain injuries induced by birth trauma.
Visual Impairment Including Blindness	<i>Visual impairment including blindness</i> means an impairment in vision that, even with correction, adversely affects a child's educational performance. The term includes both partial sight and blindness.

SOURCES

"Individuals with Disabilities Education Improvement Act of 2004," (IDEA) Public Law 108-446 (December 3, 2004)

Implementing Regulations for IDEA, 34 CFR Part 300

"Rosa's Law" (October 5, 2010)

future plans. For individuals with LD, this document should provide diagnostic information as well as accommodations important for postsecondary education and employment. One goal of the SOP is for postsecondary programs to accept it as disability documentation and a guide to effective accommodations. Once students exit secondary school, they are no longer covered by IDEA, and negotiating their learning disability in education and employment becomes their responsibility.

THE REHABILITATION ACT OF 1973

The Rehabilitation Act of 1973 is civil rights legislation whose purpose is to protect individuals with dis-

abilities from discrimination. This act, as amended, defines disability as "a physical or mental impairment that constitutes or results in a substantial impediment to employment; or ... a physical or mental impairment that substantially limits one or more major life activities" (29 U.S.C. § 705(9)(B) (2000)). Specific LD became a qualifying disability for rehabilitation services in 1981 (Vogel & Reder, 1998).

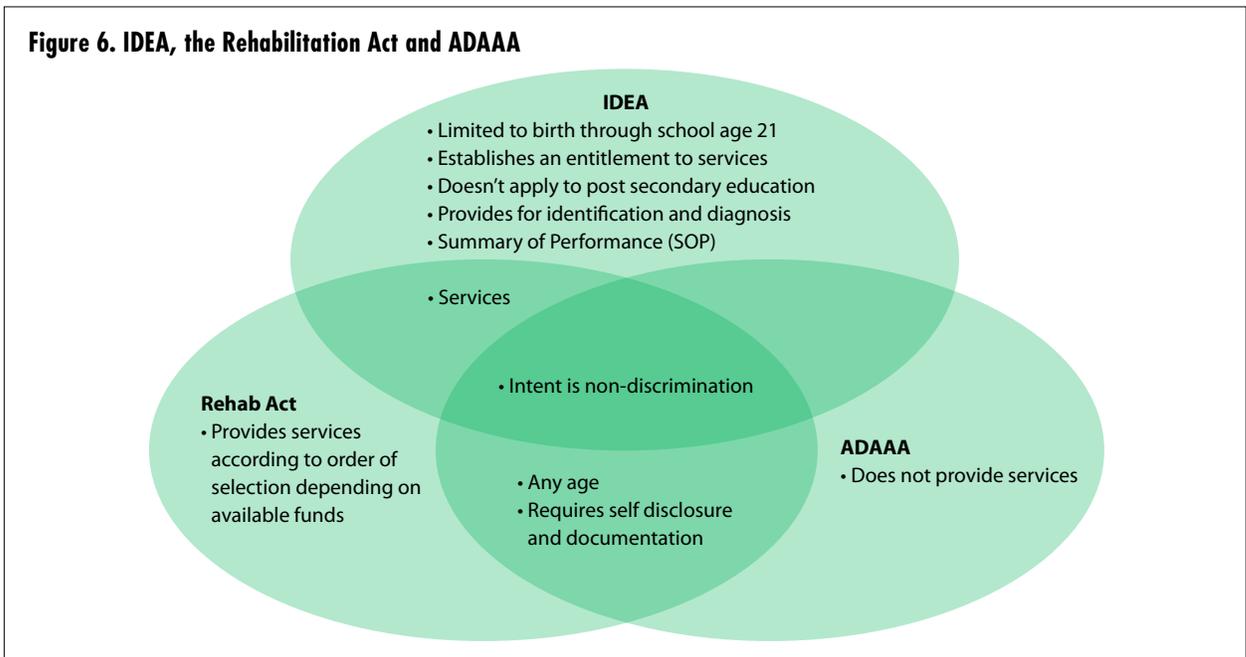
The Rehabilitation Act applies to organizations receiving federal funding, which include education organizations and employers. Any employer with more than 15 employees is required to comply with this law. One purpose of the Rehabilitation Act is to offer

individuals with disabilities the same opportunities to succeed as nondisabled individuals have. This is called equal access, which means that qualified persons with disabilities should have an equal opportunity to participate in or benefit from their education or employment situations. The right to equal access is based on an individual with LD having the qualifications for the educational program or employment position. If the individual is qualified, then he or she may not be denied on the basis of a disability. One important consideration is that it is up to the individual whether to disclose the disability or not.

One way the Rehabilitation Act promotes nondiscrimination is through reasonable accommodations. The goal of reasonable accommodations is not to give individuals with disabilities an advantage but to allow them a chance to demonstrate their competence by minimizing the demands that target their disability. An educational example is allowing students with LD in the area of writing to use scribes for the GED test. Even though the learners are not physically writing the essay, they must still organize their thoughts, dictate

coherent and connected sentences, and identify correct punctuation. Thus, the students are demonstrating their competence in the essential tasks of essay writing while circumventing their problems with spelling and handwriting caused by their LD. A work example is a building contractor with LD in math calculation. This individual was slow and inaccurate in developing job cost quotes. After a discussion with the employee's supervisor, the company purchased a contractor's calculator, which enabled the employee to produce quotes more quickly and accurately (Kitchen, 2008).

The Rehabilitation Act does not require an educational program or employer to reach out to or identify a qualified individual with a disability. According to the act, once admitted to an educational program or employed, the individual has the responsibility to self-disclose a disability. Often it can take more than self-disclosure to access accommodations and services. A person may need to self-advocate by providing a clear description of his or her areas of strength and needs and ways he or she has learned to compensate for the specific areas of disability. This description would include



a request for specific accommodations to minimize the effects of the LD.

Another limitation is that no guidelines are provided for evaluation or assessment under the act. Individuals must provide their own documentation of disability. Neither employers nor postsecondary institutions are obligated to pay for evaluations or assessments. State vocational rehabilitation agencies can sometimes provide funds for diagnostic testing or supports (e.g., assistive technology, educational services). Rehabilitation agencies often face more demand for more services than there is available funding. Individuals receive support based on the severity of their needs and are funded accordingly. In comparison with other individuals seeking rehabilitation services, individuals with LD are often not considered in severe enough need to be funded for diagnostic and other services.

THE AMERICANS WITH DISABILITIES ACT AMENDMENTS ACT

Like the Rehabilitation Act, the ADAAA is civil rights legislation aimed at preventing discrimination. The purpose of this law is to prohibit discrimination against persons with disabilities. Many of the basic concepts and definitions in the ADAAA are drawn from the Rehabilitation Act. ADAAA defines a disability as “a physical or mental impairment that substantially limits one or more of the major life activities of an individual” (42 U.S.C. 12102(2)(A)) and designates specific LD as a disability category entitled to protection under the act. This law does not provide further definition or assessment requirements for LD determination.

The ADAAA address a broader range of situations than the Rehabilitation Act. The purpose of the ADAAA is to make American society, not just entities that receive federal funds, nondiscriminatory. Its scope encompasses access to most adult life situations, such as education, employment, public services, everyday facilities (banks, hotels and stores), telecommunications and transportation. Like the Rehabilitation Act, it is applicable to individuals of all ages, requires self-disclosure and is based on

reasonable accommodations. Unlike the Rehabilitation Act, it does not provide funding for services.

IMPLICATIONS OF THE LAWS FOR ADULT EDUCATORS

Figure 6 summarizes important aspects of the IDEA, Rehabilitation Act and ADAAA. The intent of all three laws is to protect the rights of people with disabilities by prohibiting discrimination. Individuals need documentation of their disability in order to benefit from these laws.

Once individuals with LD exit secondary school, they must disclose their disability in order to receive accommodations. This means that they must be prepared to share personal information about their disability for the specific purpose of receiving accommodations. Disclosure is a major decision for individuals with LD because their disability is less readily apparent than those of individuals with obvious physical disabilities. Adults with LD must decide what, if anything, they want to reveal. They also need to be knowledgeable about types of accommodations they are able to use successfully. Sometimes this information is part of diagnostic assessment reports, and sometimes it is through trial and error that an individual learns how to use accommodations. For young adults exiting secondary school, the SOP exit document should be an easy-to-read outline of their areas of strength and needs and useful accommodations.

Self-disclosure is a difficult process. Many individuals with LD enter new education and work environments hoping and believing that they can leave their LD behind. Even when this wish does not come true, it is common for adults to fear that self-disclosure will lead to uncomfortable interactions with teachers, peers or work supervisors because of their lack of understanding of LD. Others may not have recent documentation, and disclosure without documentation does not result in the right to request accommodations. For example, specific diagnostic information is necessary to receive testing accommodations for the GED and other formal tests necessary to qualify for credentials and licenses.

It takes courage, self-confidence and self-understanding to disclose in a way that clearly communicates accommodation needs. The benefit of self-disclosure is the possibility of receiving support and accommodations that can lay the foundation for success in education and work environments. The jeopardy is that the information may be misunderstood and may not result in appropriate accommodations. The ability to effectively self-disclose is closely tied to self-determination, which is addressed in Chapter 2.

Once a person has self-disclosed, he or she is entitled to the assurance of confidentiality about the information contained in his or her disability-related records. Disability-related information should be shared only with other professionals with the informed written consent of the individual who has self-disclosed. Adult education programs are legally responsible for ensuring confidentiality and should have specific policies that are clear to everyone who works or volunteers in the program.

Summary

- People with LD are a heterogeneous group of individuals whose profiles of strengths and needs vary greatly.
- Currently, experts in the field of LD agree on six characteristics that can be used to define LD:
 1. The concept of specific LD is valid and is supported by strong converging evidence.
 2. SLD are neurologically based and intrinsic to the individual.
 3. Individuals with SLD show intra-individual differences in skills and abilities.
 4. SLD persist across the life span.
 5. SLD may occur in combination with other disabling conditions, but they are not due to other conditions.
 6. SLD are evident across ethnic, cultural, language and economic groups.
- Lack of research, theory and practical knowledge makes it difficult to appropriately assess English language learners for LD.
- About 5 percent of the school-age population is identified with LD under IDEA. Once students exit secondary school, they are no longer covered by this law.
- The Rehabilitation Act and the ADAAA are civil rights laws that provide protection against discrimination for individuals with disabilities. Both laws provide for reasonable accommodations for individuals who self-disclose their disabilities. Self-disclosure can be a difficult decision to make for adults with LD.

Programs must ensure that any disability-related information that is self-disclosed is kept confidential.

Additional Resources

ADA National Network.

The ADA National Network is a national network of 10 regional ADA Centers that provides the most complete and experienced services for up-to-date information, referrals, resources and training on the ADA to businesses, employers, government entities and individuals with disabilities.²

Job Accommodation Network (JAN).

JAN is a free consulting service designed to increase the employability of people with disabilities by providing individualized worksite accommodation solutions and technical assistance regarding the ADA and other disability-related legislation.³ JAN's Accommodation and Compliance Series is designed to help employers determine effective accommodations and comply with the ADA. This document specifically addresses workplace accommodations for individuals with LD.⁴

2 <http://www.adata.org/index.html>

3 <http://www.jan.wvu.edu>

4 <http://www.jan.wvu.edu/media/ld.html>

Specific Learning Disabilities Determination and Legal Issues.

The National Research Center on Learning Disabilities (NRCLD) conducts research on the identification of LD; formulates implementation recommendations; disseminates findings; and provides technical assistance to national, state and local constituencies. The organization's Web site has a wealth of information on trends and issues on the identification of LD as well as information on how specific laws apply to individuals with LD.⁵ LD definition example: *SLD Definition Overview*.⁶ Legal issues example: *Understanding the Americans with Disabilities Act Amends Act and Section 504 of the Rehabilitation Act: The Impact on Students with LD and AD/HD*.⁷

5 <http://www.nrclcd.org/topics/sld.html>

6 http://www.nrclcd.org/resource_kit/tools/SLDOverview2007.pdf

7 <http://www.nclcd.org/publications-a-more/parent-advocacy-guides/understanding-the-americans-with-disabilities-act-amendments-act-and-section-504-of-the-rehabilitation-act>

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Chapter 2

Self-Determination

Setting the Context

Simply stated, self-determination is the development of personal characteristics, knowledge and skills needed to take responsibility for and control of one's actions. Self-determination is connected to positive adult outcomes, is teachable, and is valued by individuals with learning disabilities (LD) and their family members, employers and teachers (Mooney & Silver-Pacuilla, 2009). The ability to act as a self-determined individual is important for all adults. This ability can be jeopardized when

individuals feel they do not have the skills, power or control to assert themselves for their own benefit. Incorporating experiences to develop self-determination is an evidence-based intervention that can improve adult life outcomes for individuals with LD (Malian & Nevin, 2002) and can be used in adult education and related adult services.

What Is Self-Determination?

Self-determination is a combination of skills, knowledge and beliefs that enables a person to engage in goal-directed, self-regulated, autonomous behavior. An understanding of one's strengths and limitations together with a belief in oneself as capable and effective is essential to self-determination. When acting on the basis of these skills and attitudes, individuals have greater ability to take control of their lives and assume the role of successful adults in our society (Field, Martin, Miller, Ward, & Wehmeyer, 1998, p. 2)

This definition contains two crucial concepts to guide the work of adult service providers:

1. **What is meant by “self-regulation”?** Self-regulation is an important characteristic that supports independent functioning. It is based on individuals' ability to use their knowledge and skills to set goals and plan, perform and evaluate their performance on tasks. Self-regulation also includes the ability to assess their performance

prior to task completion in order to make needed adjustments “en route” for success. This has important implications for teaching adult education students how to learn and perform in both educational and work environments.

2. **What is meant by “autonomous”?** Autonomous behavior means that a person engages in activities that reflect his or her pref-

erences, interests or abilities and is independent, that is, free from undue external influences (Wehmeyer & Field, 2007). Although “autonomous” implies independent action, the concept also recognizes that healthy adult life is interdependent. Most people make it through life with support and reciprocal relationships with friends, families and co-workers. Such reciprocal relationships are particularly important for adults with LD, who must find ways to work around their specific areas of need. Most important, reciprocity means that the members in the relationship each bring important areas of competence to share.

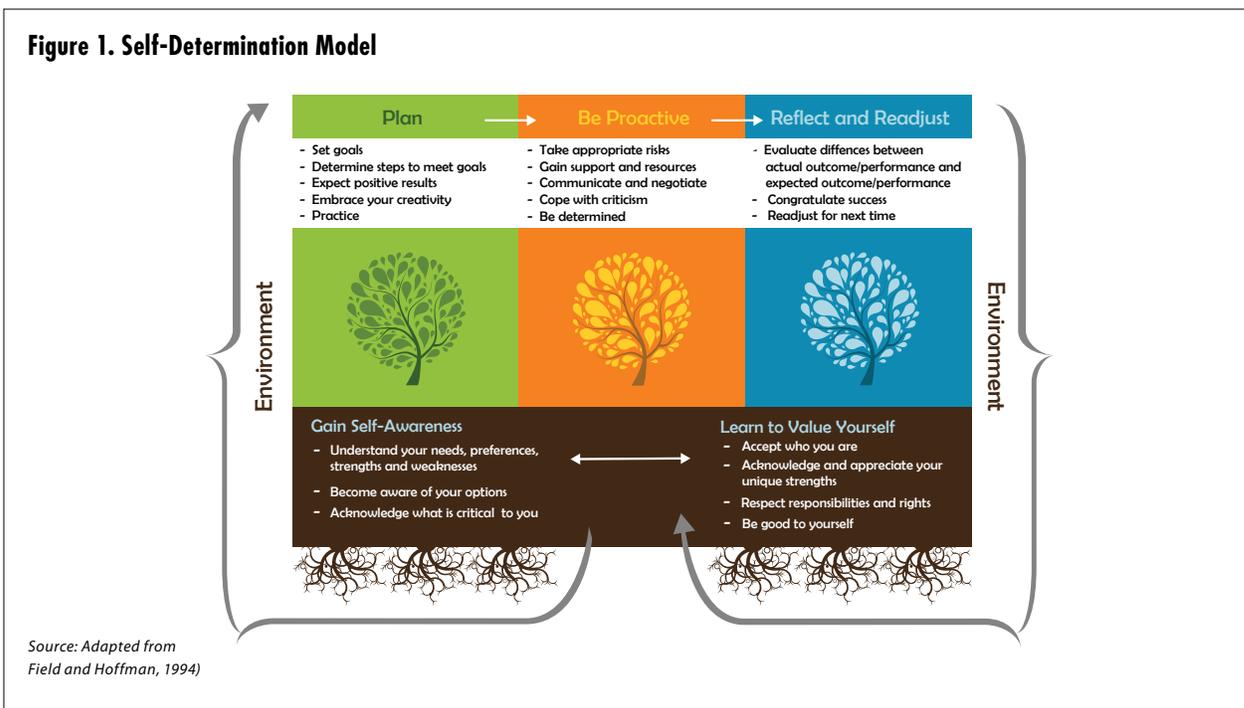
Although much has been written about the importance of self-determination, one model is particularly helpful to educators seeking guidance on how to incorporate self-determination into their work. This model for self-determination is supported by an extensive

research base (Field & Hoffman, 1994) and identifies six main areas for intervention:

1. Gain self-awareness
2. Learn to value yourself
3. Plan
4. Be proactive
5. Reflect and readjust
6. Manage the environment

As depicted in Figure 1, two attributes are the foundation of self-determination: gaining self-awareness and learning to value oneself. With this foundation, individuals can then develop the essential skills of planning, being proactive in their communications and reflecting in order to experience the outcomes of their actions and to learn from both successes and challenges. The final component of the model surrounds the entire image and addresses the environmental characteristics that can either inhibit or promote the development of self-determination.

This model can be both a conceptual and practical guide to structuring learning for all adults who struggle with learning.



Why Is Self-Determination Important for Adults with LD?

The development of self-determination is important for successful adult adjustment of individuals with LD (Tilson & Hathaway, 2010). Many adults with LD, diagnosed or not, have experienced unresolved challenges and failures because of their LD. For example, some individuals may have received too much help and assistance, which sends the message that they are not capable and should be dependent on others. These experiences can negatively affect motivation and confidence to pursue and succeed in education and employment. Individuals with LD have the legal right to request and

receive reasonable accommodations if they are willing to self-disclose their disability. In most instances it takes more than self-disclosure to negotiate accommodations (Gerber & Price, 2005). Individuals must be able to self-advocate by explaining their strengths and needs in order to receive appropriate accommodations. Effective self-disclosure and self-advocacy requires self-knowledge, self-confidence and communication skills. Adult service providers can assist in the development of these attributes by integrating the development of self-determination into their intervention goals.

What Practices Can Promote Self-Determination for Adults with LD?

There are three basic ways to incorporate self-determination into adult education. One way is to use a curriculum that directly teaches self-determination skills. A second way is to infuse activities that address one or more areas of self-determination into a learning curriculum. A third way is to design instruction to integrate explicit instruction and use of accommodations to enhance learners' ability to succeed in the teaching-learning process (Gerber, 2009; Gregg, 2009; Hock, 2009; Swanson, 2009). Each strategy offers a benefit to the individual with LD.

1. DIRECT TEACHING OF SELF-DETERMINATION

Adult education programs have embraced the importance of directly teaching self-determination skills that are applicable to all students. For example, the University of Tennessee Center for Literacy Studies, in partnership with the Tennessee Department of Human Services, has developed a 27-lesson study skills course that teaches an array of self-determination skills such

as goal setting, communication processes and stress management. This curriculum focuses on laying a foundation of self-determination skills before teaching important classroom learning strategies such as reading and writing strategies. See Sample 1 in the appendix for an example lesson.

Many other curricula also specifically address the self-determination needs of individuals with LD and other disabilities. Although most of these curricula focus on youth transition, the content and processes can be adapted for adult education programs. Most self-determination curricula directly teach one or more of the following (Test, Karvonin, Wood, Browder, & Algozzine, 2000):

- Self-awareness
- Choice/decision making
- Goal setting/attainment
- Problem-solving

- Self-evaluation and self-reinforcement
- Self-disclosure and self-advocacy
- Relationships with others

Sample 2 provides an example of how to teach disability self-disclosure.

2. INFUSION OF SELF-DETERMINATION ACTIVITIES

The structure of adult education programs does not always allow for directly teaching self-determination skills. Whether these skills are taught directly or not, instruction can be designed to infuse self-determination development into the teaching-learning process. Many of the activities listed in this section were recommended by Wehmeyer and Field (2007) and are based on the self-determination model in Figure 1.

Gain self-awareness.

A self-determined individual knows his or her strengths, needs and preferences. Examples of related activities include the following:

- Ask learners to identify their areas of strength based on different types of intelligence (e.g., visual-spatial).¹
- Use sentence starters that help students reflect on who they are:

I am proud of ...

I really enjoy ...

A place I would love to see ...

One dream I have is ...

One activity I don't like is ...

One activity I like is ...

I try to avoid ...

Learn to value yourself.

A self-determined individual accepts his or her profile of strengths and needs and can identify how it positively and negatively influences his or her life. Self-determined individuals can identify people in their lives who either contribute to or negatively challenge their sense of well-being. Examples of related activities include the following:

- Use examples of individuals who have overcome challenges to be successful (e.g., the Beatles were initially turned down for a recording contract; Michael Jordan was cut from his high school basketball team).²
- Invite students to share their relevant experiences related to study topics in order to demonstrate their self-value.
- Communicate to students that you value their effort and contributions.

Plan.

A self-determined person sets long- and short-term goals and then makes plans to achieve those goals. Examples of related activities include the following:

- Give students a task (e.g., evaluating Internet dictionaries) and have them develop a plan on how to complete the task and report on it.
- Give students a long-term assignment and have them develop a plan and time line to accomplish it (see Sample 3, taken from the same curriculum as Sample 1).
- Provide a format for students to set a goal in relation to course objectives and how to monitor their progress.
- Demonstrate planning by teaching students a step-by-step process to follow to accomplish learning tasks.

¹ Strengths assessment: <http://literacyworks.org/mi/assessment/findyourstrengths.html>

² Stories of famous failures: http://www.associatedcontent.com/article/1163465/inspirational_stories_of_famous_failures.html

Be proactive.

A self-determined person has a range of effective communication skills and uses these skills to build supportive relationships. Examples of related activities include the following:

- Teach a variety of oral and written communication skills.
- Use role playing to practice appropriate communication skills.
- Provide students with choices on ways to accomplish tasks.
- Help students practice using accommodations.

Reflect and readjust.

Self-determined people are able to compare their actual performance with their desired performance. When desired results are achieved, self-determined individuals are able to identify reasons for success. When desired results are not achieved, self-determined individuals are able to learn from their mistakes and make changes. Examples of related activities include the following:

- Show learners how to monitor their progress (e.g., keeping track of number of pages read, number of math problems solved).
- Use a problem-solving model to analyze how to break a real-life problem apart and identify ways to solve it. One example is to teach the IDEAL acronym: I = identify the problem, D = define and represent the problem, E = explore possible strategies, A = act on the strategies, L = look back and evaluate the effects of your actions (Smith, 1995).³
- Identify anticipated and unanticipated barriers when success is not achieved.
- Celebrate successes.

Manage the environment.

Environments that foster self-determination allow students to make choices and provide feedback on how they are experiencing the teaching-learning process. The environment is structured so that students are learning about their strengths and needs and how to work with these to optimize their learning. Examples of related activities include the following:

- Provide clear objectives for activities.
- Explain and demonstrate steps students can follow to accomplish learning tasks.
- Provide timely and specific feedback.
- Allow students to provide specific feedback to their teachers on how well the structure of a class is meeting their needs.

3. INTEGRATION OF EXPLICIT INSTRUCTION AND ACCOMMODATIONS

Explicit instruction.

Explicit instruction means directly and systematically teaching students how to engage in learning strategies linked to school or work success. Explicit instruction is based on task-analyzing important academic or work activities such as solving math problems, figuring out unfamiliar words, interpreting directions or taking notes. Once the task is identified, a series of steps is developed for the learner to follow. Key teacher behaviors include providing clear explanations, modeling the strategy steps, practicing with the learner, and providing positive and corrective feedback (Hock, 2009). Explicit instruction is effective because it provides a structure and organization for both the teacher and learner. This structure provides a guide that learners can use to plan, monitor and evaluate their performance. Once learners know how to use this structure, they are better able to self-regulate their learning, which is important, as the definition of self-determination indicates. Chapter 4 provides detailed information on explicit instruction.

³ IDEAL Problem Solving Model: <http://www.nwlink.com/~donclark/hrd/acron.html>

Figure 2. Testing and Instructional Accommodations

<i>Testing Accommodations</i>	<i>Instructional Accommodations</i>
Private room	eText
Quiet room	Books on tape
Extended time	Note-taker
Scheduled breaks	Digital/tape recorder
Speech to text	Strategy and accommodation
Word prediction	Text to voice
Reader	Voice to text
Interpreter	Outline/Web software
Text to speech	Screen magnification
Word processor	Computer access devices
Proofreader	Modified keyboard
Spell-check	Listening devices
Talking word processor	mp3 player
Print/computer thesaurus	Extra time
Word bank	Private room or space
Nonprogrammable calculator	Embedded text
Formula sheet	Hypertext/hypermedia
Write directly on test	Word processor
Written instructions	
Computer access devices	
eText	
Modified keyboard	

Source: Gregg (2009)

Accommodations.

Accommodations are alterations to instruction, testing or work situations that allow an individual access to or demonstration of knowledge without changing the standards or expectations (Gregg, 2009, p. 150). While most teachers are familiar with a range of instructional approaches, which may include explicit instruction, many may be less familiar with the range of accepted testing and instructional accommodations. Figure 2 provides a list of these accommodations.

For accommodations to be effective, they must directly support a learner’s specific area(s) of need.

Understanding the relationship between specific accommodations and an individual’s learning profile is an important part of maximizing the effectiveness of any accommodation. This information should be available as part of disability documentation. In addition, teachers can explore with learners their experience with using accommodations.

Identifying appropriate accommodations is only the first step in the process. Explicit instruction to teach a learner how and when to use an accommodation is essential. For example, a student with a reading disability may benefit from the use of audio texts. Merely providing a student with an audio book is probably not enough. The student will need to develop listening comprehension strategies as well as learn how to regulate the audio technology (i.e., voice speed). Likewise, providing extended time is most beneficial when the student has learned how to plan for and structure the additional time (Gregg, 2009). How to help students learn how to use accommodations is dependent on a program’s resources. When working with students with identified LD, you can discuss the following questions to help guide their use of accommodations:

- What accommodations have you used or have been recommended for you to use?
- What experience have you had with each accommodation including your successes and concerns?
- What accommodations fit into this situation?
- How can I help you use the accommodation(s)?
- What can we do to troubleshoot your use of the accommodation(s)?

Sample 4 shows an Accommodations Selection Record that lists information you and a student can collect to guide and document accommodation usage.

Summary

Self-determination is the development of personal characteristics, knowledge and skills needed to take responsibility for and control of one's actions.

Adults with LD may struggle to develop self-determination because of unresolved challenges and previous failures resulting from their LD.

For adults with LD, the development of self-determination includes self-disclosure and self-advocacy.

Self-determination can be incorporated into adult education through teaching self-determination curricula, infusing self-determination skill development into academic activities and integrating explicit instruction and accommodations into classes.

Additional Resources

Life Success for Students with Learning Disabilities: A Parent's Guide. This guide is based on more than 20 years of research conducted by Marshall Raskind and Roberta Goldberg at the Frostig Center in Pasadena, Calif. The research traced the lives of individuals with LD in an attempt to identify factors that predicted successful life outcomes.⁴

4 <http://www.ldssuccess.org/pdf/LifeSuccessParentGuide.pdf>

Adult Learner Goals Toolkit. Instruments for setting goals, exploring feelings about goal work, revisiting goals and celebrating goal achievement. This 2004 document contains a variety of instruments teachers and learners can use for four phases of goal work: setting goals, exploring feelings around goal work, revisiting goals to show progress or revise the goals and celebrating goals.⁵

5 <http://www.cde.state.co.us/cdeadult/download/pdf/GoalsToolkitR.pdf>

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SAMPLE 1: "TAKE RESPONSIBILITY FOR LEARNING" LESSON

Take Responsibility for Learning

Overview: This lesson is focused on the Equipped For the Future Standard *Take Responsibility for Learning (TRL)*. This is a foundational standard that can be used in all *Learning Skills* lessons. Students will learn that they are responsible for their learning and identify their strengths and weaknesses as a learner. They will be asked to identify and use strategies to help them reach their goals and to monitor their progress toward their goals.

Educational Goal: The objective of this lesson is for each learner to (1) Comprehend what *Take Responsibility for Learning* is and how it works and (2) Respond positively to the standard and value it enough to see how it can be applied in their everyday lives and goals.

Objectives:

Cognitive: Learners will:

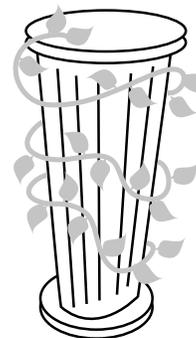
- Explain what *TRL* is and each of its components.
- Identify strategies to reach their goals.

Affective: — Participate in classroom discussion.

- Begin to see the value in taking responsibility for learning and predict how they can use it in their everyday lives and goals.

Skill Standard Connection: This lesson links to future lessons by introducing students to the skills they need in order to take independent action and learn how to learn. This skill will help prepare students to adapt in a changing world. Many learners come back to school without a full understanding of what it takes to become a successful learner. They need to understand that what they need to learn and what they do to learn are different. This lesson has connections to the Tennessee KSA – *Do the Right Thing*; the GED – *To Achieve*; and the EFF Standard – *Take Responsibility for Learning*. (Appendix II)

Teaching Strategy: Use the Read, Write, Discuss model to teach this lesson. Teaching students the skills they need to become lifelong learners links this lesson to future lessons.



Time: 1 hour

Teacher Materials:

- EFF *Take Responsibility for Learning* Standard
- EFF Framework Poster
- 3A's Visual
- Academic Survival Guide (information source on page 123)

Learner Materials:

- Learner Note Taker
- EFF *Take Responsibility for Learning* Standard
- Pre- and Post-*TRL* Survey

Take Responsibility for Learning LESSON 4

Pre-Survey
Take Responsibility for Learning

What does it mean?

Why is it important?

How can I use it?

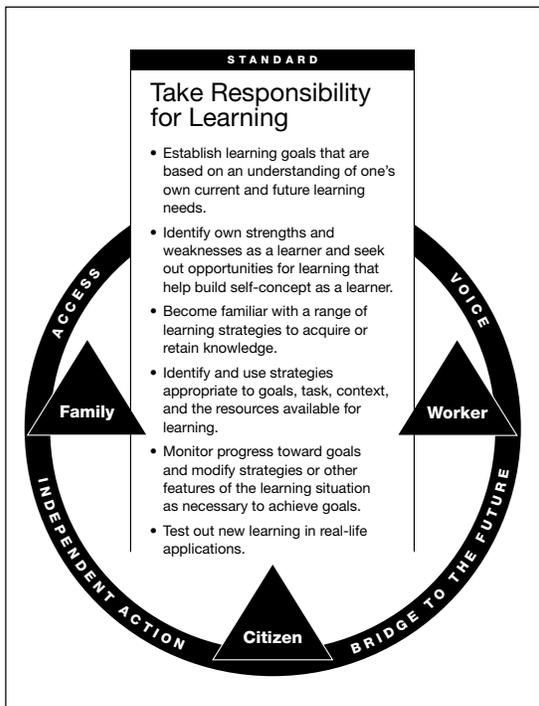
LEARNING SKILLS 281

This lesson will begin with a pre-survey to determine the students' prior knowledge (in Appendix I). Students will be asked to tell what *Take Responsibility for Learning* means, why it is important and how they can use it. Learners will be expected to build on their prior knowledge and understanding while using their previous experiences and opinions about learning throughout the lesson. The 3A's = Success visual will be used to focus students' attention on attendance, attitude, and achievement. The visual should be posted in the room.

Introduce the topic and ask students to reflect on their past actions and practices associated with the standard. Give each student a copy of the Standard, *Take Responsibility for Learning* (in Appendix I). After a brief discussion, ask students to take turns reading portions of the standard and components. After each element has been read, allow time for discussion, input, and understanding. Learners will begin to see how learning is an independent effort as much as a team effort. Teachers and learners should work together to identify needed skills.

The Read, Write, and Discuss model will be used throughout the lesson. As student discuss the topic, write their comments on the board. Ask students to take notes about the topic.

Two of the EFF Purposes for learning—*Independent Action* and *Creating a Bridge to the Future*—are key concepts in this lesson. Learners should begin to see the importance of independent achievement and at the same time value guidance and support from others when needed and accepted. Continue leading learners through a guided discussion about the standard handout and what it means. End the lesson with learners' giving a summary of taking responsibility with specific examples. Using the same questions from the pre-survey, give a post-survey to measure the growth in learning.



Lesson Plan

Introduction

Homework Review

Thought for the Day

“All rising to great places is by a winding stair.”

—*Frances Bacon*

The future is yours, so embrace it. You may not know what the road ahead has to offer, but you can prepare yourself to achieve. Remember to carefully and thoughtfully take it step by step. Reaching your goals can be challenging. You may encounter several twists and turns. But in the end you will have succeeded.

Attention: Today you will learn a skill that will allow you to become more independent and able to change as the world changes around you. In order to be successful as parents or family members, citizens and workers, we must be able to take responsibility for our own learning. This is a skill that you can use for the rest of your life.

Motivation: The EFF Standard, *Take Responsibility for Learning*, is an EFF Lifelong Learning skill. If we are going to keep up in the 21st century we need to set goals, identify our strengths and weaknesses, collect a series of strategies to help us acquire knowledge, use those strategies, monitor our progress, then try out the new things we learn in real-life situations. In order to keep pace with change, we must always be learning.

The skill we are learning today will build a strong foundation for your growth and independence. So, let's look at the Standard, analyze what it means, then identify how we can use it.

Overview: You have made the decision to return to school to improve your education and achieve your goals. This lesson will give you the strategies to use to reach your goals. It also lays the foundation for your future. This is a skill that asks you to take action. If you take action you will become an independent learner who knows how to learn and who will be able to change as the world changes.

Teaching Tip



Begin each day with a review of the previous day's homework. Allow 15-20 minutes to review the homework.

Then begin the “Thought for the Day.” Give students time to answer the four questions. Then discuss the “Thought for the Day.”

Body of Lesson

Main Point 1. What Is *Take Responsibility for Learning*?

Taking responsibility is doing away with excuses for not performing. It is accepting that you must take action or make a change. In order to take responsibility for learning, adults need to be able to understand their learning style and the styles of others, value differences between individual styles, and learn from these differences. You need to be able to identify your strengths and weaknesses, identify strategies for learning, and know when existing strategies are not working or when they are challenged.

When learners takes responsibility for their learning they are using all of the components listed above.

Question: Who is responsible for your learning?

— (*Record student responses on the board.*)

Taking responsibility for learning includes the learner as well as the teacher. It is always a good idea to ask, “What am I doing to learn as much as I can?”

Question: Can you think of a way that you have taken responsibility for your learning?

Those are all ways that we take responsibility for learning. The components that we read are a kind of check-off list that a person can use in order to see if he or she is doing everything possible to take responsibility for their learning. Let’s take a deeper look at the components.

Main Point 2. The Five Components of the *Take Responsibility for Learning* Standard

Now let’s take a closer look at the five components of the skill. (Read the components and discuss.)

- A. Establish learning goals that are based on an understanding of one’s own current and future learning needs.**
- B. Identify own strengths and weaknesses as a learner and seek out opportunities for learning that help build self-concept as a learner.**
- C. Become familiar with a range of learning strategies to acquire or retain knowledge.** There are several different ways to learn something,

not just one. *Example: If I asked someone how to get to Chicago, she could give me one way or several depending on where I am coming from. There are several routes to any destination.* Just like traveling, learning something can be taught and received in different ways. There are options to how you learn something. Everyone learns in a different way. Just like no two snowflakes are alike, neither are people and their learning styles. We all require special and unique strategies. One person may learn best by looking at pictures, while another may need to simply listen to directions.

D. Identify and use strategies appropriate to goals, task, context, and the resources available for learning.

Once you are aware of the different learning styles and strategies, choose one that is best for the learning situation that you are in. No one is better than another, but having several different learning strategies will ensure your growth and learning.

E. Monitor progress toward goals and modify strategies or other features of the learning situation as necessary to achieve goals.

If we are not making progress, then we must ask the question, “Why not?” To achieve our goals we must control the things that might get in the way of our learning. Several things can get in the way of learning. Sometimes other people in our lives can become barriers. Sometimes we can be barriers to ourselves. Barriers might include negativity from others, low self-esteem, a teacher that doesn’t teach to different learning styles or even something as simple as hunger or time barriers. Once we identify what is wrong, we can make corrections in our strategies and get back on course. This requires that we focus on our goals and constantly check to see whether our strategies are working. In order for anyone to learn the best that they can, a person must monitor her progress and make adjustments when necessary.

F. Test out our new learning in real-life applications.

Take what you learn in class and apply it in your family life, social life and community. You will want to be able to access your new learning and knowledge readily in a variety of settings and situations. Always try to connect your new learning to something that is significant and realistic to your life and goals. Reviewing what you have learned will help you to increase your ability to use what you have learned in other parts of your life. It is important that you not only understand what you learn, but also see how you can apply it to other parts of your life.

Teaching Tips



(Refer to components at left.)

A. Ask students to identify their learning needs and list them on their Note Taker. Then ask if they have set a goal to meet that need. If they have set a goal, have them record it on their Note Taker. If they have not set a goal to meet their needs, ask them to set a goal now.

B. They will have a more difficult time identifying their strengths. If students have been tested, give them copies of their tests to review and have them identify their strengths and weaknesses on their Note Taker.

C. If students have not had a learning styles assessment, remind them that when they complete the assessment, they will know how they learn best and can begin to identify strategies that will help them acquire new knowledge. Discuss with them how they feel they learn best. Many students already know what works best for them.

D. You may have to help students identify learning strategies that will help them. Make sure that they understand you are available to assist them in identifying appropriate strategies. There are many books available to help students learn different strategies.

Teaching Tip



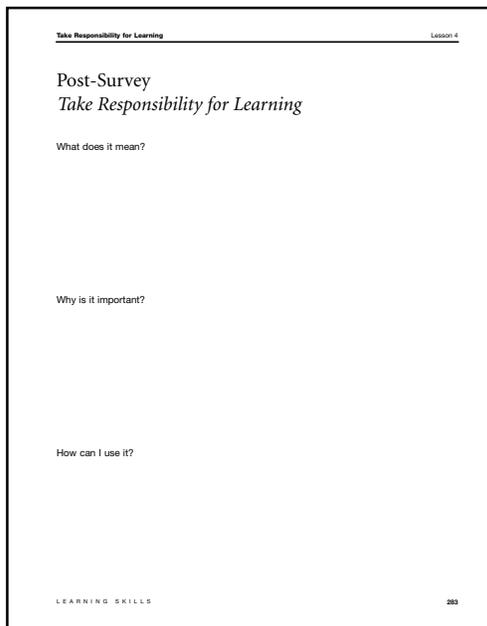
Have learners verbally summarize what they have learned from this lesson.

Ask students to explain what *Take Responsibility for Learning* means and why it is important. Ask them to give examples of how they may begin to incorporate it into their daily lives. Allow time for questions and answers or comments from the group.

Main Point 3. Purpose of Taking Responsibility

Taking responsibility for learning (TRL) prepares us for the unexpected and for the future. The following are reasons for taking responsibility for learning.

- A. Adapt to or prepare for change**—Change is bound to happen throughout your educational experience and life. TRL can help you be proactive instead of reactive.
- B. Respond to new challenges**—Be motivated and up to the unknown. Resistance to change is almost always a dead-end street. Take personal responsibility for adapting to change.
- C. Gain information**—Try to get all the information that you can about the subject. Learn how and where to access it.
- D. Help make decisions and take action**—TRL will help you to make better decisions when solving problems or planning. TRL can help you to be in control of the situation.
- E. Achieve goals**—TRL can empower you to get where you want to be by helping you to realize where you are and what it will take to succeed.
- F. Perform one’s responsibilities**—You are the owner of your learning. What you will learn and be able to do is mainly up to you.



Conclusion

Give students the Post-Survey (in Appendix I).

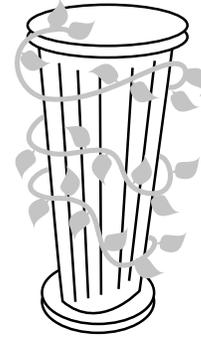
Summary: *Take Responsibility for Learning* means that you have decided to take charge of your life and become independent. It means that you have: (1) Set goals, (2) are aware of your strengths and weaknesses, (3) have a range of learning strategies, (4) use those strategies, (5) monitor your progress and make changes when necessary, and (6) test out your new learning in real-life applications.

Re-Motivation: *Take Responsibility for Learning* is a very important skill to understand and be able to apply in order to become a more successful lifelong learner. When you take responsibility for your learning, you will become more aware of what you need to do to improve and can measure your own growth in learning. You

will have entered the race with no finish line. But you now have the knowledge to help you have a successful race.

Close: Continue to learn about yourself, master yourself, and improve yourself. When you do this you will create your own future.

Learner Note Taker: *Take Responsibility for Learning*



Main Point 1. What is *Take Responsibility for Learning*?

Main Point 2. The five components of *Take Responsibility for Learning*...

Main Point 3. The purpose of *Take Responsibility for Learning*...

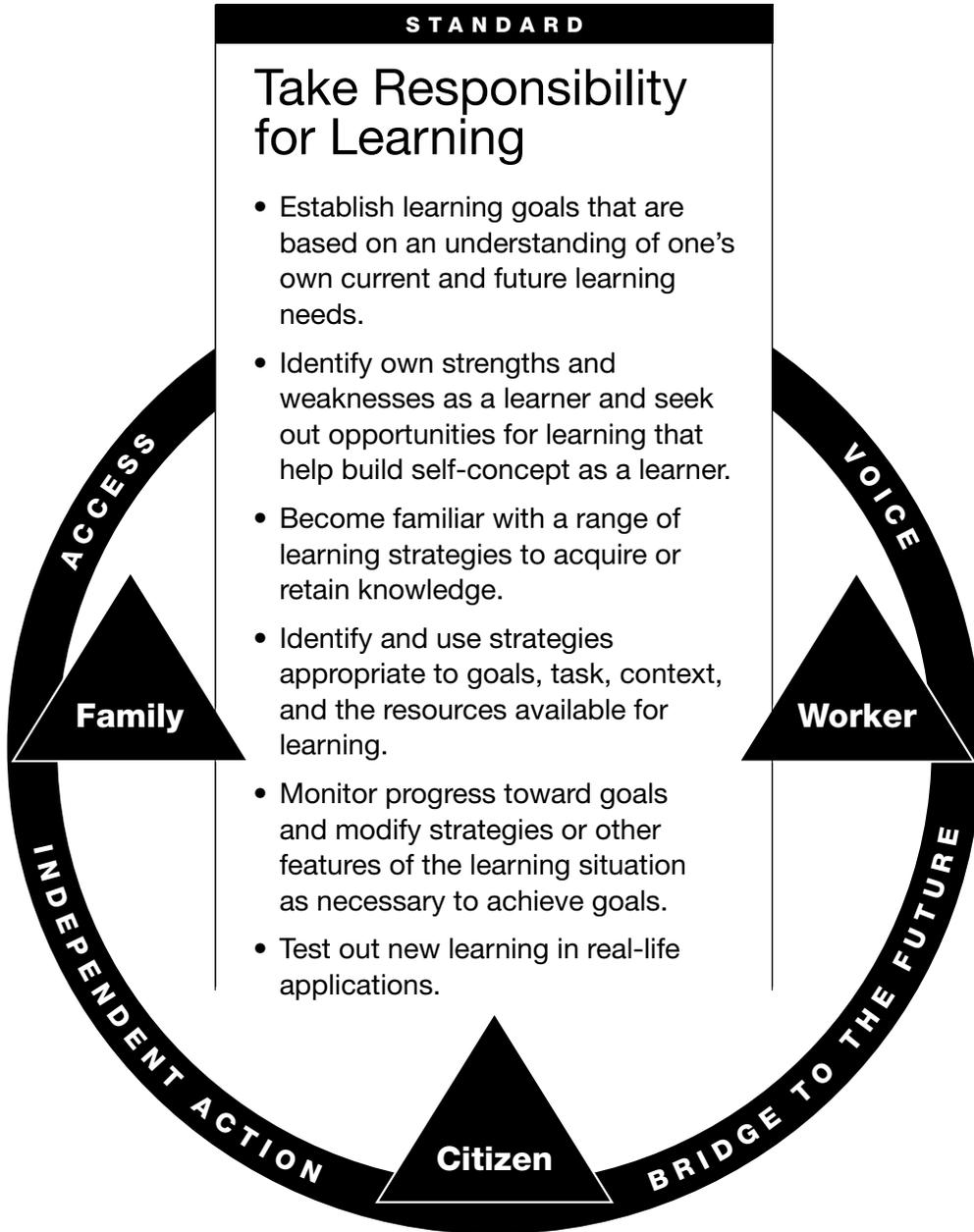
Pre-Survey

Take Responsibility for Learning

What does it mean?

Why is it important?

How can I use it?



Post-Survey

Take Responsibility for Learning

What does it mean?

Why is it important?

How can I use it?

SAMPLE 2: UNIT ON SELF-DETERMINATION (FIELD AND HOFFMAN, 1994)

Unit 1:

Self-Determination...

the BIG Picture

PURPOSE



The purpose of Unit 1 is to introduce you to the process and the value of self-determination: making informed decisions through reflecting on and building on your strengths. Terminology provided in this unit will help you better understand the topic of self-determination. A questionnaire will help you examine your strengths in the area of self-determination and to consider some skills you would like to enhance. We strongly suggest that you read the discussion section on page 1-3.

TERMINOLOGY



You may know some of these words already, or you may have just heard them in passing. First, define these words as you understand them. Then, check your definitions against the glossary located in the back of this workbook. Here are the terms used in Unit 1:

Accommodation	Goals (long-term and short-term)
Informed choice	Respect
Self-determination	Values

Accommodation _____

Goals (long-term and short-term) _____

Informed choice _____

Respect _____

Self-determination _____

Values _____

NOTES





DISCUSSION



One of the key ways that adults define themselves and develop a sense of identity is through the many choices they have made throughout their lives. Young people as well as adults often struggle with the responsibility of making good decisions, oftentimes without accurate and complete information.

Teenagers make important choices such as choosing a part-time job, deciding which classes to take, selecting someone to date, and deciding what to do in their free time. These decisions aren't always easy. Although some of these decisions may only have short-term effects, other decisions will affect your life in the long term. You will make some of these decisions on your own, while you'll make other decisions in partnership with parents, friends, teachers, or advisors. Remember that some decisions must be made without having all of the necessary information available. Not all decisions can be well supported, but it's important to try to make the most informed decision.

Youth are rarely taught about **informed choice** while in high school. **Informed choice is the process of making a decision after considering relevant facts and weighing the pros and cons (positives and negatives) of the decision.** Making informed choices is a skill that must be practiced, encouraged, reflected upon (or thought about), and then practiced some more in order to be acquired. This process requires you to collect information before making a decision. You may be given information or you may research information on your own (perhaps by going online or talking to people).

◆

Self-determination is the desire, ability, and practice of directing one's own life. It is often referred to as "The BIG Picture" because it has so much to do with the person you are and the person you want to be.

◆

Informed decision-making is a skill that you will benefit from many times in your life when you are required to make crucial decisions.

Self-determination is the desire, ability, and practice of directing one's own life. It is often referred to as "The BIG Picture" because it has so much to do with the person you are and the person you want to be. You can think of it as an umbrella that covers the very important and personal matters that make up you. A self-determined person can set goals, make decisions, see options, solve problems, speak for him or herself, understand required supports, and evaluate outcomes (Martin & Marshall, 1996). Being a self-determined person helps you to make important choices and informed decisions in your life based on your abilities, interests, and attitudes. Self-determined people accept themselves, respect themselves, and **value** themselves for who they are and what they have to offer to others.

When people are self-determined, they can more easily identify their short-term and long-term personal **goals**. Sometimes short-term

goals are steps you take to get to your long-term goal. In addition, self-determined individuals understand that some personal goals (whether short-term or long-term) can be reached independently, while also recognizing that all people seek out others to help them achieve all their goals. **Self-determination empowers people to seek assistance when needed.**

One important decision that many young people face is whether or not to disclose their disability. The decision to disclose a disability belongs solely to the person with the disability. Disability disclosure is a very personal choice and should definitely be an informed choice. If you have a disability, **there are no requirements that you disclose your disability to anyone at any time**, but in order to receive accommodations at work or in school, you must disclose.

If you do not require **accommodations**, it is generally not necessary to disclose. A self-determined person with skills in making informed choices will be better equipped to

make this important decision about disclosure after trying some of the strategies like weighing the pros and cons and considering all the facts. If you decide to disclose your disability after thoughtful reflection on the subject, it is important to practice disclosing effectively with people whom you **respect** and trust, and who know you and your strengths well.

It's not easy to share information about your disability with others. This workbook was created to help you make an informed decision about whether or not to disclose information about your disability and to prepare you to disclose information about yourself and your disability in an effective manner if necessary.

Complete the questionnaire on the following page to see just how much you know about yourself and your disability. Your answers can lead to an interesting discussion about your strengths and limitations, and how to accentuate and improve your skills in certain areas.



ACTIVITY:**JUST WHAT DO YOU KNOW ABOUT YOURSELF AND YOUR DISABILITY?**

Complete the questionnaire below.

For each question, check the box (Yes, Sometimes, or No) that best describes yourself

Questions	YES	SOMETIMES	NO
1. Do you know what you do well in school?			
2. Do you know what you do well outside of school?			
3. Can you easily explain your skills and strengths to other people?			
4. Do you know how you learn best?			
5. Do you inform your teacher how you learn best?			
6. Do you inform your employer how you learn best?			
7. Do you ask for help when you need it?			
8. Do you take responsibility for your own behavior?			
9. Do you feel proud of yourself?			
10. Do you set long-term and short-term goals for yourself?			
11. Do you create lists for yourself to help you achieve your goals?			
12. Are you present at your own IEP or 504 meetings?			
13. Do you participate in your own IEP or 504 meetings?			
14. Do you disclose your disability to others?			
15. Do you like the reaction you get when you inform someone about your disability?			
16. Do you practice disclosing your disability to others?			
17. Do you describe your disability differently depending on the setting or the people?			
18. Are there times you choose not to tell someone about your disability?			
19. Do you know what "reasonable accommodation" means?			
20. Do you know what accommodations you need in school in order to be successful?			
21. Do you know what accommodations you need on the job in order to be successful?			

Questions	YES	SOMETIMES	NO
22. Do you practice asking for the accommodations you need in school?			
23. Do you practice asking for the accommodations you need on the job?			

If you answered **YES** to many of the questions, you should be very proud of yourself! You definitely have a good sense of yourself and your disability. This means you're on the road to being a very self-determined individual! Of course you realize that there will always be room for improvement. Reflect on the questions you answered with a **NO**, and create some short-term goals designed to strengthen your areas of limitations.

If you answered **SOMETIMES** to many of the questions, you possess some very good skills in understanding yourself and your disability, but you have some specific areas that need to be developed. Once you have identified your strengths (the questions you answered with a **YES**), list the other areas that

need work (the questions you answered with a **NO**) and prioritize them. Decide which areas of need are most important to focus on right now, and create some short-term goals to begin to strengthen your weaker spots.

If you answered **NO** to many of the questions, you are at the beginning stage of understanding yourself and your disability. Take the next step and seek out others whom you trust and who know you well; ask them to help you sort out your areas of strengths and needs (you probably have more strengths than you realize). Share the results of the questionnaire with these individuals and ask them for assistance in developing some short-term goals for the purpose of gaining a better understanding of yourself.

NOTES





ACTIVITY: SELF-DETERMINED SHORT-TERM GOALS



Areas of need can be turned into areas of strength if you make a conscious effort and understand that this transformation won't happen overnight. Look over the results on the questionnaire and determine the areas you need to work on. Then develop three short-term goals that address these areas of need. Read the example below before completing the activity.

Remember, the only goal you can't achieve is the one you don't attempt!

Example:

If you answered NO to Question #1 ("Do you know what you do well (what your strengths are) in school?"), you may need to reflect on your areas of strengths and get input about your strengths from others who are familiar with you, such as your friends, parents, coaches, teachers, and employers. Make a list of the strengths they mention and select three of these strengths to develop goals around.

For example, Mira has identified her strengths in the areas of math, computers, and art. She has also identified her area of need as explaining her disability.

Now, keeping these strengths in mind (for example, math, computers, and art) answer the following questions:

Question 1: How can I use my strengths to improve my areas of need?

Answer #1: Mira has difficulty describing her disability in writing or words (area of need), but she can use her artistic abilities to explain her disability through images. This would also show people that while she has a disability in some

areas, she still excels in other areas such as art.

Question #2: What short-term goals can I develop to highlight these strengths?

Answer #2: Mira can join an extracurricular activity, such as the school newspaper or volunteer to maintain the school website, or design sets for school plays.

Question #3: How can I use these strengths to reach my employment goals?

Answer #3: She can research which careers need people with strong skills in math, computers, and art. She may look into the graphic arts career field that interests her and highlights her skills. Maybe she can find a part-time job or internship in an art store or information technology firm.

Question #4: How can I use these strengths to reach my social goals?

Answer #4: Mira would like to broaden her circle of friends, but she finds it difficult to meet new people. She will try to meet a few new people in her extracurricular activities and at her part-time job who have similar interests. She could also invite someone to an art exhibit.

Question #5: How can I use these strengths to reach my academic/educational goals?

Answer #5: Mira wants to improve her grades in English class this semester. She could improve her grade by talking to her teacher about using her artistic or technical skills to supplement her writing assignments or using these skills to aid in writing her final assignment.

Now, you try:

List your strengths noted on the questionnaire and any other strength you have identified.

Talk with others and list the strengths that they mention. _____

Select three of these strengths to focus on in this activity.

1. _____

2. _____

3. _____

Focusing on these three strengths, answer the following questions:

Question 1: How can I use my strengths to improve my areas of need? _____

Question #2: What short-term goals can I develop to highlight these strengths? _____

Question #3: How can I use these strengths to reach my employment goals? _____

Question #4: How can I use these strengths to reach my social goals? _____

Question #5: How can I use these strengths to reach my academic and educational goals? _____

SAMPLE 3: GOALS WORKSHEET

Goals Worksheet

My Goal Is _____

The diagram consists of a large circle divided into four equal quadrants by two curved lines that meet at the center. The quadrants are labeled: 'Act' in the top-left, 'Plan' in the top-right, 'Do' in the bottom-right, and 'Study' in the bottom-left. A vertical line extends upwards from the top of the circle, and a horizontal line extends to the left from the left side of the circle. A vertical line also extends downwards from the bottom of the circle.

SAMPLE 4: ACCOMMODATION SELECTION RECORD (NOEL GREGG, 2009)

Accommodation Selection Record

This form is completed by the learner and instructor. The information serves as a written record for the learner's future reference. Such documentation may be important for other occasions on which the learner may need assistance in obtaining accommodations (e.g., testing, educational, or employment settings).

Learner Goal Statements

Personal Strengths

Resources Available and Needed

Accommodation Options

Characteristics for Selecting Accommodations

Accommodation(s) Selected

Accommodation Usage

(Notes about learning the accommodation)

Accommodation Monitoring

Date

Observations

<u>Date</u>	<u>Observations</u>
<hr/>	<hr/>

Accommodation Outcomes

 Did the accommodation improve access or performance?

 Will the accommodation be useful in other community and employment settings? How?

Program Notes

Chapter 3

Explicit Instruction for Strategy Learning

Setting the Context

Adult education is based on the recognition that adults want to participate in directing their own learning. Given the variety of levels of students in adult education programs, many programs operate using self-paced learning, one-on-one instruction and other models of self-directed learning. Although these instructional arrangements may facilitate the management of learners working at different levels, research on adolescents and adults with learning disabilities (LD) clearly indi-

cates that a more structured teaching approach, known as explicit instruction, is associated with significant learning gains for these students (Hock, 2009; Swanson & Deshler, 2003). Although this model of instruction starts out as teacher-directed, its goal is to develop learners' ability to be successful, self-regulated learners. The good news is that this type of instruction is both a feasible and successful model that can be incorporated into adult education (Mellard & Scanlon, 2006).

What Is Explicit Instruction for Strategy Learning?

Explicit instruction is a multistep model focused on developing learners' ability to engage in both the overt actions and covert thinking skills necessary to perform complex tasks. The complexity of the task depends on learners' skill levels. For example, decoding a one-syllable word can be a complex task for a beginning reader, whereas writing a persuasive essay is a challenging task for someone with more advanced literacy skills. The key to this type of instruction is the active communication and interaction between teacher and student.

- By “explicit” we mean that the teacher clearly defines the learning process and follows a sequenced set of teaching procedures. Explicit

instruction is designed to allow learners to develop clearly defined skills and strategies at their own learning rate by providing extended opportunities for practice and feedback.

- By “strategy” we mean that the aim of the instruction is to engage learners in higher-order thinking skills rather than rote learning. Strategy instruction develops students' ability to engage in thinking processes that support planning, implementing and evaluating their performance on tasks. It focuses on teaching students how to think about and solve problems related to a wide range of school-centered (e.g., reading comprehension) and real-life (e.g.,

assertive communication) tasks with the goal of independent functioning. A strategy is often presented as a series of logical and connected steps for the learner to follow.

In *Learning to Achieve*, four main instructional components that support explicit instruction are identified (Figure 1):

Figure 1. Explicit Strategy Instruction

1. Provide clear explanations:

- Introduce the strategy and explain its steps.
- Discuss context and rationale.
- Use learner-friendly language.
- Connect with previous learning.
- Make sure the student has notes about the new strategy.

2. Model the learning process (I DO):

- Model the strategy by doing—correctly, clearly, concisely.
- Model the skill using “think aloud.”
- Provide an “expert learner” model for students.

3. Engage in scaffolded practice (WE DO)

- Guide practice with feedback.
- Check on understanding and use of skills.
- Engage in short practice exercises with feedback.
- Implement cooperative learning practices when appropriate.
- Problem-solve with individual students as needed.

Engage in scaffolded practice (YOU DO):

- Allow independent practice.
- Monitor student progress and provide feedback as needed.
- Provide practice with a variety of materials.

4. Provide elaborated feedback that is immediate, positive and corrective throughout.

Source: TATC

Why Is Explicit Strategy Instruction Effective for Adults with LD?

Many learners with LD are inefficient processors of information, which challenges their ability to focus on and actively engage in learning tasks. Likewise, LD can be based in memory problems, which can inhibit information and skill retention. These innate problems combined with a history of school failure result in many adults with LD entering adult education programs lacking the confidence and skills to actively engage in learning. This discomfort with formal education can cause individuals with LD to take on passive and dependent learner roles. Explicit instruction addresses these

issues by focusing on improving individuals' ability to successfully engage in learning activities and to subsequently retain what they learn. When explicit instruction is aimed at strategy learning, the ultimate goal is to develop learners' thinking processes to move them from being dependent to independent learners. Such a change can occur when instruction is clearly focused on developing learners' skills and confidence to become self-regulated learners who can plan, monitor and evaluate their own learning. This is a lofty but attainable goal.

What Are the Specific Practices That Are Important in Explicit Instruction for Strategy Learning?

1. PROVIDE CLEAR EXPLANATIONS

The first phase of explicit instruction aims to focus learners' attention on the purpose of the session and the skills or strategy to be learned and helps learners activate their prior knowledge. It can be helpful to begin each session by constructing or reviewing a visual organizer with learners and to reinforce goals and rationales by asking questions to allow learners the opportunity to put information in their own words (Hall, Mellard, & Putnam, n.d.). For example, the following questions could be asked when explaining to a learner why it is important to learn how to take tests:

- What do you know about taking tests?
- What do you want to know about taking tests?
- What did you learn about the test-taking strategy?

Introduce the strategy and its steps.

A strategy consists of a series of logical and related steps that the learner can follow to complete a learning task (see Figure 2). These steps are based on a task analysis of both the observable behaviors and the covert thinking skills involved. When introducing a new skill or strategy, it is important to explain how each step works to help learners develop an understanding of the “how” and “why” of the strategy steps. Effective strategies are often characterized by the following attributes: (1) They are useful; that is, they address a pressing need and can be generalized to other learning tasks and contexts. (2) They have key features, including cues to engage in self-regulating behaviors and an organized and coordinated set of reasonable steps. (3) They are well designed with cues to take overt action; and (4) they are short and have a scaffolded memory system (Hock, Deshler, & Schumaker, 2000).

Figure 2. Examples of Strategy Steps

Sentence Writing

- Pick a sentence formula.
- Explore words to fit the formula.
- Note the words.
- Search for verbs and subjects.

(Schumaker & Sheldon, 1998)

Math Problem-solving

- Discover the sign.
- Read the problem.
- Answer, or draw and check.
- Write the answer.

(Mercer & Miller, 1992)

Self-questioning

- Attend to clues as you read.
- Say some questions.
- Keep predictions in mind.
- Identify the answers.
- Talk about the answers.

(Schumaker, Deshler, Nolan, & Alley, 1994)

Test-taking

- Prepare to succeed (say an affirmation and review time allotment).
- Analyze the directions (read, underline, paraphrase).
- Summarize each question (read carefully, connect to knowledge, reduce choices, answer or abandon).
- Survey the test (unanswered questions, estimate answers, answer all).

(Hughes, Schumaker, Deshler, & Mercer, 1993)

Make sure the student has notes about the new strategy.

One way to focus student attention is to have students take notes. Individuals who are able writers can make cue cards of the strategy steps to use when they practice. The teacher can make cue cards for less fluent writers, who can then either underline key points or write notes on the card. These notes are used frequently during practice sessions to review the steps of the strategy until mastery is attained.

Discuss rationale.

When introducing a skill or strategy, the instructor discusses the rationale or reason to learn it. Building a rationale for the strategy can best be accomplished through a discussion, which invites learners to identify situations in their lives in which they could use the strategy. Such a discussion can motivate students.

Use learner-friendly language.

As much as possible, avoid technical and conceptual terms as well as figurative language that may be unfamiliar to the learner. For example, talking about thinking skills is preferable to using the term “cognitive skills.” Depending on your learners’ backgrounds, some idioms may be confusing, such as saying that you hope this next activity will be a “piece of cake”, or today we have to “beat the clock.” Listening to how students express themselves can help you incorporate some of their vocabulary and expressions into your explanations.

Connect with previous learning.

There are many ways to help learners connect with previous learning. One is by reviewing how activities in previous sessions support the learning in the current sessions. This also means reviewing skills needed to perform the strategy. For example, in the sentence writing strategy listed in Figure 2, it would be important for learners to be able to differentiate between nouns and verbs. Sample statement starters for this first phase of instruction include the following (Hall, Mellard, & Putnam, n.d.):

Today we are going to learn ...

We call this strategy ...

What this means is ...

Successful learners use this strategy to ...

This will help you ...

You can use this when ...

You have already learned ...

2. MODEL THE LEARNING PROCESS (I DO – YOU WATCH)

Modeling or demonstrating is a very important part of the teaching process because observational learning is an essential method of learning. Try to imagine learning to speak a language, play a musical instrument, operate a piece of equipment or cook without first observing competent performance by another. This important way of learning can be particularly crucial for adults who have struggled with academic learning because they have not been exposed to models of effective and efficient learning. Though it is difficult to demonstrate the thinking processes that support competent academic performance, teachers who master this instructional skill can significantly enhance their students’ learning. Thus, the purpose of modeling is to expose these important hidden processes so that students see and hear how expert learners learn.

Model the skill—correctly, clearly, concisely.

It is important for teachers to first practice how they will model the skill, because it is imperative that each step of the strategy be presented correctly and in order. Imagine learner confusion if you present a five-step strategy using only four steps or if you reverse steps 2 and 3. Modeling is also most effective when the teacher clearly identifies each step as it is being modeled to focus learner attention. Because students are in the role of observers, the model should not tax their ability to pay attention through long explanations. Thus, teacher practice prior to modeling helps to maintain learner attention while ensuring the demonstration of each step, in order.

Model the skill using “think aloud.”

As the teacher demonstrates the strategy, he or she exposes the cognitive processes attached to each step by thinking aloud. In addition, the teacher demonstrates self-regulatory behaviors that show active monitoring of the strategy. Explicitly teaching and demonstrating these usually hidden thinking processes is strongly asso-

Figure 3. Modeling Example

The instructor is teaching students how to monitor their comprehension using the following steps:

1. Before reading, scan title and headings and ask, "What is this passage about?"
2. While reading, ask, "What does not make sense?"
3. During reading, explore the passage for clues that clarify your questions.
4. Decide what to do next.

I am going to start with step 1. Before I read the passage, I am going to look at the chapter title, which is "The Conflict." "Conflict" usually means a disagreement or even a fight. So, I'm thinking that something is going to happen that shows people not agreeing with each other.

I am now going to start reading to see if I am on the right track. The teacher begins reading the passage with students following along. She asks herself, "Is this making sense?" She pauses at a place where readers might struggle with comprehension.

I am now at step 2. I am stopping now to ask, "Is this making sense?" I'm not sure. I don't know what this second sentence means.

The teacher identifies the comprehension problem by saying, "I don't know what the author means by 'the matter was not completely digested.' What was this 'matter,' and why wasn't it digested?"

I am now going to do step 3 and explore the passage for clues. The teacher reads back over the previous sentences that provide clues and uses the clues to think about what the phrase means.

"Maybe the word 'matter' means argument. I think this is true because the paragraph above talks about an argument between parents. So, if the argument was not digested, that could mean that it wasn't done or finished. That makes sense to me.

I am now at step 4, deciding what to do next. Because I think I have figured out what I was confused about, I am going to keep reading.

I think I did a good job of using the steps.

Source: Adapted from NIFL (2008)

ciated with improved learning for individuals with LD (Swanson & Deshler, 2003).

Provide an "expert learner" for students.

Teachers not only model following the strategy steps but also "think aloud" the problem-solving and monitoring they are doing (see Figure 3).

3. ENGAGE IN SCAFFOLDED PRACTICE

Practice provides the opportunity for learning to truly occur. Some learners do not develop essential knowledge and skills because they are not given enough time and guidance to effectively practice what they are taught. Effective practice is a balance between repetitive activities and a variety of applications that support the learner in exploring different ways to apply a strategy. Practice is aimed at mastery learning, meaning that learners engage in practice and receive feedback until they are proficient in using the strategy. The practice phase of explicit strategy instruction is different from other instructional models because it carefully tracks student learning and adjusts learning tasks accordingly. Throughout the practice phase of instruction, specific and timely feedback is important so the learner knows what he or she is doing correctly and how to improve performance.

The concept of scaffolded instruction comes from research that found that guided and supported practice enabled learners to accomplish tasks beyond expectations (Palinscar & Brown, 1984). In adult education, this means that learners are provided with support until they can apply their learning independently. The image of scaffolding is useful in terms of thinking about the gradual removal of support as students become more proficient. The instructor assumes initial responsibility for guiding a learner's performance, then gradually turns control over to the learner as the learner grows in proficiency. Figure 4 is an example of scaffolded practice.

Figure 4. Scaffolded Practice Example

Using the sheet below, the teacher and students work through three simple passages together, following the steps and talking about how to apply each step.

With a partner who is closely matched in reading level, students then practice with three additional passages. The teacher is actively engaged in this process and circulates, observes how well students are applying the steps, and provides help when necessary.

The teacher gathers together small groups of students who need additional support to use the strategy steps and, if necessary, the teacher provides passages at an easier reading level. During the session the teacher may briefly model one or more strategy steps.

Once a student demonstrates the ability to use the steps, he or she works on a passage on his or her reading level to try out using the steps independently.

Students who can successfully use the strategy on their reading level can be encouraged to use the strategy in more challenging reading passages.

Once students have been successful in independent practice they can be asked to keep a log of their strategy use as a way to show that they are continuing to practice and use the strategy in class and in other relevant situations.

Practice Sheet for Comprehension Monitoring**Step 1: What is this passage about?****Step 2: What does not make sense?**

Write the phrase that does not make sense.

Step 3: Explore the passage for clues.

Where can you find clues?

What makes sense?

Step 4: Decide what to do next.

What did you decide to do next?

Step 1: What is this passage about?**Step 2: What does not make sense?**

Write the phrase that does not make sense.

Step 3: Explore the passage for clues.

Where can you find clues?

What makes sense?

Step 4: Decide what to do next.

What did you decide to do next?

Step 1: What is this passage about?**Step 2: What does not make sense?**

Write the phrase that does not make sense.

Step 3: Explore the passage for clues.

Where can you find clues?

What makes sense?

Step 4: Decide what to do next.

What did you decide to do next?

Source: Palinscar & Brown, 1984

Guided practice (WE DO).

The practice phase of explicit strategy instruction is designed to provide gradual release of responsibility for applying the strategy from instructor to learner. Initially the instructor can continue to model the strategy while involving students in the process. This early part of guided practice can be represented as WE DO = I DO and YOU HELP. In this instance the instructor is

modeling but asking questions such as “What is the first step?” “What should I do next?” and “Have I finished this step?” which allow students to be the teacher’s helper in using the strategy steps. Then the teacher provides short practice exercises in which the teacher steps back and learners try out using the steps. This part of guided practice is WE DO = YOU DO and I HELP. Students work either individually or cooperatively with close

teacher guidance. As students begin to master the strategy steps, teachers give students increasing responsibility for applying the strategy to new material. The teacher withdraws support gradually and only when students can work on their own. A teacher may need to have different levels of materials for students to use in guided practice. For example, students practicing the comprehension monitoring strategy should work on passages at their independent reading level. For one student this may be a passage written at the fourth-grade level, whereas for another it may be at the 10th-grade level.

Independent practice (YOU DO – I WATCH).

Once students demonstrate about 80 percent accuracy on guided practice activities they are ready to practice applying the strategy independently. This means that learners can be given longer tasks to do on their own with the instructor checking and providing feedback upon task completion. One goal of independent practice is for learners to begin to use the strategy on their own, begin to self-regulate their learning, and apply the strategy in a variety of contexts and to a variety of materials.

4. PROVIDE FEEDBACK THROUGHOUT

Good feedback is like coaching. Sometimes the coach stops the game to either reinforce or redirect players. After the game, the coach analyzes with the team key plays that led to desired or undesired outcomes. This is similar to the feedback process in explicit instruction for strategy learning. The timeliness and specificity of feedback have a strong impact on student learning. In addition, learners benefit from guidance on how to receive feedback. Students with a history of school failure can be very sensitive to corrective feedback and need to learn that feedback is a natural part of practice and not an indication of failure.

Feedback is extremely important during the early stages of practice. Guided practice is structured so that learners are engaged in short exercises. This enables

the teacher to monitor and provide feedback aimed at reinforcing desired performance, correcting misunderstandings, and providing additional information. The feedback process can include additional teacher modeling to clarify areas of confusion. The consistent goal of a teacher's feedback is to clearly and sensitively help students understand what they are doing right and what they need to improve. The strategy steps are a great aid in this process because they provide a task analysis of performance expectations. Teachers can use the strategy steps to tell the learner what was done well and why, as well as what was done wrong and why, along with concrete ways to improve. Feedback is also important during independent practice. The feedback process should begin with the learner self-evaluating and reporting on the experience of using the strategy. Having the learner as an equal contributor with the instructor in the feedback process is important for developing learner self-regulation.

Effective feedback does not just tell the learner how to perform the skill but also challenges the learner to be reflective about his or her performance. Once learners develop proficiency in using the strategy, they can be prompted to first self-check and start the feedback process by identifying what they do and do not understand. Providing their own reflective analysis of their performance based on the strategy steps is a major stride toward self-regulation and independent learning. Students can be offered the following prompts to help them self-evaluate:

The strategy step that I best understand is ...

I am still not sure about ...

I spent the most time on ...

I felt best when I was ...

When you review my work I would like you to look at ...

I think I need more practice on ...

Figure 5 provides a summary of research findings along with implementation tips on providing feedback.

Figure 5. Providing Feedback

Providing the right kind of feedback to students can make a significant difference in their achievement. There are two key considerations. First, feedback that improves learning is responsive to specific aspects of student work, such as test or homework answers, and provides specific and related suggestions. There needs to be a strong link between the teacher comment and the student's answer, and the feedback must be instructive. This kind of feedback extends the opportunity to teach by alleviating misunderstanding and reinforcing learning. Second, the feedback must be timely. If students receive feedback no more than a day after a test or homework assignment has been turned in, it will increase the window of opportunity for learning. Feedback is a research-based strategy that teachers and students can practice to improve their success.

Key Research Findings

- When feedback is corrective in nature — that is, it explains where and why students have made errors — significant increases in student learning occur (Lysakowski & Walberg, 1981, 1982; Tennenbaum & Goldring, 1989; Walberg, 1999).
- Feedback has been shown to be one of the most significant activities a teacher can engage in to improve student achievement (Hattie, 1992).
- Asking students to continue working on a task and giving them feedback until it is completed and accurate (until the standard is met) enhances student achievement (Marzano, Pickering, & Pollock, 2001).
- Effective feedback is timely. Delay in providing students feedback diminishes its value for learning (Banger-Drowns, Kulik, Kulik, & Morgan, 1991).
- Administer tests to optimize learning. Giving tests a day after a learning experience is better than testing immediately after a learning experience (Bangert-Drowns, Kulik, Kulik, & Morgan, 1991).
- Rubrics provide students with helpful criteria for success, making desired learning outcomes clearer to them. Criterion-referenced feedback provides the right kind of guidance for improving student understanding (Crooks, 1988; Wilburn & Felps, 1983).
- Effective learning results from students providing their own feedback, monitoring their work against established criteria (Trammel, Schloss, & Alper, 1994; Wiggins, 1993).

Implementation

Fine-tune how you provide feedback by focusing on the details of what you say, as well as when you say it. Research suggests the following best practices for providing feedback:

1. Increase the value of tests and homework. Providing only a grade or number on a test or homework assignment leaves out critical information for students. Take time to write comments, point out omissions, and explain your thinking when reviewing student work.
2. Make feedback count. Feedback is best when it is corrective in nature. Help students see their errors and learn how to correct them by providing explicit and informative feedback when returning student work. Make feedback another part of the learning process.
3. Don't delay feedback. The longer students have to wait for feedback, the weaker the connection to their effort becomes, and the less likely they are to benefit.
4. Help students get it right. If students know you want to see them succeed, and you're willing to help explain how, their learning improves. Give students opportunities to improve, try again, and get it right.
5. Ask students to provide feedback. Students can monitor and provide feedback to other students, as well as compare their work against criteria. Engage students in review of their own work and others' work.
6. Give students time to absorb new ideas. Tests are more effective as opportunities for learning if a day has gone by between learning experiences and the test.
7. Use rubrics. Rubrics provide criteria against which students can compare their learning. Involve students in developing rubrics. Rubrics help students focus their effort.

Source: Northwest Regional Educational Laboratory (2005)

Lesson Plan Guide

Figure 6 provides a guide to developing explicit instruction lessons.

Refer to the appendix of Chapter 5 of this guide for examples of strategy lesson plans.

Figure 6. Adapting a Lesson Using Explicit Instruction

- Explain the concept (or pattern or skill) and how it will help the students.
What will you include in your explanation?
- Model the concept, pattern or skill.
What will you use to introduce?
- Guide the students in using the concept (or pattern or skill) with more examples. Move toward longer and less familiar examples.
What materials and activities will you use for guided practice?
- Give the students an opportunity to apply their new knowledge.
How will students apply their new knowledge?

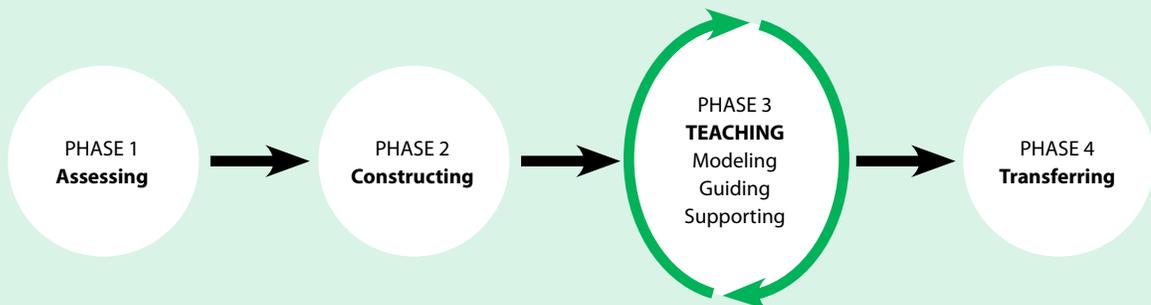
Source: Arends, 2007, pp. 291-304

Tutoring and Explicit Instruction for Strategy Learning

Explicit strategy instruction can be provided in group or individual settings. Research on tutoring adults with LD provides convincing evidence that explicit strategy instruction is well suited to this one-on-one arrangement (Hock, 2009). Hock and his colleagues at the University of Kansas, Center for Research on Learning,

have developed a strategic tutoring model that incorporates the principles of explicit strategy instruction into four phases depicted in Figure 7 (Hock, 1998; Hock et al., 2000). In this model, tutors help students complete assignments while they teach the skills and strategies necessary for learner independence.

Figure 7. Strategic Tutoring Instructional Phases



Source: Hock, 1998; Hock et al., 2000

Phase 1: Assessing.

The tutor engages the learner in a connecting conversation and discusses the current assignments or task. The tutor also discusses how the learner currently approaches the learning task.

As Figure 8 indicates, the tutor begins by greeting the student and setting a positive tone for the session. The connecting conversation is a way to determine the focus of the session. The conversation should address the task and process that will be covered. This is an opportunity for the tutor to find out the match between the learner's current skills and the task as well as the student's intended approach to the task. The tutor then plans out the session with the learner. The assessing phase should be accomplished in a short time.

Phase 2: Constructing.

Using information about the student's current approach or strategy, the tutor guides the co-construction of a more efficient strategy for approaching the task.

During this phase the tutor, through discussion, finds out what actions the learner knows to take to complete the task. The purpose of this discussion is to find out the skills and strategies the learner brings to the task as well as to identify gaps that may cause difficulty. Together, the learner and tutor develop a series of strategy steps that can be used to accomplish the learning task. Here is an example of a tutor-learner discussion that builds on what a learner usually does to write an essay:

If a student is tasked with writing an essay, the tutor would ask, "How do you currently approach writing essays?"

The student might respond, "I write it and hand it in."

The tutor asks if that has worked very well in the past, or "Were you satisfied with the results?"

The student might state, "No, my instructor has me rewrite everything I hand in."

The tutor would respond by saying, "Let's see if we can come up with a way that will help make writing a little easier for you. I think if we add a few steps to what you currently do, you'll see marked improvement. You said you write it and turn it in. Let's make that one of the steps of the strategy we will build together. Let's also add your step of writing the first draft. What if we did a little thinking before you write? What ways could we think about the topic before we write? Have you ever heard of the term 'brainstorming'? How do you brainstorm? (Add to the discussion by sharing with the student various ways to brainstorm.) What could we do next with our ideas? We could organize those thoughts by making an outline. Next, we'll do what you already do, and that's write a draft. What could we do with the draft we have just written to make it more acceptable as a formal writing piece? Yes, we could find and correct errors such as spelling and punctuation. We could also revise your draft. Finally, we do what you already do, and that's hand it in. What we have constructed together is an essay-writing strategy that has the steps you currently do when you write and some new steps we added. The strategy steps are Think about the topic, Organize your thoughts, Write a draft, Edit for common errors, and Revise and hand in. You can remember the steps of the strategy by thinking of the word 'TOWER.' Okay, let's make sure you have notes on the steps of the new strategy."

Phase 3: Teaching.

The tutor explicitly teaches the strategy to the student by explaining, modeling and supporting practice. It is important for the tutor to provide specific feedback to the student on his or her performance.

Model. The first part of this phase involves modeling a strategy or skill for the student. The tutor informs the learner that he or she needs to watch and listen to what the tutor is going to do. When the tutor models, the tutor "thinks aloud" while completing the strategy. The student's role is to watch, listen and answer questions.

Guide. In the second part of the teaching phase, the tutor guides the student's practice with the strat-

egy. The learner begins to replicate the thinking and actions modeled by the tutor. First, the student describes the process the tutor modeled (e.g., Think Aloud). This ensures that the learner comprehended the modeling demonstration. The learner then tries out using the process. The tutor carefully observes, listens and provides hints on how to use the process. The tutor’s comments and hints provide a scaffold of support, ensuring that the student experiences success. The tutor provides positive and corrective feedback for the learner’s use of the process as well as guides the learner to use the process correctly. Depending on the complexity of the task and the skill of the learner, the GUIDE phase can involve multiple sessions.

Support. In the third part of the teaching phase, the tutor supports the student’s independent practice with the strategy. During this phase, the learner plays a larger

role in using the process and the tutor offers decreasing support. The tutor helps the learner identify when to use a skill or strategy. The student should practice applying the strategy during the tutoring session with the tutor’s support and should be able to independently apply the strategy by the end of the tutoring session. During support sessions the tutor checks in with the student to see if he or she is able to use the skill or strategy successfully. If the learner is having difficulty independently applying the skill, the tutor and learner work together to problem-solve.

Phase 4: Transferring.

The tutor supports the student as he or she begins to use the new skill or strategy in another context with new assignments.

Figure 8. Strategic Tutoring Checklist

Tutor _____ Location _____

Use the Strategic Tutoring Checklist to record whether you exhibited the target behaviors. A check means you exhibited the behavior, and a blank indicates you did not exhibit the behavior.

ASSESSING

- DID I: _____ Greet the student?
 _____ Have a connecting conversation?
 _____ Share a plan for the tutoring session?
 _____ Begin within 2 minutes?

CO-CONSTRUCTION

- DID I: (Create or Quickly Review)
 _____ Discuss ways to read the material (stories or information)?
 _____ Weave what the student currently does with the tutor’s strategy?
 _____ Explain how the “new” strategy works?
 _____ See that the student has a copy of the strategy?

TEACHING

- DID I: MODEL the strategy for the student (**I DO**)?
 _____ Ask the student to watch and listen?
 _____ Model (think aloud) while using the strategy **correctly**?

- GUIDE the student’s practice with the strategy (**WE DO**)?
 _____ Ask the student to briefly review the steps of the strategy?
 _____ Watch and support the student as he or she used each part of the new strategy?
 _____ Provide positive and corrective feedback as needed?

- SUPPORT the student’s independent practice with the strategy (**YOU DO**)?
 _____ Cue the student to use the strategy independently on an assignment?
 _____ Periodically check on the student’s progress?
 _____ Provide positive and corrective feedback as needed?

TRANSFER

- DID I: _____ Celebrate progress toward becoming an independent learner?
 _____ Develop a plan for using strategies in other places?
 ___ a. identify a specific place?
 ___ b. identify an assignment and when to independently use the skill/strategy?
 _____ Provide positive and corrective feedback as necessary?

Source: Hock (2009)

The transferring phase occurs when the learner has a good grasp of the skill and sets the stage for generalization or transferring use of the skill beyond the specific assignment. All learners, but especially learners with LD, benefit from the recognition that they have developed a new strategy or skill. Clearly targeting when and where the strategy will be used facilitates the process of applying the strategy in settings beyond the tutoring sit-

uation. Even though the tutor and learner will move on to new skills and strategies in future tutoring sessions, the tutor should ask the learner to bring in examples of the strategy used in new situations and give feedback on the work samples provided.

Figure 8 provides a checklist tutors can use to work through each phase of the model.

Summary

Definition

Explicit instruction is a multistep model focused on developing learners' ability to engage in both the overt actions and covert thinking skills necessary to perform complex tasks.

Why Explicit Strategy Instruction Can Be Effective

Many learners with LD are inefficient processors of information. Explicit instruction teaches learners how to successfully engage in learning activities and to subsequently retain what they learn. When explicit instruction is aimed at strategy learning, learners can develop thinking processes to move them from being dependent to independent learners.

Specific Practices

Explicit instruction is a multistep model focused on developing learners' ability to engage in both the overt

actions and covert thinking skills necessary to perform complex tasks.

- Provide clear explanations.
- Model the learning process (I DO).
- Engage in scaffolded practice (WE DO and YOU DO).
- Provide elaborated feedback.

Tutoring and Explicit Instruction for Strategy Learning

Explicit instruction for strategy learning is well suited for tutoring adults. The one-on-one arrangement allows the tutor to work with the learner to assess, co-construct, engage in explicit instruction, and transfer learning strategies. In short, strategic tutoring builds a bridge between helping students complete assignments and students learning the skills and strategies necessary for learner independence.

Additional Resources

A Study Guide for Educators Providing GED Preparation. This guide provides examples of strate-

gies and how explicit strategy can be incorporated into adult education.¹

¹ http://ldlink.coe.utk.edu/pdf_files/Study_Guide_Book.pdf

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Chapter 4

Reading Disabilities

Setting the Context

Reports that examine the status of reading for school-age students and adults consistently note that many individuals enter adulthood with underdeveloped reading skills. Research on school-age students indicates that a significant percentage make their way to the end of high school without becoming competent readers. A recent national assessment of 12th-grade students finds that more than 25 percent read below the basic level (Grigg, Donahue, & Dion, 2007). According to the results of a national survey of adult literacy, 11 million Americans are nonliterate in English; 30 million possess below-basic reading skills, indicating challenges in reading beyond the most simple and concrete tasks; and 63 million can perform everyday basic literacy activities but have difficulty reading technical information or extended prose (Kutner et al., 2007, p. 2).

Research on learning disabilities (LD) supplements this picture. Between 5 percent and 17.5 percent of school-age children are estimated to have reading disabilities (Shaywitz & Shaywitz, 2007). Early reading intervention and remediation can positively affect these

individuals' ability to read, yet follow-up studies indicate that, despite interventions, reading disabilities persist in some form into adulthood (Shaywitz et al., 1999). In addition, adult education research reveals that many individuals enter adult education programs with either diagnosed or undiagnosed LD (Ryan & Price, 1993). For example, Mellard and Patterson (2008) found that 29 percent of participants attending a group of Adult Education and Family Literacy Act programs (not including English language learning services) reported having one or more LD.

To take a larger view, reading is a national concern directly tied to our country's ability to build an internationally competitive economy. This recognition has resulted in an array of research-based reports on the components of effective reading interventions (Faggella-Luby, Ware, & Capozzoli, 2009). This knowledge and practice base, combined with a growing understanding of LD, makes it possible to offer recommendations for how adult education programs can translate these findings into its programming.

What Are Reading Disabilities?

Reading ability can be likened to other aspects of the human condition such as height or weight, which occur

across a continuum. Certain characteristics are often given definitive labels. For example, someone whose

height is 6'5" is considered tall and someone whose weight is 350 pounds is considered obese. In any population of individuals, most characteristics fall across a spectrum, with the majority of people clustered around an average point and fewer people at the extremes. This is certainly true of adult reading abilities; people vary widely in reading skill and comprehension, but most are in a middle range and can handle the reading requirements of work, school and adult life.

At the lower end of the continuum of reading abilities are adults who struggle with reading for the following reasons: English is not their native language; they were frequently absent from school or dropped out early; they received a poor-quality education; or they have sensory, behavioral or intellectual disabilities. In addition, however, there are people who struggle with reading because they have specific LD¹ that affect reading. LD can affect a variety of academic areas. In this chapter, "reading disability" refers to a specific learning disability that causes deficits in the ability to read.

What do we know about adults with reading disabilities? For one thing, reading disabilities occur across a continuum from mild to severe, and adults with LD can be found in all walks of life, from unskilled workers to highly skilled professionals (Shaywitz, Morris, & Shaywitz, 2008). So, how do we distinguish adults with reading disabilities from those whose reading struggles are less severe or are caused by other factors? Our understanding of reading disabilities has increased greatly over the past 15 years thanks to studies on the epidemiology of reading disabilities. These studies indicate that reading disabilities are strongly associated with problems in phonological processing, have a familial link, can be observed through neuroimaging, and are a lifelong condition (Shaywitz et al., 2008).

Phonological processing.

Phonological processing is the ability to access the specific sounds that make up words. Problems with phonological processing can be evident in oral expression (e.g., omitting a sound or sounds in spoken words), oral reception (e.g., misperceiving words with similar sounds – pit vs. bit), written expression (reversing letter sequence when spelling – obseration for observation), and reading (e.g., matching sounds to letters). Phonological processing includes phonemic awareness, which is the ability to detect and manipulate the individual sounds (called phonemes) in words. In order to read, a person must understand that the individual sounds of English can be matched to the letters of the English alphabet. Inability to hear the individual sounds and match them to letters and different word forms is the basis of most reading disabilities. This sound-symbol relationship and understanding of how English words are formed are the basic building blocks of reading. Research on reading disabilities clearly identifies problems with phonological processing as the major contributor to most reading disabilities (Shaywitz & Shaywitz, 2007). This core reading deficit is often referred to as dyslexia.

Familial linkage.

Reading disabilities run in families. Between 25 percent and 50 percent of children with reading disabilities have a parent with the disability, and if one child in a family has a reading disability, then about half of the child's siblings are likely to be reading disabled. One well-recognized phenomenon is for a child to first be diagnosed and, on the basis of that diagnosis, the parent seeks testing and discovers he or she also has a reading disability. Genetic research is beginning to identify genes that may be contributors. Although genes can influence the development of a reading disability, the interaction between an individual's genetic makeup and the environment (considerations such as reading in the home, the frequency and type of oral interactions, quality of schooling) appears to play a role in the ultimate severity of the disability (Shaywitz, 2003).

1 Educators sometimes use "learning disability" in an informal way to refer to any disability that affects learning, but in literature and laws and in this chapter, "learning disability" has a more specific meaning. Refer to Chapter 1 for a definition of learning disabilities.

Neuroimaging.

Researchers use functional magnetic resonance imaging to identify areas of the brain associated with normal and abnormal reading development. These brain imaging studies provide concrete evidence that individuals with reading disabilities process written language differently than do individuals without the disability. In addition, brain imaging studies reveal that instructional interventions can change the activation of neural systems in the brain, resulting in more accurate and fluent reading (Shaywitz et al., 2008, p. 460).

Lifelong Condition.

Reading disabilities are lifelong conditions, but adults with reading disabilities vary in how well their specific weaknesses have been addressed. Some individuals are referred to as “compensated” readers, and despite their specific deficits in reading, they become competent readers through effective interventions and accommodations. Yet, their areas of weakness can still present challenges. For example, despite developing the ability to decode and having a broad reading vocabulary, some

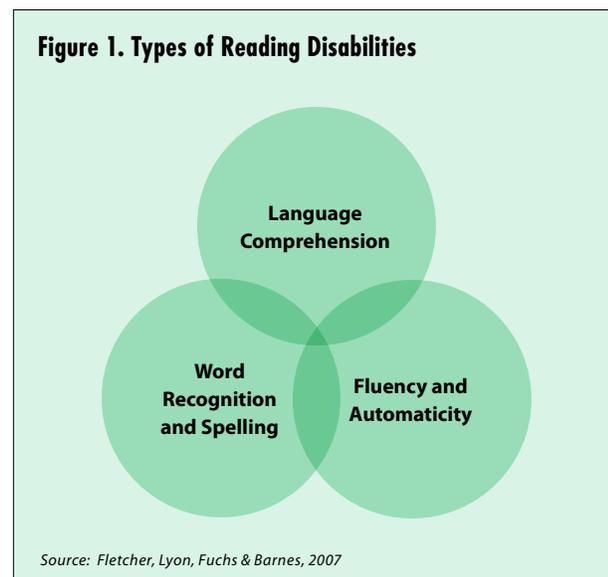
individuals with reading disabilities are relatively slow readers. This is especially apparent among individuals who enter postsecondary degree programs and face significant amounts of reading. Although these individuals may be able to read and comprehend college texts, their slow reading rate can be a major challenge. These individuals may need continued reading interventions and accommodations such as extended time and audio texts to overcome their lifelong reading challenges. In contrast, “uncompensated” readers have not received effective interventions matched to their reading disabilities and enter adult education programs with either extremely depressed reading skills or specific reading skills well below their other areas of functioning. These individuals can benefit from reading interventions that address their specific profile of reading disabilities (Grigorenko, 2008). Both compensated and uncompensated adults with reading disabilities tend to score at the lower end of the continuum in their specific areas of reading weakness, and those with the most severe reading disabilities will have significant difficulty in multiple skill areas.

Types of Reading Disabilities

Researchers have identified three basic types of reading disabilities—word recognition and spelling, fluency and automaticity, and language comprehension—which can occur individually or in combination (Fletcher, Lyon, Fuchs, & Barnes, 2007). Figure 1 depicts these three types of reading disabilities.

1. WORD RECOGNITION AND SPELLING

The most basic and pervasive type of reading disability is difficulty in word recognition, sometimes called “dyslexia” (Fletcher et al., 2007). One of the most basic tasks of learning to read is learning the “alphabetic principle”—the understanding that speech is made up of individual sounds (called phonemes) and that these



sounds are represented by letters that are combined to form written words (NICHD, 2000). Word recognition requires “phonemic awareness” — the ability to listen to language and detect the individual sounds. For example, phonemic awareness allows us to hear and make rhymes orally by substituting beginning sounds in words (“hand,” “sand,” “band,” “land”) or to change vowel sounds to make different words (“bit,” “bat,” “but,” “bet”). Phonemic awareness can be tricky because people hear words in their entirety and must learn to break down a word into its individual sounds as part of learning to read. Most people naturally develop this skill. If this skill does not develop naturally, then it must be explicitly taught and practiced.

Phonemic awareness provides a foundation for the ability to decode words. Phonemic awareness is the ability to hear the individual sounds of English, and decoding is the ability to associate those sounds with letters and letter combinations. People learn to decode by internalizing the many rules for how English words are formed and pronounced and how to analyze words by breaking them into prefixes, suffixes and syllables. These rules, of course, can be complicated and inconsistent. For example, “ch” has multiple sounds, which differ across the words “church,” “scheme” and “chef.”

Once this sound-symbol relationship is firmly established, an individual is ready to read. The more reading an individual does, the easier it is to internalize and remember these different sounds and sound combinations and to develop the automatic recognition of familiar words. Reading proficiency, like any other skill, takes practice. This practice is based on being able to read individual words and then recognize them in text.

When the child does not understand the relation of sound and print, word recognition will be delayed. The longer the child struggles to learn to read words, the more likely it is that a severe reading disability will emerge as the child cannot access print. Developing fluency and accessing comprehension abilities becomes increasingly difficult as the child loses exposure to sight words and the opportunity to access books. It is not

surprising that, at this point in time, the most common form of LD in reading involves word recognition ability (Fletcher et al., 2007, p. 88).

2. FLUENCY AND AUTOMATICITY

A fluent reader reads accurately, rapidly and with expression. Many of the basic processes of reading are done with “automaticity,” which means the reader’s attention is free to focus on the meaning of the text rather than the mechanics of decoding (Shaywitz et al., 2008). Fluency must occur at two levels, the word level and the sentence level, and it is based on automatic word recognition and understanding how sentences are composed (Fletcher et al., 2007). Slow, labored reading is considered an indicator of a reading disability, particularly in adult readers (Lyon et al., 1993, as cited in Shaywitz et al., 2008; Shaywitz, 2003). A recent review of reading research seeking to differentiate adults with and without reading disabilities identified an assessment task called “naming speed” (also referred to as “rapid naming”) as an important indicator of a reading disability (Swanson, 2009). Naming speed tests an individual’s ability to quickly name letters, numbers, colors and simple objects. Problems with naming speed are caused by slow processing of visual information, which inhibits the ability to become a fluent reader. Individuals who show difficulty in rapid naming can have trouble establishing representations of common letter sequences in memory (e.g., str, tion, ough). This lack of skill in identifying common word chunks slows down the reading process.

3. LANGUAGE COMPREHENSION

Reading comprehension involves two basic cognitive tasks: (1) the reader must recognize or decode printed words, and (2) the reader must construct meaning from these words. Both tasks require cognitive resources, which are restricted by the limits of verbal memory. If the reader has difficulty with decoding, few cognitive resources are available for interpretation and comprehension. “Consequently, for the nonfluent reader, dif-

difficulty with word recognition slows down the process and takes up valuable resources that are necessary for comprehension. Reading becomes a slow, labor-intensive process that only fitfully results in understanding” (NICHD, 2000, p. 3).

For adults with reading disabilities, there is strong evidence that comprehension problems are associated with deficits in verbal memory. Verbal memory supports recall of written or auditory linguistic information (Isaki, Spaulding, & Plante, 2008; Swanson, 2009). Verbal memory can affect the immediate processing of text (ability to remember the sentence one has just read or heard) as well as long-term recall of information so important for comprehension. Verbal memory is tested by measuring a person's ability to remember and repeat a series of words, phrases or numbers.

Reading comprehension problems can also arise from problems in understanding oral language (Fletcher et al., 2007). These problems may be caused by the reader's unfamiliarity with the vocabulary in the text, by defi-

cits in processing language or by the reader's inability to engage in higher-order cognitive processes required for finding meaning in the text.

In summary, adults with reading disabilities can present different reading comprehension profiles (Swanson, 2009). Some individuals struggle with comprehension because of inaccurate or dysfluent word recognition. They have difficulty comprehending because they cannot efficiently decode the words, which leaves insufficient cognitive resources for understanding the text. Such individuals may be able to comprehend the text if it is presented auditorily and they are relieved of the challenge of decoding. Other individuals may be able to decode adequately but have deficits in oral language or vocabulary that prevent them from comprehending the text. Some individuals have deficits in both decoding and comprehending text. These individuals present the most challenging group of learners because of their broad-based needs.

What Principles of Reading Instruction Are Appropriate for Adults With Reading Disabilities?

Principles of reading instruction are based on a clear conceptualization of the components of reading identified in Figure 2. Good readers use all the components of reading to gather information and expand their intellectual horizons. Struggling readers, including adults with reading disabilities, are deficient in one or more of the components of reading and need instruction to strengthen and connect their reading skills so they can comprehend what they read.

Effective reading instruction helps learners develop proficiency in the specific component skills they are lacking and enables them to merge these skills to understand what they read. Most classes of adult learners encompass a wide range of reading skill levels and

Figure 2. Reading Components Defined

Phonemic awareness: the ability to detect individual speech sounds in words.

Decoding: the ability to match letters to the sounds they represent.

Fluency: the ability to read passages accurately, rapidly, with expression and with little effort.

Vocabulary: the ability to understand the meaning of words based on how they are formed (i.e., prefixes and suffixes) and how they are used.

Language comprehension: the ability to actively and effectively engage in reading text to understand the author's message.

Source: NICHD (2000)

often include adults with reading disabilities. Adding to the complexity is the fact that adults who score at the same silent reading comprehension level may be at very different levels in their component skills. Programs that assess these component skills prior to and during instruction are able to plan reading instruction that matches learners' areas of strengths and needs. As discussed previously, adults with reading disabilities have characteristics that distinguish them from other struggling adult readers. However, the principles of reading instruction for other adult learners, as discussed in McShane (2005), also apply to adults with reading disabilities, although adults with reading disabilities may have more extensive reading deficits and may require more intense interventions than do other struggling adult readers.

1. PHONEMIC AWARENESS

Phonemic awareness is the most basic part of understanding how words are formed. Individuals with phonemic awareness can recognize the smallest sound units. They can listen to words and separate the words into their individual sounds as well as blend sounds to form words orally. Phonemic awareness problems strike at the fundamental ability to make the sound-symbol connections that are necessary for reading words. For example, if an individual cannot hear that the words “bat” and “banana” both begin with a /b/ sound, then he or she cannot engage in the more complex skill of blending individual sounds to make words (i.e., blending the sounds of /b/ /i/ /t/ to say “bit”).

Figure 3. Phonemic Awareness Tasks and Examples

<i>Phonemic Awareness Task</i>	<i>Example</i>
Phoneme isolation. Can the learner identify specific sounds at the beginning, middle and end of words?	Teacher (T): What is the first sound in the word “man”? Student (S): /m/
Phoneme identity. Can the learner recognize the sounds words have in common?	T: What sound do you hear in these three words — “bear,” “boy,” “bell”? S: /b/
Phoneme categorization. Can the learner identify the word with the odd sound in a sequence of three or four words?	T: Which word does not belong — “bit,” “bat,” “sun”? S: sun
Phoneme blending. Can the learner listen to a sequence of separately spoken sounds and combine them to make a recognizable word?	T: What word is /l/ /a/ /n/ /d/? S: land
Phoneme segmentation. Can the learner break a word into its individual sounds by counting the sounds or by moving a marker for each sound?	T: Show me how many phonemes there are in the word “bake.” S: three — /b/ /a/ /k/
Phoneme deletion. Can the learner identify the word that remains when a phoneme is removed or deleted?	T: What word is left when we drop the /s/ from the word “spit”? S: pit

Source: NICHD (2000)

Assessment and instruction.

Figure 3 lists specific phonemic awareness activities that can be used for assessment and instruction.

McShane (2005) provides specific guidelines and examples of providing phonemic awareness instruction for adults who need it. Some general guidelines are as follows:

- If using child-based curriculum materials, adapt the materials to be appropriate for adults.
- Provide a clear rationale to allow the learner to understand the need to work at this basic level.
- Connect phonemic awareness activities to the learner's long-term reading goals.
- Use principles of explicit instruction to provide modeling, scaffolded practice and feedback to learners.
- Always combine phonemic awareness with other reading activities aimed at higher order skills such as oral and receptive vocabulary and comprehension development.

Phonemic awareness is recognized as a foundational skill for reading, but it is also one of the most common areas of deficit for adults with reading disabilities, and some of them may not be capable of reaching complete competence. Therefore mastery of phonemic awareness should not be treated as an absolute prerequisite before instruction can begin in more advanced skills such as decoding. Instead, some adults with reading disabilities may need a balanced approach in which they learn how words are formed and they practice reading simple and familiar words (McShane, 2005; Shaywitz & Shaywitz, 2007).

2. DECODING

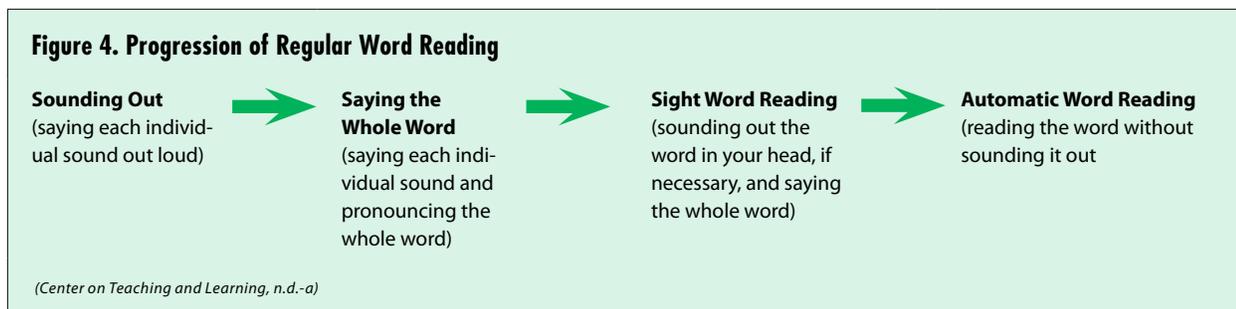
Decoding is the skill of connecting written letters and letter combinations with the sounds they represent. For example, the reader must know the letters “b,” “a,” and “t” and their associated sounds and must be able to blend them into the word “bat.” One reason that decoding is so complicated is that although there are 26 letters in the English alphabet, these letters represent approximately 44 different sounds (phonemes). When these 44 sounds are translated into written words, these sounds have 250 different spellings (i.e., the /f/ sound can be spelled as ph, f, gh or ff) (Center on Teaching and Learning, n.d.). Thus, successful decoding is based on internalizing a complex set of rules and patterns for forming words and pronouncing them in English.

Most children develop their ability to decode words by engaging in a variety of reading activities leading to automatic word recognition as indicated in Figure 4. Individuals with reading disabilities based on their problems with phonological processing, such as dyslexia, have difficulty moving through this progression. The result is that they have a more limited reservoir of words to read automatically compared with their same-age peers.

Assessment and instruction.

Decoding assessments are individually administered oral assessments that typically require the learner to read either real or nonsense words in isolation. See Sample 1 for an example of an assessment aimed at decoding skills (Sylvia Greene's Informal Word Analysis Inventory²).

² http://lincs.ed.gov/readingprofiles/SG_All_Docs.pdf



We use phonics curricula as a guide for planning and offering instruction to help learners develop their decoding skills. These curricula are valuable resources because they map out a scope and sequence for rules to follow to sound out words. See Sample 2 for a beginning reading scope and sequence. Phonics instruction progresses from teaching the most common and simple rules. For example, one-syllable words range from simple three-letter combinations (cvc words—consonant, vowel, consonant—such as “dig”), to longer six-letter combinations (cccvcc words such as “scrimp”). Phonics rules provide guidelines for decoding multiple syllable words (e.g., “disinherited”); these guidelines are based on rules for syllabification and also demand knowledge of prefixes and suffixes. Research on teaching decoding to adults who struggle with this skill provides the following instructional guidance:

- Match instruction to individual needs. Some learners may be generally competent in decoding and may need only to review a few phonics rules to fill in a few gaps. Others may have very little knowledge and will need extensive phonics instruction as a long-term part of their instructional program (McShane, 2005).
- Phonics instruction should be explicit and systematic. The teacher explains and models how specific letters or letter combinations make certain sounds. (“The sound /p/ is spelled with the letter ‘p.’”) Systematic phonics instruction follows a sequence of letter-sound relationships that increase in complexity. It also includes consistent dosages of explicit instruction with graduated practice in reading and writing words using letter-sound relationships that have been taught. Simply put, learners need a lot of continual practice to internalize the phonics rules and move toward automatically recognizing and reading the word patterns they have been taught (NICHD, 2000).
- Phonics instruction is a means to an end. Phonics instruction can be reinforced by having learn-

ers read decodable connected text at their level. Learners may also want to engage in reading related to their current interests and life demands. Offering instruction in how to use electronic dictionaries as well as text-to-speech accommodations, such as screen readers, or audio books can keep learners involved in age- and interest-appropriate text (Learning Point, 2004).

- Remediation of decoding weaknesses is a necessary intervention for individuals with dyslexia (Shaywitz et al., 2008).

3. FLUENCY

Although fluency is based on decoding skills, these skills do not automatically result in fluent reading. Fluency is rapid, efficient and mostly error-free reading. An accurate reader is able to correctly identify a word on a first attempt. Fluency also includes reading with expression by grouping words into meaningful phrases and varying intonation to make reading resemble natural speech. Figure 5 identifies the component skills that support fluent reading. All of these fluency components contribute to individuals’ ability to comprehend what they read (Learning Point, 2004).

Figure 5. Essential Components of Fluency

Accuracy and Automaticity of Decoding

- Decode words accurately.
- Decode words effortlessly.
- Recognize words that do not follow regular decoding patterns.

Reading Speed or Rate

- Read with an age- or grade-level-appropriate rate.
- Adjust speed based on reading purpose and text difficulty.

Expression and Prosody

- Group words into phrases.
- Use punctuation for pacing and expression.

Comprehension

- Know vocabulary words in the text.
- Comprehend important ideas in connected text.

Sources: Ruetzel (n.d.); Shaywitz (2003)

Research on fluency indicates that an average reading rate of 150 correct words per minute is acceptable for older school-age readers (Shaywitz, 2003). Learners who are motivated to read and have strong vocabulary and reasoning skills may be able to achieve adequate comprehension despite fluency problems. Learners without strong content knowledge, vocabulary and thinking skills are more dependent on fluency to reach the same level of comprehension. Thus, the need for direct fluency instruction is dependent on how well an individual learner's knowledge and skills support the types of reading comprehension tasks he or she faces (Torgesen et al., 2007, pp. 70–71). Fluency plays an important role in reading comprehension. When readers are fluent, they can devote their cognitive resources to comprehension.

Assessment and instruction.

Fluency assessments measure reading rate and accuracy by calculating words correctly read per minute on selected reading passages. Fluency assessments can be used to screen for problems and can also be used periodically for progress monitoring and instructional planning. For screening purposes, passages are selected to match a learner's current instructional reading level. This level can be determined by administering a graded word list that the learner reads orally. A passage is considered to be on a learner's instructional level if his or her reading accuracy is 90 percent or above (Hasbrouck, 2006). For progress-monitoring purposes, passages should be at the goal reading level. For example, an individual reading at a fourth-grade level may use fifth-grade passages to monitor progress (Hasbrouck, 2006). Informal reading inventories are a good source of short graded passages to use for fluency screening and progress monitoring (McShane, 2005).

Fluency instruction has the potential to benefit adult learners in a number of ways (Kruidenier, 2002). Once an individual progresses to a fourth-grade reading level, there is a jump in the proportion of words that do not follow regular pronunciation rules (examples:

“cousin,” “enough”). Thus, many reading programs for older readers include fluency exercises with irregular words that are likely to be found in upper-level reading materials. Fluency exercises help learners recognize these words through repeated practice (Shaywitz, 2003, p. 275). In addition, practicing fluent oral reading with words that a learner recognizes and understands can help individuals who struggle with fluency make the connection between speech and print.

Fluency instruction can take many forms. A sampling of instructional methods appropriate for adults with reading disabilities can be found in Figure 6. Research that examines the effectiveness of fluency instruction for older (secondary school) versus younger (elementary school) readers indicates that fluency improvement does not necessarily lead to comprehension gains for older learners (Wexler, Vaughn, Roberts, & Denton, 2010). This does not mean that fluency problems should be ignored, especially for learners whose fluency is an obvious impediment to their reading. It does suggest that, for older learners, other reading components such as vocabulary knowledge and comprehension instruction play a significant role in comprehension.

For more information on fluency assessment and instruction, see additional resources at the end of this chapter.

4. VOCABULARY

Vocabulary is the understanding of word meanings. Oral vocabulary is composed of the words we use when we speak and those we understand through listening, while our reading vocabulary consists of words we recognize in print. In addition, we have a spelling vocabulary for the words we write (NICHD, 2000). In terms of reading, our oral vocabulary has a strong relationship to our reading vocabulary. If a word is in our oral vocabulary, then we can understand it in print as long as we can decode it. If a word is not part of our oral vocabulary, then we must learn the meaning of the word. Good readers develop their vocabulary by engaging in a wide range of reading and language activities in and out of

Figure 6. Fluency Instruction

Previewing. A learner follows along in the text while listening to an audio recording or a competent reader in person. The learner may listen to the passage repeatedly and then read the passage a set number of times to practice reading it fluently (McShane, 2005, p. 53; Wexler, Vaughn, Edmonds, & Reutebuch, 2008).

Echo reading. The instructor reads a sentence out loud with the learner immediately reading the same sentence, imitating the instructor's phrasing. They continue reading the passage in this manner. When the passage is completed, the instructor can revisit sections of the passage that were challenging for the learner to continue the process of echo reading. The learner can then reread the text aloud independently (McShane, 2005, p. 52).

Repeated reading. The instructor first models the passage aloud. The learner then reads the passage repeatedly with the instructor offering guidance and feedback until some measure of fluency is reached (Bos & Vaughn, 2006, p. 173). Repeated reading based on learners practicing a targeted group of words may be an effective way to focus the practice (Torgesen et al., 2007). While repeated reading can be effective as an instructor-learner activity, recent research with adolescent students with reading disabilities found that using peer-to-peer repeated reading practice did not improve fluency or comprehension (Wexler et al., 2010).

Corrective feedback. An instructor or more competent peer provides corrective feedback while the learner is reading (Wexler et al., 2008).

Reading and speaking. Address reading and speaking fluency together. For individuals with reading disabilities, problems with reading fluency can be combined with problems in oral expression. Previewing a reading, reviewing key vocabulary, and talking through key concepts reinforce passage vocabulary and provide extra support for verbal memory challenges discussed previously in this chapter

Source: Shaywitz (2003), p. 276

school. Individuals who struggle with reading often avoid reading, which severely limits the development of their reading vocabulary. Thus, vocabulary instruction becomes an important component of instruction aimed at increasing reading ability for adults with reading disabilities.

Vocabulary knowledge is multidimensional. We can consider the breadth of our vocabulary, which is the number of familiar words we recognize and use, as well as its depth, which is how well we understand words'

multiple meanings and nuances. Thus, there are different degrees to knowing a word (Dale, 1965, as cited in Ebbers & Denton, 2008).

1. A word is totally unfamiliar, having never been seen or heard before.
2. A word has been seen and/or heard, but the meaning is unknown.
3. A word is partially known; its meaning is understood in some contexts.
4. A word is very familiar and its meanings are known.

The fact that vocabulary knowledge is not "all or nothing" has implications for vocabulary assessment and instruction. In terms of assessment, one implication is that an individual may have some knowledge of a word that is not reflected in a vocabulary test because of the decontextualized nature of the assessment tasks. In terms of instruction, an individual needs ongoing interaction with new vocabulary for the words to become truly functional additions to his or her vocabulary. Research indicates that it takes approximately 12 varied interactions with a word to develop deep understanding (Beck, McKeown, Omanson, & Pople, 1985).

Assessment and instruction.

Vocabulary is one of the most challenging areas of reading to assess. As indicated above, people's vocabulary knowledge varies depending on their knowledge of oral versus written words. The depth and flexibility of understanding and using words also vary based on people's range of experience with the words. The first assessment challenge is to determine the words or concepts that should be assessed. Initial assessments at program entry may use standardized written or oral vocabulary tests based on a sampling of words at different levels. During instruction, assessments should be based on essential vocabulary needed for the content being presented. See McShane (2005), Chapters 6 and 8, for more information on vocabulary assessment.

There is virtually no research on vocabulary instruction in adult education, much less research focused on

adults with reading disabilities. Adult educators must therefore look toward research on adolescent learners for evidence-based principles to use in vocabulary instruction for adult learners with reading disabilities (Curtis, 2006; McShane, 2005). These principles are summarized below.

Provide explicit vocabulary instruction.

Learners benefit from explicit instruction on word meanings. Instructors should clearly explain the vocabulary learning technique they are teaching, model it, provide scaffolded practice with feedback and teach students how to generalize the vocabulary learning to other situations (Scammacca et al., 2007). See Chapter 3, Explicit Instruction, for more detailed information.

Teach vocabulary learning strategies.

Individuals who struggle with expanding their reading vocabularies benefit from focused instruction on vocabulary learning strategies. These strategies guide learners to connect new vocabulary with their prior knowledge. One of the most thoroughly researched strategies is the keyword method (Brigham & Brigham, 2001; see Figure 7 for an example), which is based in the following procedures.

- Identify a new vocabulary word and its definition.
- Identify a word (called the keyword) that sounds similar to the new vocabulary word that can be represented as a picture.

- Construct a picture that represents the definition of the new word and also contains the keyword.
- Study the word and its meaning using the picture.

This strategy is especially helpful for learning abstract vocabulary because it connects the new information with words that are acoustically similar and already known to the learner. It is important for instructors to follow the principles of explicit instruction to ensure that learners understand the steps of the process. Learners need ample practice to develop their ability to use all of the components of this strategy.

Engage learners in exploring the different ways of understanding words.

There are a variety of ways to help learners explore new words they encounter in their reading (Boardman et al., 2008). Learning how to think about words in different ways is more effective than learning new vocabulary from decontextualized vocabulary lists with definitions. For example, word mapping is a technique that facilitates vocabulary learning through the exploration of relationships between words. See Figure 8 for a sample word map that connects a new vocabulary word to its synonyms, antonyms and related root words. The map also includes a section for the learner to write the word in sentences using familiar contexts.

Another way to teach vocabulary is by teaching the meaning of common word parts known as morphographs. Morphographs are prefixes, suffixes and roots,

Figure 7. Keyword Method			
Vocabulary word	Definition	Reminding word	Knowledge Connection
Society	A group of persons organized for a purpose	Tea	
<small>Source: Brigham & Brigham, 2001</small>			

Figure 8. Word Map

To take, to get SYNONYM	CAPTURE	Give away ANTONYM
Captivate, capacity RELATED WORDS		I captured my friend's party on video. I captured the dog that bit the child.

Source: Boardman et al., 2008

which are the smallest parts of words that have meaning. A list of common morphographs is displayed in Figure 9. Teaching learners to recognize these word parts along with their meanings can be an effective way to teach vocabulary, because it gives learners word knowledge they can apply to new words.

Teaching learners how to figure out the meaning of unknown words in text through the use of context clues is another evidence-based approach to teaching vocabulary (Kamil et al., 2008). This type of instruction teaches learners to infer word meanings by using specific types of context clues (see Figure 10 for examples). Research on struggling adolescent readers indicates that combining morphographic analysis with using context clues can be a more effective intervention than teaching context clues alone, because it gives learners multiple clues to determine the meaning of an unknown word (Kamil et al., 2008). Using principles of explicit instruction, learners would need to learn the two ways of figuring out vocabulary separately before combining them. See Sample 3 in the appendix of this chapter for a sample lesson from adult education combining these two vocabulary learning techniques.

Use collaborative groups to promote verbal interactions among learners.

Vocabulary development occurs through conversation as well as through reading. Incorporating verbal interactions for vocabulary development is particularly important for students who function at the lowest reading

Figure 9. Common Prefixes, Suffixes and Roots

<i>Prefix</i>	<i>Meaning</i>
ad-	To, toward
circum-	Around, about
com-	With, together
de-	Away from, off
dis-	Away, apart
ex-	From, out
in-	Not
in-	In, into
inter-	Between
mis-	Wrong
<i>Suffix</i>	<i>Meaning</i>
-able (-ible)	Capable of being
-ance (-ence)	The act of
-ate	Making or applying
-ful	Full of
-ity	The state of being
-less	Without
-ly	In a certain way
-ment	The result of being
-ness	The state of being
-tion (-ion, -sion)	The act of or the state of being
<i>Root</i>	<i>Meaning</i>
Act	Do, to act
Bene	Good
Cap, capt	To take or seize
Dem	People
Gram, graph	To write or record
Mem	Remember
Phil	Love
Rupt	Break
Struct	Build

Source: Kamil et al., 2008

Figure 10. Context Clues

Type of Context Clue	Description	Example
Definition	Passage provides a direct definition of the unfamiliar word. Signal words: <i>is, are, means</i>	You can tell by the bad smell that something is <i>putrid</i> in the trash can.
Synonym	Passage contains another word or phrase that is similar to the unfamiliar word. Signal words: <i>also, as, like, same, or</i>	The man felt infallible because he was always right about the next day's weather.
Antonym	Passage contains a word or phrase that is the opposite of the unfamiliar word. Signal words: <i>although, but, however, in contrast, instead of</i>	Although DJ was anxious about taking the driver's test, Anna was not worried at all.
Example	The passage has words or ideas that are examples of the unfamiliar word. Signal words: <i>for example, for instance, including, like, such as</i>	A common lunch entrée, such as a sandwich, is often on a menu.
General	The passage has nonspecific clues to the meaning of the unfamiliar across multiple sentences.	Maria was planning a cookout. She had hamburgers, hot dogs and rolls. She needed to buy some condiments.

Source: Adapted from Diamond and Gutlohn (2006)

levels. Vocabulary development should include opportunities for learners to use target vocabulary words in small- and large-group discussions based on common readings or topics (Boardman et al., 2008). Discussions can also focus on word meanings and the different ways the same word can be used based on context. Successful reading interventions often include these types of oral discussions, which are particularly appropriate for adult learners. Ebbers and Denton (2008, p. 92) summed up the case for verbal interactions for vocabulary learning: “As long as vocabulary remains trapped within the narrow boundaries of the printed page, word learning is restricted for students with limited decoding skills. Conversely, when scholarly vocabulary becomes conversational or pragmatic ... it has the potential to become personally meaningful.”

The most effective vocabulary instruction will carefully and systematically choose among these evidence-based approaches. Certainly, adult educators should rely on explicit instruction as a major instructional method for vocabulary learning. On the basis of learners' backgrounds, adult educators should select and combine different instructional strategies such as word mapping, morphographic analysis, context clues, keywords and collaborative discussions to deepen understanding of new vocabulary. Effective instruction provides consistent practice, feedback and reinforcement to enable learners to identify which approaches best suit their unique profiles of learning strengths and needs.

5. READING COMPREHENSION

Reading comprehension is the ability to derive meaning from text. It is the result of an interaction between

the learner, the text and the purpose for reading and results in the construction of new knowledge. Learners' knowledge, skills, strategies, sociocultural experiences and motivation to read are crucial factors that affect reading comprehension (RAND Reading Study Group, 2002). Struggling readers, including adults with reading disabilities, may have difficulty with reading comprehension for one or more of the following reasons (Murray, Wexler, Vaughn, Roberts, & Tackett, n.d.; RAND Reading Group):

- **Difficulty with decoding words or reading fluently.** Some individuals have difficulty reading text because they are struggling with recognizing the words in a passage or they cannot use word and sentence structures to read fluently. These individuals need instruction and practice using the unfamiliar words before trying to comprehend them from reading them in text.
- **Difficulty understanding vocabulary.** Some students, especially English language learners, have limited English vocabulary. They may be able to decode words, but they do not know the meaning of many of the words they read in a passage. These individuals need instruction that allows them to develop their vocabulary knowledge, especially of key vocabulary words used in a passage.
- **Lack of prior knowledge or inability to relate content to prior knowledge of the topic.** Some individuals lack knowledge about a topic or do not know how to connect the content of what they are reading to what they already know. These learners may need to develop more background knowledge or learn how to use their background when they read.
- **Overreliance on background knowledge.** Some readers have the opposite problem and are overly dependent on their background knowledge to fill in comprehension gaps. This strategy allows them to ignore parts of passages that they do not understand as they fill in information they already know as they read. These learners need to learn strategies they can use when text becomes difficult to understand.
- **Inability to attend to meaning while reading or inability to apply comprehension strategies.** Some individuals are fluent readers but do not cognitively engage in the text in order to comprehend what they are reading. These individuals need to learn comprehension and self-monitoring strategies that will help them pay attention to the meaning of what they are reading.
- **Mismatch between comprehension tasks and sociocultural experiences.** People belong to various groups based on family structure, income, race, ethnicity, native language, neighborhood and recreational activities. These all influence what we know, what we read and when we read, as well as broader ways we use language for communication. The more familiar the content and language expression is because of an individual's experiences, the easier it is for the individual to develop comprehension.
- **Motivation.** Motivation is a powerful force in any activity. How individuals view themselves in relation to reading in general as well as the particular comprehension task at hand will affect how much effort they will expend in actively thinking while reading. Motivation can be enhanced when learners understand the purpose for the activity connected to their reading goals. In addition, motivation is enhanced when learners are given choices in what they read, are provided with texts they find interesting and relevant and have the opportunity to interact with others as part of the comprehension process.

Reading assessment and instruction.

Adult education programs commonly administer standardized silent reading tests to assess reading comprehension as part of program placement. Additional testing with informal reading inventories, though time-consuming, can provide a fuller picture of comprehension because these tests also include measures of oral

comprehension and fluency. There are many ways to assess comprehension during instruction. Classroom discussions, short written responses, role plays and graphic representations can all provide information on reading comprehension. Because comprehension is the ultimate goal of reading instruction, tracking comprehension growth is usually an important individual and program accountability measure (McShane, 2005). Ongoing instruction and assessment should be targeted at realistic and important near-point goals for students. For example, the lower levels of the Comprehensive Adult Student Assessment System (CASAS) call for basic vocabulary knowledge and more literal comprehension skills. In contrast, the majority of reading comprehension questions on the General Educational Development (GED) test require the ability to summarize and infer (Hock & Mellard, 2005). Having clear comprehension goals tied to assessment targets will help instructors identify which strategies to teach, and setting such goals can help motivate learners to improve their comprehension skills.

Adult educators should realize that as a rule, middle and high school students are not directly taught reading comprehension strategies (Edmonds et al., 2009). Some students come to adult education needing comprehension instruction because they didn't acquire the strategies in the early grades and were never taught the strategies on a remedial basis in later grades. Others will have comprehension needs because they lack essential reading component skills because of reading disabilities

or other factors such as lack of exposure to reading or level of English language learning. The good news is that research supports the direct teaching of comprehension skills. For example, results on reading comprehension interventions for secondary students with LD indicates that these students can make significant comprehension gains when taught comprehension strategies (Edmonds et al., 2008). Evidence-based comprehension interventions that work for adolescents may also be effective for adult struggling readers, especially for adults with reading disabilities.

The overarching principle of reading comprehension interventions is the use of explicit instruction focused on developing comprehension strategies (Edmonds, 2008, Swanson & Deshler, 2003). A major difference between struggling readers and their reading-proficient peers is less *what* they are taught than *how* they are taught (Faggella-Luby et al., 2009). Older struggling readers need instructional intensity that focuses their attention on clearly presented comprehension goals and procedures. Specifically, this type of instruction incorporates instructor modeling, leveled readings for guided practice at the learner's tested instructional level, progress monitoring combined with feedback, and enough sustained learning time to develop proficiency in the comprehension strategies. Chapter 3 provides sample lesson plans with detailed examples of how explicit instruction for strategy learning can be implemented. The following section describes reading comprehension strategies appropriate for adult education.

Comprehension Strategies

Reading comprehension strategies are step-by-step procedures that help readers actively engage with text. Researchers have identified specific types of strategies with proven effectiveness for adolescent struggling readers that can be directly applicable to progressing through Adult Basic Education levels and GED attainment (Hock

& Mellard, 2005; Kamil et al., 2008). See Figure 11 for a brief description of these types of comprehension strategies.

Researchers suggest that the most important characteristic of effective comprehension strategy instruction is not the power of any individual strategy but how well the instruction cognitively engages learners. One prac-

tical way to organize strategy instruction is to group strategies according to when they are used: before, during and after reading (Lenz, n.d.). “Before reading” strategies activate learners’ background knowledge and prepare students to learn from reading the text.

Specifically, these strategies enable learners to explore a text prior to reading, to ask themselves questions about the content and its connection to their knowledge and experiences, and to set goals for reading. “During reading” strategies help learners to monitor their comprehension as they read. “After reading” strategies help learners check their comprehension and deepen their understanding of what they have read. Figure 12 is an example of “before,” “during” and “after reading” strategies developed for Adult Basic Education learners.

Prior to the lesson, the teacher chooses a short text passage with pictures and captions or subtitles and make copies for all the students who are learning the strategy. The text should be at the learners’ current reading level, preferably on a topic that interests the students. The instructor follows explicit instruction procedures for introducing each part of the strategy (before, during and after reading). If the learner group has a great deal of variation in reading levels, the instructor models using

Figure 11. Types of Reading Comprehension Strategies Aligned with Adult Education Assessments

This chart identifies four types of comprehension strategies that support performance on CASAS and GED testing with examples of specific strategies.

1. Generating Questions. Example Strategy:

Self-Questioning

Attend to clues as you read.

Say some questions.

Keep predictions in mind.

Identify the answer.

Talk about the answers.

(Schumaker, Deshler, Nolan, & Alley, 1994)

2. Looking for Clues. Example Strategy: Multipass

Survey the chapter for text and question clues.

Read chapter and section questions.

Skim to find answer paragraphs.

Paraphrase.

Answer questions.

(Schumaker et al., 1981)

3. Putting information in your own words. Example Strategy: Paraphrasing.

Read a paragraph.

Determine main idea and details.

Put the main idea and details in your own words.

(Schumaker, Denton, & Deshler, 1993)

4. Making Inferences. Example Strategy: Question-Answer Relationship

Identify information that is easy to find.

Identify information that has to be put together from different parts of the passage.

Identify how what you already know helps with understanding the reading.

Identify predictions based on the information in the passage.

(Raphael, 1986, as cited in Bos & Vaughn, 2006, p. 99)

Source: Hock & Mellard (2005)

Figure 12. Before, During and After Reading Strategies

Before Reading: Preview

Step 1: Turn the title into questions (who, what, why, etc.).

Step 2: Look at the pictures or graphics. Summarize what you see.

Step 3: Read the captions. What do they tell you?

Step 4: Ask yourself, “What do I already know about this topic? Write a little about what you already know.

Step 5: Think about what you would like to know about this topic.

During Reading: Reflect

Highlight anything that surprises you while you read.

Make notations in the margins such as: ?, !

What information helps you answer your “who, what, why” preview questions?

After Reading: Answer Questions

Step 1: Answer your previewing questions (Who? What? Why?).

Step 2: Look at what you said you already knew about the topic. What would you now correct?

Step 3: Answer the following:

What did you learn about _____?

What about the passage surprised you? Why?

What did you find most interesting?

Source: Hager et al. (2005)

text at an easier reading level to help engage all learners and then differentiates text difficulty for guided practice. Using explicit instruction principles, learners engage in repeated practice exercises until they are proficient in the strategy and ready for independent practice.

The type of reading comprehension strategy instruction described in this section has one of the strongest evidence bases (NICHD, 2000; Schumaker & Deshler, 1992; Swanson & Deshler, 2003). This type of instruction demands teacher planning in terms of assessing learners' reading comprehension levels in order to use readings at learners' instructional levels. It is also based

on allowing learners to progress at their own rate, which means allowing enough sustained instructional time for learners to become proficient in the strategy. Research also indicates that it is important for learners to be proficient in multiple strategies in order to use strategies that match the specific reading demand (e.g., reading a short text passage on a test vs. reading an instructional manual at work) (Gersten, Fuchs, Williams, & Baker, 2001; Vaughn, 2006). Helping learners develop multiple reading comprehension strategies and know how to choose the best strategy for a particular situation should be a key component of adult education programs.

Summary

DEFINITION

Reading disabilities occur across a continuum from mild to severe. Studies indicate that reading disabilities are strongly associated with problems in phonological processing, have a familial link, can be observed through neuroimaging and are a lifelong condition.

TYPES OF READING DISABILITIES

- Research has identified three basic types of reading disability profiles: word recognition and spelling, fluency and automaticity, and language comprehension.
- The most basic and pervasive type of reading disability is difficulty with word recognition and spelling, sometimes called dyslexia. This type of reading disability is based on a lack of phonemic awareness, that is, the ability to listen to language and detect individual sounds.
- Another type of reading disability is indicated by a lack of fluency and automaticity marked by inaccurate, slow and expressionless reading. This type of reading disability is indicated by problems with quickly naming letters, numbers, colors and simple objects.

- Difficulty with language comprehension based in deficits in verbal memory is another marker of a reading disability.
- Adults with reading disabilities can present problems in one or more of the three reading disability profiles.

INSTRUCTIONAL PRINCIPLES

- Instruction should be matched to an individual's reading disability profile.
- Learners with word recognition and spelling problems may need instruction in phonemic awareness and decoding skills. This type of instruction develops learners' ability to understand the specific sounds of the English language, how those sounds map to individual letters and letter combinations, and rules that explain how individual words are formed.
- Fluency instruction can take many forms including previewing, echo reading, repeated reading, corrective feedback, and addressing reading and speaking together.

- The most effective vocabulary instruction will carefully and systematically choose among evidence-based approaches, which include explicit vocabulary instruction, teaching learning strategies, exploring different ways of understanding words, and collaborative learner interactions.
- The overarching principle of reading comprehension interventions is the use of explicit instruction focused on developing comprehension strategies, which can occur before, during or after reading.

Additional Resources

Understanding and Assessing Fluency.

Learn what reading fluency is, why it is critical to make sure that students have sufficient fluency, how to assess fluency, and how to best provide practice and support for all students.³

Assessment Strategies and Reading Profiles (ASRP).

This Web site provides research-based assessment strategies to improve reading instruction for Adult Basic Education and Adult Secondary Education learners.

With ASRP you can learn about the components of reading, learn about reading profiles and instruction, watch videos of a teacher giving diagnostic reading tests to an adult learner, download free tests with directions for administering and interpreting them, match your adult learners' test scores to research-based adult reading profiles, get instructional suggestions for teaching your learners based on their profile matches, and access additional resources and references on reading, assessment and instruction.⁴

³ <http://www.readingrockets.org/article/27091>

⁴ <http://lincs.ed.gov/readingprofiles/index.htm>

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SAMPLE 1: SYLVIA GREENE'S INFORMAL WORD ANALYSIS INVENTORY

http://lincs.ed.gov/readingprofiles/SG_All_Docs.pdf

Sylvia Greene's Informal Word Analysis Inventory

Directions:

Reading (Decoding):

1. Give the learner the "Learner Copy" of the inventory and explain that he/she should read the words aloud, going down each column.
2. As the learner reads the words, mark correct and incorrect responses next to each word on the "Teacher's Copy" of the inventory in the "Reading Column."
3. The responses recorded on the "Teacher's Copy" show the letter combinations that the learner knows (the correct responses) as well as those he/she does not know (the incorrect responses)
4. As a teacher, you can then plan instruction that targets the letter combinations that each learner does not know.

Spelling (Encoding):

1. To determine a learner's Spelling ability, reading aloud each word on the inventory and ask the learner to write down the correct spelling.
2. Use the "Teacher's Copy" of the inventory to record the responses in the "Spelling" column.
3. As a teacher, you can then plan instruction that targets the letter combinations and spelling patterns that each learner does not know.

Informal Word Analysis Inventory - Level I - Learner Copy

fan	thin	hung
hag	wham	brag
Sal	rum	slot
ban	cup	snap
tad	log	strut
rig	mod	sprig

Sid	fen	runt
shin	met	Fisk
chat	quit	Luke
pitch	quack	file
latch	rank	rote
sack	link	nape
bath	Kong	Pete

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Informal Word Analysis Inventory - Level II - Learner Copy

vain	gauze	mild
jay	jaw	cent
peek	knack	pace
beam	writ	cinch
roam	tight	cyst
mow	limb	gem
foe	sly	binge
hue	tie	gin
few	hark	gym
void	port	phase
soy	verb	tough
foul	firm	deaf

pow

curl

hunted

loop

pall

wished

hood

balm

slammed

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Informal Word Analysis Inventory - Level I - Teacher's Copy

	Reading	Spelling		Reading	Spelling
fan			met		
hag			quit		
Sal			quack		
ban			rank		
tad			link		
rig			Kong		
Sid			hung		
shin			brag		
chat			slot		
pitch			snap		
latch			strut		
sack			sprig		
bath			runt		

thin			Fisk		
wham			Luke		
rum			file		
cup			rote		
log			nape		
mod			Pete		
fen					

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Key to Individual Phonics Skills Assessed on Level I Inventory

	Skills		Skills
fan	short a and consonants: f, n	met	short e
hag	short a and consonants: h, g	quit	qu
Sal	short a and consonants: s, l	quack	
ban	short a and consonants: b, n	rank	nk
tad	short a and consonants: t, d	link	
rig	short i and consonants: r, g	Kong	ng
Sid	distinguish between short a and short i	hung	
shin	distinguish between short a and short i	brag	two letter initial consonant blends, br, sl, sn
chat	ch	slot	

pitch	tch	snap	
latch		strut	three letter initial consonant blends, str, spr
sack	ck	sprig	
bath	-th	runt	two letter final consonant blends, -nt, -sk
thin	th-	Fisk	
wham	wh	Luke	final e: long u,i,o,a,e
rum	short u	file	
cup		rote	
log	short o	nape	
mod		Pete	
fen	short e		

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Informal Word Analysis Inventory - Level II - Teacher's Copy

	Reading	Spelling		Reading	Spelling
vain			hark		
jay			port		
peek			verb		
beam			firm		
roam			curl		

mow			pall		
foe			balm		
hue			mild		
few			cent		
void			pace		
soy			cinch		
foul			cyst		
pow			gem		
loop			binge		
hood			gin		
gauze			gym		
jaw			phase		
knack			tough		
writ			deaf		
tight			hunted		
limb			wished		
sly			slammed		
tie					

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Key to Individual Phonics Skills Assessed on Level II

>

	Skills		Skills
vain	vowel digraphs <u>ai</u>	hark	r - controlled vowels, <u>ar</u>
jay	ay	port	or
peek	ee	verb	er
beam	ea	firm	ir
roam	oa	curl	ur
mow	ow = long o	pall	l - controlled vowels, <u>al</u>
foe	oe = long o	balm	silent consonants, lk, lm
hue	ue, ui = long u	mild	ild, old words
few	ew = lon u	cent	soft c, <u>ce</u>
void	oi	pace	
soy	oy	cinch	ci
foul	ou	cyst	cy
pow	ow = ou	gem	soft g
loop	oo	binge	ge
hood	oo	gin	gi
gauze	au	gym	gy
jaw	aw	phase	ph = f
knack	silent consonants <u>kn</u>	tough	gh = f
writ	<u>wr</u>	deaf	ea = short e

tight	<u>igh</u>	hunted	-ed = ed
limb	m <u>b</u> , doubt <u>bt</u>	wished	-ed = t
sly	sounds of y	slammed	-ed = d
tie			

SAMPLE 2: BEGINNING READING SCOPE AND SEQUENCE

Fundations Level 1 Scope and Sequence

By the End of Level 1, Students will be able to:

- *Segment words into syllables
- *Segment syllables into sounds (phonemes)-up to five sounds
- *Name sounds of consonants (primary) and short and long vowel sounds when given the name
- *Name corresponding letter(s) when given the sounds of consonants and vowels
- *Identify the word structures such as blends, digraphs, basewords, suffixes, syllable types (closed and vowel-consonant-e syllables)
- *Read and spell CVC,CCVC,CVCC, CCVCC,CVCe words
- *Read and spell compound words and other words with two syllables
- *Read and Spell words with s, es, ed, ing suffixes
- *Construct sentences using vocabulary words
- *Read controlled stories with fluency, expression and understanding
- *Apply beginning dictionary skills
- *Apply correct punctuation (period, question mark, exclamation point)
- *Apply capitalization rules for beginning of sentences and names of people
- *Retell short narrative stories
- *Retell facts from expository text

Unit 1

Letter formation (**a-z**)

Alphabetical order

Letter names, keywords and sounds: short vowels, consonants

Unit 2

Blending and reading three-sound short vowel words

Segmenting and spelling three-sound short vowel words

Phonemic awareness skills: sound manipulation (initial, final, medial)

Sentence dictation procedures: Capitalization, period, word spacing

Sentence proofreading procedures

Sample words: **cat, sip, log, fox**

Unit 3

Concept of consonant digraph, keyword and sounds: **sh, ch, th, wh, ck**

Spelling of ck at the end of words

Sentence dictation procedures: question mark

Narrative vs. expository text

Prosody with echo reading

Sample words: **hill, puff, chop, sock**

Unit 4

“Bonus” letter spelling rule-**ff, ll, ss** and sometimes **zz**

Glued sounds: **all**

Story retelling

Prosody with echo reading

Sample words: **hill, puff, bill, miss, call**

Unit 5

Glued sounds: **am, an**

Story retelling

Prosody with echo reading

Sample words: **ham, can, fan**

Unit 6

Baseword and suffix with the suffix **-s**

Plural nouns

Story retelling

Prosody with echo reading

Narrative story structure

Beginning composition skills

Unit 7

Glued sounds: **ang, ing, ong, ung, ank, ink, onk, unk**

Blending and reading words with **ng** and **nk**

Segmenting and spelling words with **ng** and **nk**

Story retelling

Prosody with echo reading

Narrative story structure

Beginning composition skills

Sample words: **bang, bank, pink**

Unit 8

Blending and reading words with four sounds (**+suffix-s**)

Segmenting and spelling words with four sounds (**+suffix-s**)

Story retelling

Prosody with echo reading

Narrative story structure

Paragraph structure

Sample words: **bump, stash, bled, past, steps**

Unit 9

Teach the concept of closed syllable

Story retelling

Prosody with echo reading

Sample words: **kit, slip, stash**

Unit 10

Blending and reading words with five sounds (+ **suffix –s**)
Segmenting and spelling words with five sounds (+ **suffix-s**)
Words with suffix **–s** used as action words vs. plurals
Story retelling
Prosody with echo reading
Narrative story structure
Beginning composition skills
Sample words: **Stump, clasp, strap**

Unit 11

Concept of syllable
Compound words
Syllable division rules for closed syllables: compound words between two vowels
Story retelling
Prosody with echo reading
Expository text
Beginning composition skills
Sample words: **catnip, publish**

Unit 12

Adding **–s, –es**, suffix to unchanging basewords with closed syllables
Story retelling
Prosody with echo reading
Sample words: **bumps, steps, wishes, lunches**

Unit 13

Adding **–ed, –ing** suffixes to unchanging basewords with closed syllables
Story retelling
Prosody with echo reading
Sample words: **wishing, rented, slashing, blended**

Unit 14

Long vowel sounds for vowel-consonant-e
Expository text
Prosody with echo reading
Sample words: **stove, hope, caves**

FUNdations Scope and Sequence Level 2

Unit 1

- Letter-keyword-sound for consonants and vowels
- Concept of consonant digraphs
- Letter-keyword-sound for digraphs
- Concept of consonant blends
- Concept of digraph blends
- 3 spellings for /k/ sound (c, k, ck)
- Closed syllable type
- Sample words: quilt, elf, shred, kick, crush

Unit 2

- Bonus letter spelling rule: ff, ll, ss, and sometimes zz
- Glued (welded) sounds: all, am, an, ang, ing, ong, ung, ank, ink, onk, unk
- Blending and reading words with glued sounds
- Segmenting and spelling words with bonus letters and glued sounds
- Prosody
- Story retelling
- Vowel teams: ai, ay, ee, ea, ey
- Sample words: spill, string, stand, toss

Unit 3

- Concept of closed syllable exceptions
- Glued sounds: ild, ind, old, olt, ost
- Story retelling
- Fluent passage reading
- Vowel teams: oi, oy
- Sample words: wild, find, cold, colt, post

Unit 4

- Review suffixes: s, es, ed, ing
- Comparison suffixes: er, est
- Additional sounds of –ed /d/ and /t/
- Spelling procedure for words with suffixes
- Forming plurals
- Forming present and past tense
- Categorizing vowel and consonant suffixes
- Fluent passage reading
- Making judgements and predictions from given facts
- Vowel teams: oa, oe, ow, ou, oo, ue, ew
- Sample words: stronger, tallest, spilled, passed

Unit 5

- Reading and spelling two-syllable words
- Review syllable concept in multisyllabic words
- Compound words
- Syllable division rules for dividing between closed syllables
- Spelling of ic at the end of multisyllabic words
- New suffixes: ful, ment, ness, less, able, en, ish, au and aw
- Sample words: catnip, habit, tonic, mascot, hundred, freshen, boldness

Unit 6

- Review vowel-consonant-e syllables
- s - /s/and /z/
- Spelling option procedure
- Two syllable words with closed and vowel-consonant-e syllables
- Compound words
- Vowel-consonant-e exception (-ive)
- Suffix – ive
- Sample words: hope, confuse, reptile, olive, inventive

Unit 7

- Open syllable type
- Y as a vowel
- Combining open syllables with closed and vowel-consonant-e syllables
- Additional syllable division rules
- y, ly, ty suffixes
- Sample words: no, music, relate, cry, baby, chilly

Unit 8

- R-controlled syllable
- Sounds of ar and or
- Combining r-controlled syllables with other syllable types
- Sample words: fort, part, orbit, party

Unit 9

- Sound of er, ir, and ur
- Spelling option procedure for /ər/ sound
- Combining r-controlled syllables with er, ir, and ur with other syllable types
- Dictionary skills
- Sample words: burst, termite, dirty

Unit 10

- Double vowel syllable type
- Sounds of ai and ay
- Use of spelling option procedure for /ā/ sound
- Combining all types of syllables
- Homophones
- Sample words: paint, display

Unit 11

- Sounds of ee, ea, ey
- Use of spelling option procedure for /ē/ sound
- Sample words: cheap, keep, chimney

Unit 12

- Sounds of oi and oy
- Spelling generalizations of /oi/ sound
- Sample words: moist, toys, paperboy

Unit 13

- The long o sound of oa, oe, and ow
- Use of spelling option procedure for /ō/ sound
- Review of suffix endings
- Sample words: road, doe, grown

Unit 14

- The /ou/ sound of ou and ow
- Flexibility in sound choices for reading
- Spelling generalizations of /ou/ sound
- Sample words: sample, drown, plow

Unit 15

- The /ü/ sound of oo, ou, ue, and ew
- The /ū/ sound of ue
- Use of spelling option procedure for /ü/ and /ū/ sounds
- Sample words: spoon, soup, overdue, blew, argue

Unit 16

- Sounds of au and aw
- Spelling generalizations for the /o/ sound
- Sample words: claw, aunt

Unit 17

- Consonant-le syllable type
- Spelling consonant-le words
- Review of all 6 syllable types
- Favorite, sugar, trouble, couple, young
- Sample words: gobble, tumble, noble

Source: http://www.arlington.k12.ma.us/tl/curr/ela/k-5/reading/es/pdfs/g2_fundations_scope.pdf

SAMPLE 3: DEVELOPING READING VOCABULARY

Teaching Materials, *Understanding What Reading Is All About*
NCSALL

LESSON EIGHT: DEVELOPING READING VOCABULARY

Objectives:

Learners will be able to:

- Understand the important role vocabulary plays in reading.
- Use the following strategies for learning new vocabulary.
- Context clues to “guess” the meaning of an unfamiliar word.
- Knowledge of known words.
- Knowledge of prefixes.

Materials:

- blackboard or newsprint

Vocabulary:

- *context clue*
- *prefix*

Time: 1 hour and 15 minutes

Steps:

1. Introduce vocabulary as a reading skill

- **Explain:** *There are still a few more reading skills we need to know about. Once we are able to read words and longer passages well (fluently), what do we have to be able to do in order to understand what we read? (Know what the words mean.) This is called vocabulary.*

Note to Teacher

Research shows that 90% of new words are learned in the context of reading. That is another reason why it is so important for learners to read frequently and to read about varied subject matter.

⇒ **Write** the following sentence on the board (and read it aloud):

*My dad loves to **slomp** every day.*

⇒ **Ask** a learner to read the sentence aloud. Then ask: *Does anyone know what the word **slomp** means?*

⇒ **Help** learners to understand that even though they can “read” (sound out) all the words, they cannot understand the full meaning of the sentence without knowing the meaning of the word **slomp**. That is why it is important to learn new vocabulary.

2. Demonstrate “context clues” and “known words” strategies to learn vocabulary

- **Ask:** *If you read a word and you don't know what it means, how can you figure out what the word means? Learners will probably mention using the dictionary and/or asking someone. Write these responses on the board and ask: *What if we do not have a dictionary and no one is around to ask? Let's explore that.**
- **Write** the following sentence on the board and read it aloud.

It was hot and sticky. I was hungry and tired. I felt smucky.

- **Ask:** *What do you think the word “smucky” means? What can help you to figure out the meaning of this word that you have never seen before?*
- **Use** the following guided questioning to help learners discover the value of using **context clues** and **thinking about words they already know** as strategies for understanding new words.
 - ⇒ **Ask:** *What words in the sentence provide clues to the meaning of the word **smucky**? Are hot, sticky, tired, and hungry used to describe positive or negative feelings?*

- ⇒ **Ask:** *What word do you know that sound like **smucky**? (Possible answer “yucky,” “mucky.”) Are these words used to describe positive or negative feelings?*
- ⇒ **Explain:** *So, even though you don’t exactly know what **smucky** means, you can make a guess by looking at the other words in the sentence and by seeing how the new word is used. When we take an educated guess about what a new word means because of how it is used in the sentence, we are using the “**context clues**” strategy. When we guess a new word’s meaning by the way it is used with words we already know, we are using the “**known words**” strategy.*

3. Explain prefixes

- **Explain:** *There is another important strategy that can help you to figure out the meaning of words. This strategy involves looking at letters that are added to the beginning of words. These word parts are called “**prefixes**” and they change the meaning of the word.*

Remind learners how we used base words and suffixes to figure out how to say a word and how suffixes changed the meaning of words. Now we will look at how prefixes help us determine what a word means.

- **Write** the following list of words on the board and read them aloud. Ask volunteers to come up and underline the base word and circle the prefix in each word. Have learners discuss the meaning of the base word and reflect on how the prefix “un” changes the meaning of the base word (“un” means “not”).

un happy

un do

un kind

un well

un wise

- **Write** the following words on the board and read them aloud.

reuse
remake
review

redo
rewrite

Note to Teacher

The following words can be used with more advanced learners:

- **preuptial**
- **premeditated**

Note to Teacher

Explain to learners that even though the meaning they guess may not be exact, it will probably be accurate enough to help them move on with their reading and not get stuck on a new word. If learners are not comfortable with guessing using the strategies above, they can use the “list it and skip it” strategy. Learners write an unfamiliar word down on a bookmark made for this purpose. They still try to predict the meaning of the word, but they can also list it on the bookmark and look it up in a dictionary later. This allows learners to keep reading.

- **Ask:** *What do these words have in common? Any idea what the prefix "re" might mean?*

Explain that "re" means "again." Have learners discuss the meaning of each base word and consider how the meaning is changed once the prefix is added. Use the following examples to explore what the prefix "pre" means.

preview pretest
prepay

4. Put it all together: Practice new strategies

- **Have learners practice** the above mentioned vocabulary strategies to figure out the possible meanings of the nonsense words in the following sentences written on the board:
 - ⇒ Sam and Beth *jaggled* the ball to each other.
 - ⇒ We went to the shop to pick up some milk, eggs, and *sups*.
 - ⇒ Tam rode her *zoop* to the store.
 - ⇒ He was *unzum* about the job.

5. Wrap up & reflect

- **Have learners refer** to their strategies chart and review the three strategies for learning new vocabulary. They can do this by working in pairs and discussing the strategies or by writing in a journal.
 - Use clues in the sentence.
 - Think about other words in the sentence you already know.
 - Find the prefix and the base word.

Note to Teacher

When learners are involved in a particular classroom activity, you can ask: *What are we working on (e.g., vocabulary, word analysis)? How is _____ helpful for reading?* This mini-reflection exercise can help promote learners' awareness of reading strategies.

Chapter 5

Written Expression Disabilities

Setting the Context

Many adults do not like to write. Consider the example of a New York cab driver who explains why he carefully avoids hitting pedestrians: “I always try to avoid hittin’ ’em because every time ya hit one, ya gotta write out a long report about it” (Lerner & Johns, 2009, p. 432). While speaking is a natural part of human communication, as the cabbie conveys, writing is an uncomfortable, unnatural task for many individuals. Individuals with written expression disabilities generally have difficulty learning to use writing as an effective communication tool. This difficulty often negatively affects their abil-

ity to be successful in school as well as in the workplace. The amount and types of writing expected in the workplace are expanding (Gillespie, 2001). Employers clearly indicate that writing problems affect their ability to promote otherwise qualified individuals. In addition, misspellings as part of the job application process can substantially reduce the chances of a job applicant receiving an interview (National Commission on Writing, 2004). Discomfort with writing also has social implications in limiting individuals’ comfort and confidence in sending written social messages.

What Are Written Expression Disabilities?

A large percentage of adults with learning disabilities (LD) have written expression disorders (Gregg, Coleman, & Lindstrom, 2008). The ability to write is based on the integration of many processes. Individuals with written expression disabilities will have underdeveloped knowledge in one or more areas of word knowledge: pronunciation, meaning, grammar and spelling (Gregg et al., 2008). To convey ideas in writing also means keeping an idea in focus while translating it into words and sentences, remembering and producing the correct letter formations, and manipulating a writing instrument. Writing calls on visual and motor memory

to coordinate eye-hand movements as well as higher-order thinking for planning, drafting and revising written compositions (Lerner & Johns, 2009, p. 432). Along with significant problems in the previously described knowledge and skills, a marked difference between the sophistication of an individual’s oral expression compared with written products is a key indicator of a written expression disability. In terms of identifying and teaching adults with written expression disabilities, there are two main areas of need: transcription and generation (Fletcher, Lyon, Fuchs, & Barnes, 2007).

1. **Transcription** is the production of letters and spelling required for a written product. Transcription draws on processes involved in retrieving letter forms and familiar word spellings from long-term memory, remembering strategic spelling patterns as well as novel words, and monitoring planning to produce letters and words.
2. **Generation** is the translation of ideas into written language. Ideas must first be retrieved from memory and then expressed in a way that others can understand. Generation is based on planning, organizing, drafting and revision skills.

Individuals with written expression disabilities may have deficits in one or both of these areas. In addition, their writing problems may be linked to reading disabilities. Likewise, it is possible to be a good reader but a poor writer. The key to working with adults who have written expression disabilities is to identify the specific area or areas of difficulty and then match accommodations and interventions to those areas of need.

TRANSCRIPTION

Handwriting/dysgraphia.

Handwriting that is extremely difficult to read because of underlying neurological conditions is called dysgraphia. Handwriting is much more than a motor activity. Berninger and Graham (1998) have called it “language by hand.” Handwriting is the process of first retrieving specific letter shapes from memory and then producing them in written form. Individuals with dysgraphia have problems remembering and producing these letter shapes. In producing script (cursive) or manuscript (printed) letters, the individual must remember how to form letters and use fine motor skills to actually make the letter (Christensen, 2005). For example, to write the name of a street, an individual must first know the letters, remember how the letters are formed and then use motor skills to produce each letter in order. Handwriting becomes especially burdensome when an individual for-

gets how to make specific letters during a writing task. This difficulty results in written products with the same letter formed in different ways, retraced letters or incomplete words. If this basic process of producing writing is not automatic, writers must devote their mental energies to the act of writing rather than attending to the message they want to convey. These basic-level handwriting problems have a strong negative effect on the quality and length of compositions produced by writers of all ages, including adults (Medwell & Ray, 2007). Characteristics of dysgraphic writing include the following (based on research by Weintraub & Graham, 1998, as cited in Bos and Vaughn, 2006, p. 265):

- Poor letter formation
- Letters that are too large, too small, or inconsistent in size
- Incorrect use of capital and lowercase letters
- Letters that are crowded and cramped
- Inconsistent spacing between letters
- Incorrect alignment
- Incorrect or inconsistent slant of cursive letters
- Lack of fluency in writing
- Slow writing even when asked to write as quickly as possible

Spelling.

Spelling is a common problem for individuals with LD because it exposes issues in their understanding of how words are structured. Individuals whose LD includes poor spelling will have trouble with phonemic awareness, which is the aural ability to isolate and manipulate sounds in words. They may also have difficulty applying phonemic (individual letter sounds) and phonetic conventions (e.g., syllabification) when writing (see Chapter 4 for an explanation of these processes). Spelling problems can also include a poor memory for how to write words that do not fit phonetic patterns.

Error analysis is a good way to determine an individual's spelling needs. Most spelling assessments are straightforward interactions. The instructor states a word, reads it in a sentence and asks the person to spell the word in writing. Spelling assessments can also include analysis of writing samples such as sentence writing, reports and essays produced as part of instruction. Spelling error analysis can focus on the plausibility and sophistication of spelling errors, which are indicators of how significant an individual's spelling problem may be (Gregg et al., 2008). Plausibility is based on evidence of how well an individual understands the common structures of English. This is accomplished by examining spelling mistakes to determine if the spelling matches phonetic patterns. For example, spelling "concentrating" as "consitrating" is plausible because it follows the correct sequence of sounds. Sophistication is based on evidence that the individual can demonstrate knowledge of common prefixes, suffixes and syllables. The example shows some sophistication in word knowledge because the spelling uses the suffix -ing as well as common word parts "con," "sit," and "tra." Figure 1 lists common types of spelling errors with examples:

Figure 1. Types of Spelling Errors and Examples

<i>Spelling Error</i>	<i>Example</i>
Segmentation	Nomater or no matter
Homophone substitution	Rain for reign
Consonant substitution	Korner for corner
Vowel substitution	Butiful for beautiful
Substitution of a similar word	Hurt for hard
Sequencing problem	Obversation for observation
Sound omission/distortion	Reamember for remember
Syllable omission/distortion	Corpation for corporation
Morphological problem	Stopt for stopped
Orthographic problem	Brig for bridge
Multiple problem	Driffrante for different

Source: Adapted from Gregg et al. (2008), p. 314

GENERATION

The ability to generate a written composition of any length is based on the effective use of a range of knowledge and skills that may be negatively affected by LD (Gregg et al., 2008):

- **Content knowledge of the topic.** This draws on the ability to activate relevant prior knowledge as well as engage in collecting information through observing, remembering, interviewing and reading. This aspect of writing draws heavily on memory as well as reading and listening skills.
- **Use of correct syntax.** Syntax is the grammatical arrangement of words in sentences. This includes the correct usage of words (semantics), developing sentences with logical word order (grammar), and punctuation. Syntax is affected by oral language development. An adult who has an expressive language disorder will likely exhibit the same difficulty when writing. Reading development is also relevant. Lack of print exposure across a range of writing styles (e.g., technical, informal, expository, narrative) can limit an individual's understanding of different types of sentence structures and word usage appropriate for different types of writing.
- **Use of strategies to engage in the writing process.** Elements of the writing process include planning, composing, revising, editing and producing a final product. This process is based on an interwoven set of skills, supported by important mental processes associated with an individual's ability to focus and sustain attention; plan complex tasks; simultaneously integrate handwriting, spelling and language expression; and regulate negative emotions associated with writing (if applicable)

The integration of these diverse skills is a complex task that many individuals do not master, because of either inadequate instruction or associated disabilities. Although writing and reading competence are closely related, reading proficiency often does not equate to

competent writing. Fortunately, there is a clear body of research to guide writing instruction and a significant

portion of this research is based on individuals with LD (Graham & Perin, 2007).

What Are Principles of Good Writing Instruction for All Learners?

HANDWRITING INSTRUCTION

Whereas instruction focused on writing composition is a specific and integrated part of the K–12 school curriculum, handwriting is often regarded as the least important part of writing instruction. This means that some individuals who struggle with handwriting may have received inadequate instruction. Although word processing is increasingly used for transcription, handwriting is usually an unavoidable necessity in daily adult activities such as filling out forms, making lists and writing notes. In school, handwriting can make a difference in how assignments and test compositions are assessed. Despite these realities, a basic determination must be made whether handwriting instruction will be helpful or if time is better spent in developing competence in word processing or use of assistive accommodations such as scribes and speech-to-text software. If handwriting instruction is to be incorporated into an individual's literacy program, legibility and fluency are the two most important attributes to address (Bos & Vaughn, 2006).

Legibility and fluency.

Experts indicate that legibility is the most important goal of handwriting interventions (Bos & Vaughn, 2006). In addressing legibility, the benefits of manuscript versus script should be considered, as well as the individual's writing preference. Manuscript is often favored over script because it more closely resembles print and has fewer letter forms to learn.

Fluency is affected by a variety of factors. Difficulty with the mechanics of writing such as spelling and grammar can slow the writing process. Deficiencies in basic motor skills and automatic letter form retrieval will also inhibit fluency. In addition, composition issues such as challenges in generating ideas, organization, motivation and confidence can slow the writing process. Thus, it is important for an instructor to determine whether handwriting problems are a key contributor to a fluency issue for particular students. An individual student's handwriting needs should be determined by observing his or her letter formation and fluency while completing a writing task. Curricula for elementary students can be used as a basis for developing brief tracing and copying exercises that focus the learner's attention on letter formation and fluency with the provision of instructor feedback (Bos & Vaughn, 2006).

Word processing.

Learning keyboarding skills can be a welcome relief from handwriting challenges for individuals with dysgraphia. Although word processing can ease some handwriting demands without keyboarding instruction, an individual may write fewer words because of unfamiliarity with typing. In addition, research suggests that struggles with automatic handwriting can extend to keyboarding (Connelly, Gee, & Walsh, 2007). Learning to type is a complex skill and requires explicit and consistent instruction supported by practice over an extended period (Lerner & Johns, 2009). Keyboarding

instruction can be a combination of instructor guidance and software programs that offer tutorial instruction and practice exercises (Zeitz, n.d.).

SPELLING INSTRUCTION

Spelling interventions should focus on helping individuals develop proficiency and fluency. Instruction can focus on one or more of the following goals:

- **Teach regular spelling patterns.** One approach to identifying spelling words is to introduce students to common spelling patterns. Figure 2 provides an example of spelling patterns.

- **Teach how to spell frequently used words.**

In this approach to choosing spelling words, the instructor and learners identify words that are used frequently in students' writing. This may vary by individual based on particular school and work requirements. Yet, there are relatively few words commonly used in writing. A number of such word lists are available via the Web (e.g., <http://www.world-english.org/english500.htm>) or are in research articles (e.g., Graham, Harris, & Loynachan, 1996).

Figure 2. Spelling Patterns

Massachusetts Department of Education

Bay State Readers Initiative/Phonics and Spelling Grades 3–5

The examples following each rule given below can be used to test learners' knowledge of particular rules. For GED-level readers, use more sophisticated and, if appropriate, polysyllabic examples of the rules.

1. -ff -ll -ss -zz

When a one-syllable word ends in the /f/, /l/, /s/ or /z/ sound, double the final *f*, *l*, *s* or *z* after a short vowel.

Examples: *cuff*, *pill*, *mess*, *buzz*

2. c -k-

Use *c* before a consonant or the vowels *a*, *o* and *u*. Use *k* before the vowels *e*, *i* and *y*.

Examples: *cat*, *cot*, *cut*, *key*, *kiss*

3. -k -ck [two-part rule]

When a one-syllable word ends in the /k/ sound, use *-ck* after a short vowel.

Examples: *neck*, *pick*, *sack*

BUT, use *k* after a consonant, long vowel sound or two vowels.

Examples: *silk*, *cake*, *speak*

4. -ch -tch

When a one-syllable word ends in the /ch/ sound, use *-tch* after a short vowel; use *-ch* otherwise.

Examples: *patch*, *witch*, *Dutch*

Exceptions: *rich*, *which*, *much*, *such*

5. -ge -dge

When a one-syllable word ends in the /j/ sound, use *-dge* after a short vowel and *-ge* after a consonant or long vowel.

Examples: *hedge*, *badge*, *fringe*, *huge*

6. Doubling Rule (1-1-1)

When a one-syllable base word ends in one consonant with one short vowel before it, double the final consonant of the base word when adding a suffix beginning with a vowel.

Examples: *mad* + *est* = *maddest*; but *mad* + *ly* = *madly*

7. Silent E Rule

Words ending in silent *e* drop the *e* before a suffix beginning with a vowel but do not drop the *e* before a suffix beginning with a consonant.

Examples: *hope*, *hoping*, *hopeful*

8. Y Rule

Final *y* after a consonant changes to *i* before any suffix except one beginning with *i* (*-ing*, *-ist*).

Examples: *copy*, *copies*, *copied*; *copying*, *copyist*; *boy*, *boys*

9. Plurals

Add *es* to words ending with *s*, *ss*, *sh*, *ch*, *x*, *z*.

Examples: *passes*, *slashes*, *churches*, *foxes*

Change *f* or *fe* to *v* and add *es*.

Examples: *knife* to *knives*; *half* to *halves*

There are more spelling generalizations, from basic understandings such as "a vowel in every syllable," "the effect on the vowel of final *e* in one syllable words," "marking past tense, *-d*, *-ed*, *-t*," and "*r*-controlled vowel patterns," to those more advanced spelling conventions such as the "use of less frequent affixes (*pleasure*, *fortunate*, *flexible*, *confident*, *opposition*)" and "knowledge of spellings derived from other languages, e.g., *confide*, *fortunate*, *emphasize*."

Source: Bear, D., Invernizzi, M., Templeton S., & Johnson, K. (2000)

- **Teach strategies on how to study and practice spelling words.** As described in Chapter 3, teaching spelling as a strategy provides a focused, structured approach that allows learners to develop both their ability to engage in learning activities and learn important skills. A number of spelling strategies have been developed for students with LD. Figure 4 provides an example of a spelling study strategy.
- **Teach proofreading skills.** Spell checkers and hand-held dictionaries can be useful tools to check spelling once learners have developed basic spelling skills at about the fifth-grade level (Graham, Harris, & MacArthur, 2004, pp. 298–299; McNaughton, Hughes, & Clark, 1997). Teaching proofreading allows writers to take responsibility for checking their spelling. Major problems with spell checkers is that they do not flag misspellings when one word is substituted for another (e.g., “how” for “who,” “sweet” for “sweat”), and they fail to suggest the correct word when the misspelling is not recognized. Even when the correct word is provided in a list of possible words, the writer may have difficulty discerning the correct word from the suggested list (MacArthur, 1999).
- **Modality.** Honor learner preference on how to practice spelling words by offering choices such as printed or script writing, arranging letters on tiles or keyboarding.
- **Computer-assisted instruction (CAI).** CAI programs that focus on spelling instruction offer a number of features that promote learning. Features that focus the learner’s attention on word structure and spelling strategies make spelling patterns explicit. Time delay, voice simulation and sound effects also help learners maintain attention and can make instruction more motivating.
- **Study techniques.** Learners are taught and supported in using a specific procedure to follow to study spelling words (see the Kinesthetic Method described in this section).

In a recent review of spelling research relevant to adult basic education, Sawyer and Joyce (2006) provide evidence that multisensory spelling instruction can be effective for individuals with LD, low-literacy adults, and students who struggle with spelling in high school and postsecondary education. Multisensory instruction combines kinesthetic, visual and auditory practice. One example of such an approach is called the Kinesthetic Method (Graham & Freeman, 1986). This method uses the following procedures:

- A small body of research has examined effective spelling practices in K–12 education for students with LD. The following instructional practices are applicable to adult education and can be incorporated into spelling instruction (Bos & Vaughn, 2006, p. 264):
- **Error imitation and modeling.** This is a multi-step process. First, learners compare their incorrect spellings to the correct spelling. Second, the teacher rewrites how the student spelled the word and then models writing the word correctly. Finally, the teacher and student identify the specific error(s) and develop a way for the learner to remember how to correctly spell the word.
 - **Unit size.** Limit the number of spelling words to be learned to three at a time.
1. Say the word. This ensures that a learner is correctly pronouncing the word.
 2. Write and say the word. This combines kinesthetic and oral practice.
 3. Check the word and correct if needed. This includes the practice of visually inspecting spelling.
 4. Trace and say the word. This combines oral and kinesthetic practice.
 5. Write the word from memory; check it and correct if needed. This allows the learner to learn how to develop self-regulation by engaging in self-correction.
 6. Repeat steps 1 through 5.

GENERATION INSTRUCTION

Writing instruction for struggling writers should address the problems they face engaging in the process required to generate written composition. Many writers skip the planning stage and jump right into writing. This lack of planning combined with underdeveloped monitoring and revision skills often results in poorly organized compositions (Butler, 2003; MacArthur & Lembo, 2009) that lack meaningful connections between sentences (cohesion) and do not consider a target audience (Gregg et al., 2006). Explicit instruction in writing strategies is a well-researched intervention to support learners who struggle with writing and has a convincing research base regarding its effectiveness in K–12 education (Graham & Perin, 2007). Specifically, a model called self-regulated strategy development (SRSD) (Harris & Graham, 1999) has demonstrated effectiveness in elementary education through General Educational Development (GED) test preparation. Recently, researchers have successfully applied the principles that undergird SRSD to adult education students with and without LD preparing for the GED writing test (Berry & Mason, in press; MacArthur & Lembo, 2009). SRSD combines a number of instructional components that are recognized as effective. First, it is a structured approach that allows individuals to work at their own levels. It incorporates instruction in self-regulation such as goal setting, self-monitoring and self-reinforcement. It provides strategy steps that serve as an explicit set of directions tailored to specific types of compositions. In addition, SRSD includes graphic organizers that provide visual guides and structured memory supports.

Researchers have demonstrated the effectiveness of three SRSD strategies particularly relevant to adult education (POW, TREE, COPS) that support planning, drafting, revising and evaluating expository compositions (Graham & Harris, 2003; Harris & Graham, 1999). Figure 3 displays the steps of each strategy. Note that TREE is also a visual analogy to aid in comprehension and memory. The Topic is like the trunk of a tree to support the essay. The Reasons are represented as roots

to nourish the essay. Explanations are depicted as leaves that add color and shape to the composition. The End is like the earth that wraps around the tree. SRSD is taught in six stages that incorporate all the principles of explicit instruction. Below are the SRSD steps using the explicit instruction principles described in Chapter 3.

4. EXPLICIT INSTRUCTION PRINCIPLES

Provide clear explanations

- **Stage 1: Develop background knowledge.** This stage begins with the instructor and students discussing what it means to write, including purposes, skills and goals. Developers of this strategy recommend that this stage begin with an examination of

Figure 3. SRSD Strategies

<i>SRSD Strategies</i>	<i>Strategy Steps</i>
POW	<p>Pick my idea</p> <ul style="list-style-type: none"> • Pay attention to the prompt • Single underline: What am I being asked to write about? • Double underline: How am I being asked to develop it? <p>Organize my ideas: Use TREE (below)</p> <p>Write and say more: What can I add?</p>
TREE	<p>Topic sentence: What do I believe?</p> <p>Reasons: Why do I believe this? (3 or more reasons + 1 counter reason)</p> <p>Explanations</p> <ul style="list-style-type: none"> • Why do I believe it? • What are my personal experiences? • If I have a counter reason, why does this not change my belief? <p>End: How am I wrapping it up?</p>
COPS	<p>Capitalization</p> <p>Organization</p> <p>Punctuation</p> <p>Sense: When I read it, does it make sense?</p>

Source: Graham & Harris, 2003; Harris & Graham, 1999

samples of learners' current writing products as well as an exploration of their current skill levels, which may indicate the need for supplemental instruction in basic writing skills. The instructor then presents a cue card that students can use to learn the writing strategy. After discussing the strategy steps, students identify essay parts. Students also participate in a discussion of how to use the strategy steps to set goals and monitor their writing performance. See lesson plan 1.¹

- **Stage 2: Discuss it.** Instructor and learners discuss the goal of instruction, why this type of writing is important and how specific parts of an essay work together. During this phase of instruction, the teacher and learners discuss the rationale for using the SRSD strategy along with self-talk that students can use as they apply the steps, such as “I can do this?” “What do I need to do first?” “So I have three reasons?” and “How good is my ending?” See lesson plan 2.

Model

- **Stage 3: Model it.** The instructor then models using the strategy to write a composition. The instructor uses “think aloud” to show how he or she is deciding what to write, as well as self-mon-

toring: “Have I finished my beginning statement?” “What should I do next?” Once the instructor has modeled, learners can then develop and write down the self-statements they want to use to monitor their strategy implementation. See lesson plan 3.

- **Stage 4: Memorize the strategy steps.** Students memorize the strategy steps for POW, TREE and COPS. See lesson plan 4.

Scaffolded practice

- **Stage 5: Support it.** The instructor and learners plan a composition together using the strategy steps. Students then set goals and work on their essays. The instructor checks in and provides feedback and prompting questions to support students in monitoring their application of the strategy steps and use of self-statements. See lesson plan 5.
- **Stage 6: Independent use.** Once students are able to write a composition that includes all the parts, they compose independently. The instructor provides feedback as needed. Instruction ends when students can independently apply the strategy. See lesson plan 6.

Feedback

- **Feedback.** Feedback is provided throughout, with careful monitoring and guidance during scaffolded practice.

¹ All lesson plans mentioned on this page can be found in the appendix and are available at <http://kc.vanderbilt.edu/casl/pow-tree.html>.

Results of This Type of Instruction for GED Test Preparation

As mentioned previously, this type of instruction has yielded positive results that can directly affect success on the GED test. The two research studies in adult education, although small, yielded promising findings. Students improved their overall quality of writing by learning how to do the following:

- Generate and organize ideas
- Evaluate their essays for organization and purpose
- Set goals for improving drafts
- Structure their writing to fit the essay format
- Address opposing positions

- Provide conclusions
- Write longer essays
- Use transition words
- Use reasons and examples to support points (Berry & Mason, in press; MacArthur & Lembo, 2009)

Understandably, progress is contingent upon an individual's knowledge and skill levels at the beginning of writing strategy instruction. Some students will

progress more quickly than others in learning how to write an essay at the level of GED expectations. As is typical in adult education, attendance patterns dictate if this type of instruction can be offered in a group format, or if one-on-one is the best way to accommodate gaps in attendance. Yet, despite the challenge of variable skill and attendance levels, these small-scale research projects, combined with research in adolescent literacy, demonstrate that explicit strategy instruction in writing can be effective for struggling adult education students.

Summary

DEFINITION

- Individuals with written expression disabilities may have deficits in one or both areas that support writing skills: transcription and generation.

TRANSCRIPTION

- Transcription problems can be based in handwriting and spelling.
- Handwriting that is extremely difficult to read and results from underlying neurological conditions is called dysgraphia.
- If handwriting instruction is to be incorporated into an individual's literacy program, fluency and legibility are the two most important attributes to address.
- Word processing can ease handwriting demands but will require explicit and consistent instruction for individuals who have not already developed the skill.
- Spelling is a common problem for individuals with LD because it relies on their limited understanding of how words are structured.
- Spelling interventions should focus on helping individuals develop proficiency and fluency by focusing on one or more of the following: regular spelling

patterns, frequently used words, spelling study/practice strategies, and proofing skills.

COMPOSITION

- The ability to generate written compositions is based on effective use of a range of content knowledge including knowledge of the topic, use of syntax and application of writing strategies.
- Self-regulated strategy development can be an effective instructional method to develop adult learners' composition skills.

Additional Resources

Introduction to Spelling Instruction for Adult Educators.

This site lists references for a collection of materials intended to provide an introduction to spelling instruction.²

LD Online: Spelling Strategies.

This article by Susan Jones describes five guidelines for learning spelling and six ways for practicing spelling.³

LD Online: Spelling.

This article discusses how common spelling difficulties are, what causes spelling problems, diagnosis of spelling problems, how individuals learn to spell, whether the English spelling system is predictable or unpredictable, and the implications for teaching.⁴

Lesson Plans for SRSD: Story Writing.

This Web site provides lesson plans for writing stories.⁵

Interactive Tutorial.

This free, online tutorial is available through the IRIS Center for Training Enhancements at Vanderbilt University. The tutorial includes all stages of instruction and video clips.⁶

CEC Current Practice Alerts.

This article discusses self-regulated strategy development (SRSD) for writing. SRSD is an empirically validated model for supporting students as they compose text.⁷

2 <http://www.indiana.edu/~reading/ieo/bibs/spell.html>
 3 <http://www.ldonline.org/article/6192>
 4 <http://www.ldonline.org/article/Spelling>

5 <http://www.education.umd.edu/literacy/srsd/lessons.htm>
 6 <http://iris.peabody.vanderbilt.edu/pow/chalcycle.htm>
 7 <http://www.teachingld.org/pdf/alert17writingSSRD.pdf>

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Chapter 6

Content Learning

Setting the Context

Content learning focuses on building a usable knowledge base that supports higher order thinking. For example, to pass the General Educational Development (GED) test, test takers must be able to demonstrate comprehension of science and social studies reading passages, which necessitates some familiarity with basic science and social studies concepts and vocabulary. If an individual is interested in pursuing a degree or credential, then content learning is an important part of that process. In many employment settings, employees

are expected to understand and apply information in written manuals. Individuals seeking citizenship must demonstrate an understanding of foundational concepts of American geography and government. We live in an information society, which means that we all need to comprehend and analyze information in many forms. This ability to build a knowledge base and take action based on content knowledge is an essential foundation for productive and independent adult living.

What Is Content Learning?

Content learning is defined as “the process of constructing knowledge and organizing information into comprehensive and complex cognitive structures” (Arends, 2007, p. 315). In other words, content knowledge is the “substance” needed to think about ideas. It is what a person knows and includes the words used when a person thinks, writes and talks about information and ideas. Content knowledge includes declarative knowledge, which can be portrayed as “Knowing that ...,” and procedural knowledge, which is skill-based knowledge or “Knowing how to” Examples of declarative knowledge are the information and concepts involved in taking out a car loan, such as knowing about inter-

est rates, sources of car loans and loan qualifications. Examples of procedural knowledge include knowing how to fill out a loan application, calculate interest and budget for loan payments. As the examples demonstrate, these two types of knowledge go hand in hand. Successful teaching of content knowledge involves integrating both types of learning—the “what” and the “how”—into a base of usable knowledge.

Content learning is sometimes mistakenly viewed as memorizing quantities of information for later recall. However, rote memorization of “inert” knowledge is inefficient and ineffective. The human brain learns best through organizing and understanding informa-

tion, building on a foundation of prior knowledge, and connecting information to a variety of contexts of use (Bransford, Brown, & Cocking, 1999). Content instruction should provide opportunities for higher-order thinking such as comparing and contrasting, drawing inferences, interpreting, applying and evaluating. In addition, content learning involves developing “content literacy” skills, that is, literacy skills needed for learning

in a content area (Deshler et al., 2001). For example, learning science requires an understanding of basic science and math concepts and vocabulary, the ability to interpret diagrams and graphs, and comprehending expository text. Learning social studies requires a different set of basic concepts and vocabulary and is more dependent on the ability to read maps, timelines and narrative text.

Why Might Adults With LD Have Content Learning Challenges?

Characteristics associated with learning disabilities (LD) can limit individuals’ ability to develop content knowledge. LD can lead to problems with reading comprehension, listening comprehension, working memory and higher-order processes (Fletcher, Lyon, Fuchs, & Barnes, 2007).

- **Reading comprehension.** Chapter 4 of this guide provides a description of types of reading comprehension problems associated with LD. Some comprehension problems occur at the level of word recognition, which would call for working on listening comprehension and oral vocabulary supplemented by developing written word knowledge (e.g., prefixes, suffixes and roots) to build content knowledge. Other learners, who are able to decode, may learn to build content knowledge by expanding their use of reading comprehension strategies and vocabulary development. Vocabulary knowledge is a key ingredient for reading comprehension. If key vocabulary and concepts in a passage are familiar to the learner, he or she is more likely to understand new content and connect it with prior knowledge. Individuals with LD typically bring less content knowledge to the reading task than do those without disabilities, and their comprehension suffers as a result (Gersten, Fuchs, Williams, & Baker, 2001).
- **Listening comprehension.** Listening comprehension is the ability to understand and interpret spoken information. Problems with listening comprehension parallel those of reading comprehension. Individuals with listening comprehension deficits tend to perceive oral information at a literal level and rely on simple sentence structures and uncomplicated vocabulary for understanding. Thus, when content presentations contain a lot of abstract or complex information, conceptual vocabulary, and complicated sentence structures, little learning occurs. Research indicates that weaknesses in listening comprehension affect reading comprehension (Fletcher et al., 2007). Thus, some individuals with LD will need interventions to strengthen both of these areas.
- **Working memory.** Both listening and reading comprehension make demands on working memory. Working memory is a storage resource that holds words and sentences in focus. This mental workspace allows the reader or listener to integrate incoming information with prior knowledge (Fletcher et al., 2007, p. 189). Individuals with LD who have working memory deficits can struggle with comprehension despite a well-developed vocabulary and conceptual base because they cannot keep the information in focus long enough to elaborate or connect it to what they already

know. Both passage content and structure can overload working memory. Consider the following sentence: The boy that the girl that the baby hugged kissed giggled. (The sentence can be restated as The boy that the girl kissed giggled. The girl that the baby hugged kissed the boy.) Although the words are simple vocabulary, the convoluted sentence structure stresses working memory. The listener or reader must first untangle the meaning before connecting it to other information. A reader, fortified with motivation and confidence, may stop and take the time to figure out the relationships between the actors and actions. A listener would not have that opportunity. Thus, when individuals have not internalized common sentence and discourse structures, or are faced with very complex sentences, their working memory can be stressed as they try to unlock the meaning of individual sentences (Caplan & Waters, 1999, pp. 78–79).

- **Higher-order processes.** Individuals with LD can have problems with content learning because they have not developed the higher-order thinking skills that support learning new concepts. As students progress through elementary, middle and high school, the expectations for using higher-order thinking skills increase. Unfortunately, the explicit instruction that many students need to develop those skills is often not offered (Grossen & Carnine, 2005). Students who function below their grade level are often overwhelmed by the amount of information provided and therefore do not learn how to engage in higher-order thinking for school learning. Explicit instruction aimed at developing higher-order thinking skills (e.g., analysis, synthesis, evaluation) has been demonstrated as an effective way to help individuals with LD learn how to actively engage in content learning.

What Are Strategies for Effective Content Instruction for Adults With LD?

Adults with LD often enter educational programs in “catch-up” mode, with gaps in their content knowledge and weaknesses in their ability to acquire new knowledge. At the same time, they must keep up with challenging demands to learn new course material, become proficient in occupational and functional skills, and pass assessments such as the GED and professional licensing exams. There are two basic types of strategies for overcoming these knowledge gaps and learning weaknesses. The first type of strategy is **teacher-focused** and involves the teacher’s selection and presentation of content in a way that is easy to understand and remember. The second type of strategy is **student-focused** and involves teaching students the skills and strategies they need to learn new content (Deshler et al., 2001).

Both approaches must be used in combination to help adults with LD catch up and keep up with the demands of adult education.

TEACHER-FOCUSED STRATEGIES

A variety of teacher-focused strategies can be applied before, during and after instruction. Bos and Vaughn (2006), for example, suggest a six-step process (Figure 1) for teaching concepts. The process begins with deciding what concepts to teach and ends with providing postlearning activities to reinforce and extend the information learned.

Perhaps the most critical teacher-focused strategies are those that the teacher uses in planning and prepar-

Figure 1. Six Steps for Teaching Content

1. Determine the concepts and vocabulary that are most important to teach.
2. Evaluate instructional materials to determine how well format and reading level match learners' skills.
3. Engage learners in activities to assess their background knowledge.
4. Use prelearning and prereading activities to activate background knowledge and introduce new vocabulary.
5. Engage learners in instruction focused on the content identified in Step 1.
6. Provide reinforcement and review of content.

Adapted from Bos & Vaughn (2006, p. 287)

ing for instruction. Among the most useful are the following:

1. Selection of important content
2. Content enhancement
3. Information presentation
4. Ways to engage learners
5. Graphic organizers
6. Using technology to support and accommodate content learning
7. Elaboration

Each of these strategies is detailed below.

1. Selection of important content.

One common lament of educators today is that there is so much content and so little instructional time. Effective instruction involves striking a careful balance in presenting all the required information without subjecting learners to information overload. For students with LD, this balance is especially important. One key strategy in achieving this balance is for teachers to focus instruction on the essential information and central ideas that are critical to understanding the topic under study and that can provide a structural foundation for further learning.

In adult education, there are many sources for determining essential content for instruction. In some cases, guidance can be taken from the GED test, which tests knowledge and skills in five core areas: Language Arts

– Reading, Language Arts – Writing, Mathematics, Science and Social Studies. Guidance concerning essential content is available in documents such as the *Technical Manual: 2002 Series GED Tests* (GED Testing Service, 2009), which describes the subtopics, item types, cognitive levels, types of source documents and other information about the GED test. It should be noted that even though the GED consists primarily of multiple-choice items, it assesses higher-order thinking using content that is presented in the testing material. Thus, essential learnings for GED preparation involve cognitive skills such as comprehension, analysis and application of content information rather than massive amounts of information for rote memorization and recall. See Sample 1 in the appendix of this chapter for a description of levels of higher-order thinking and types of questions on the GED.

Sources of guidance on essential information for individuals in adult basic education are based on defining essential adult skills. One example is the *Equipped for the Future* (EFF) standards, which provide an organized framework defining what adults must know and be able to do to carry out their roles and responsibilities as workers, parents and family members, and citizens and community members (Stein, 2000). The EFF standards are organized around a framework (see Figure 2) that identifies common activities and generative skills that can be applied across adult roles. This framework can both guide instruction and be shared with adult learners. When adults learn meaningful concepts in an organized way, they are more likely to draw on these ideas and use them for effective action (Stein, 2000).

2. Content enhancement.

Once the essential content has been determined, the next task is to analyze the content in order to identify structural elements such as the central ideas, key concepts and vocabulary, relationships between ideas and the general structure of the content. This analysis provides a basis for content enhancement strategies that facilitate the acquisition and retention of the con-

Figure 2. Content Framework for EFF Standards

Content Framework for EFF Standards			
<i>In order to fulfill responsibilities as parents/family members, citizens/community members, and workers, adults must be able to:</i>			
<p>MEET THESE 4 PURPOSES</p> <p>Access To information so adults can orient themselves in the world</p> <p>Voice To be able to express ideas and opinions with the confidence they will be heard and taken into account</p> <p>Independent Action To be able to solve problems and make decisions on one's own, acting independently, without having to rely on others</p> <p>Bridge to the Future Learn how to learn so adults can keep up with the world as it changes</p>	<p>ACCOMPLISH THESE COMMON ACTIVITIES</p> <ul style="list-style-type: none"> • Gather, Analyze, and Use Information • Manage Resources • Work Within the Big Picture • Work Together • Provide Leadership • Guide and Support Others • Seek Guidance and Support From Others • Develop and Express Sense of Self • Respect Others and Value Diversity • Exercise Rights and Responsibilities • Create and Pursue Vision and Goals • Use Technology and Other Tools to Accomplish Goals • Keep Pace With Change 	<p>DEMONSTRATE THESE GENERATIVE SKILLS</p> <p>Communication Skills</p> <ul style="list-style-type: none"> • Read With Understanding • Convey Ideas in Writing • Speak So Others Can Understand • Listen Actively • Observe Critically <p>Decision-Making Skills</p> <ul style="list-style-type: none"> • Use Math to Solve Problems and Communicate • Solve Problems and Make Decisions • Plan <p>Interpersonal Skills</p> <ul style="list-style-type: none"> • Cooperate With Others • Advocate and Influence • Resolve Conflict and Negotiate • Guide Others <p>Lifelong Learning Skills</p> <ul style="list-style-type: none"> • Take Responsibility for Learning • Reflect and Evaluate • Learn Through Research • Use Information and Communications Technology 	<p>UNDERSTAND AND BE ABLE TO USE THESE KNOWLEDGE DOMAINS</p> <ul style="list-style-type: none"> • How We Grow and Develop • How Groups and Teams Work • How Systems Work • Rights and Responsibilities • Culture, Values, and Ethics • How the Past Shapes the World We Live In <div style="text-align: right;">  </div>

(Stein, 2000, p. 111)

tent knowledge by easing the information-processing demands (Bulgren, 2006). Adults with LD, and possibly other individuals who struggle with school learning, tend to demonstrate a range of information processing deficits. Examples include problems with the following:

- Separating important from extraneous information
- Recalling factual information
- Identifying main ideas and supporting details
- Drawing inferences
- Relating new information to prior knowledge
- Monitoring comprehension

- Understanding expository text patterns (Gajria, Jitendra, Sood, & Sacks, 2007)

Thus, it is important to structure content learning in a way that helps learners identify, organize and comprehend important content information.

Research supports the efficacy of a number of content enhancement procedures, such as semantic mapping, graphic organizers, mnemonic illustrations and visual displays (Bulgren, Deshler, & Lenz, 2007; Gajria et al., 2007). Deshler et al. (2001) describe a number of research-validated content enhancement routines for secondary students with LD that can be applied before, during and after the delivery of instruction. These rou-

tines were developed and tested with secondary students with LD and may be adaptable for adult learners as well. Sample 2a and Sample 2b in the appendix of this chapter provide two examples of content enhancements from Job Corps training courses. Sample 2a displays a unit organizer for a culinary arts program. The unit organizer provides both the instructor and students with a road map of the content and processes that will be addressed during the instructional unit. Sample 2b is a “frame” from a health occupations course. The frame organizes four main ideas about patients’ rights to treatment and provides examples. Both the unit organizer and the frame are examples of content enhancements that clearly organize and highlight key content. For an example of determining central ideas and vocabulary, consider the definitions of climate zones for GED preparation in geography in Figure 3a.

By analyzing the definitions, an instructor can determine that temperature and precipitation are two key concepts in all of the definitions. If the instructor had just been working from the five definitions, he or she might not have realized that organizing the information into two major types of attributes would simplify the literacy demands while providing focus for further exploration of climates. An instructor-developed concept map (Figure 3b) serves as a graphic organizer students could use before and during instruction. The instructor

can also identify key vocabulary (climate, temperate, polar, precipitation) to ensure that learners have some familiarity with these terms before being asked to apply them. After introducing the information in the concept map, the instructor can engage learners in discussions to make inferences. Possible discussion questions include, “What do you think it would be like to live in a polar climate?” “Which climate do you think would have the most insects?” “In terms of climate, where do you think most people in the world live?” “Which climate would be your least favorite?” The graphic representation can then be used by students as a reference when reading, for further discussion, or for a follow-up writing activity.

3. Information presentation.

One critical component of content instruction is the use of textual materials, including textbooks, workbooks, reference manuals, electronic books and Web sites. Despite the fact that instructional materials such as textbooks are intended specifically to promote learning, many have flaws that actually create barriers to learning, particularly for individuals with LD (Kame’enui, Carnine, Dixon, Simmons, & Coyne, 2002). Examples of barriers to content learning in instructional materials include the following:

- Too much information is presented.
- Information does not have a clear organizational pattern.

Figure 3a. Definitions of World Climate Zones

Tropical. A climate with large amounts of rain and high temperatures at all times of year.

Dry. A climate with very little precipitation. Temperatures vary widely with hot days and cold nights.

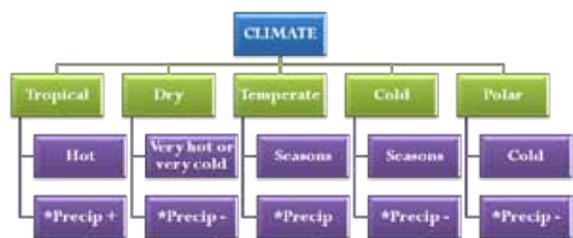
Temperate. A climate with distinct seasons, with warm summers and cold winters and moderate amounts of precipitation in the form of rain or snow.

Cold. A climate with low precipitation and distinct seasons, with wide variations in temperature and particularly cold winters.

Polar. A climate where temperatures are uniformly cold and precipitation is low year-round.

Source: Deshler, et al., 2001

Figure 3b. World Climates Concept Map



* “precip +” indicates a lot of precipitation, “precip -” indicates little precipitation and “precip” indicates moderate precipitation.

Source: TATC

- There is no indication of what is most important.
- Vocabulary and concepts are unfamiliar.
- Content is presented via complex language structures.

In evaluating instructional materials, adult educators can consider such questions as, “Do structural features such as the table of contents, chapters and subsections communicate the relationships within the information being presented?” “Do pictures, graphics and organizational cues (e.g., font sizes and formats, headings, highlighted words) clarify the content?” “How readable is the text?” “How well are pages laid out?” Sample 3 in the appendix of this chapter is a checklist of “considerate” text characteristics.

Another aspect of content instruction is learning from oral presentations. How well speakers structure their presentations by providing organized and relevant visual supports is also an important factor in student learning. Learning is facilitated when instructors provide advance organizers when introducing a topic (Swanson & Deshler, 2003). Advance organizers present the “big picture” in terms of content and process.

Example: An instructor provides the following information orally and writes key words (which are in bold below) on the board to introduce a lesson on nutrition.

1. Let's start out by having you **guess** the name of each food group from the pictures (see Figure 4).
2. We will then **read** a short passage that describes each food group.
3. Then you will identify **what you ate** yesterday from each group.
4. Finally, we will **compare** what you ate with what is recommended **for a healthy diet**.

Another consideration for presenting information is teaching learners how to analyze the structure of text or oral presentations to determine the important information and interpret the content. Figure 5 provides school- and work-related examples of four basic types of expository presentations. Instructors can facilitate stu-



dent learning by teaching recognition of signal words to identify how information is structured (Fante, 2007).

4. Ways to engage learners.

A recent review of research on teaching content to students with LD has identified three characteristics of instruction that are particularly important for student learning. First, the content should be translated into a format that is easy to understand and is designed to focus the learner's attention on the most essential information and ideas. This usually involves preparing a graphic representation of the concept, which lessens literacy demands and makes relationships between ideas explicit. Second, students learn to use strategies that can help them develop higher-order thinking skills to interact with the content. This means identifying how students will engage with the content. Will they be comparing and contrasting, generating questions or describing and elaborating? It also means deciding if comprehension strategy instruction is going to be part of content learn-

Figure 5. Text Structures and Signal Words

Text Structures

Enumeration/Description: Text in which the major idea is supported by a list of details or examples. This type of text may be found in a policy manual in which the policy is stated, followed by a list of examples describing how the policy is implemented.

Chronological/Sequential Order: Text in which a main idea is supported by details that must occur in a particular sequence or order. Directions for assembling a product or carrying out a specific task may be provided within this type of structure so that the reader knows what has to be done and the sequence in which the steps should occur.

Comparison/Contrast: Text in which the supporting details of two or more main ideas indicate how those ideas are similar or different. Readers encounter this type of text structure when they read an advertisement that compares two products or services.

Cause/Effect: Text in which the supporting details give causes of a main idea or supporting details are the results produced by the main idea. This type of text structure may be found when reading about a problem that must be solved or what caused the problem.

Source: Fantane, 2007

Signal Words and Phrases

for instance, for example, such as, to illustrate, most important, in addition, another, furthermore, first, second

first, next, then, initially, before, after, when, finally, preceding, following, meanwhile, previously, ultimately, shortly, eventually, initially, ever since, not long after

different from, same as, similar to, as opposed to, instead of, although, however, compared with, as well as, either ... or, on the other hand, unless, even if, on the contrary, likewise, regardless

because of, as a result of, in order to, may be due to, effects of, therefore, consequently, for this reason, if ... then, thus, it follows that, hence

ing. Third, teachers use principles of explicit instruction such as modeling and guided practice to develop learners' ability to engage in content learning (Gajria et al., 2007). Combined, these three elements provide a road map for planning and teaching content.

5. Graphic organizers.

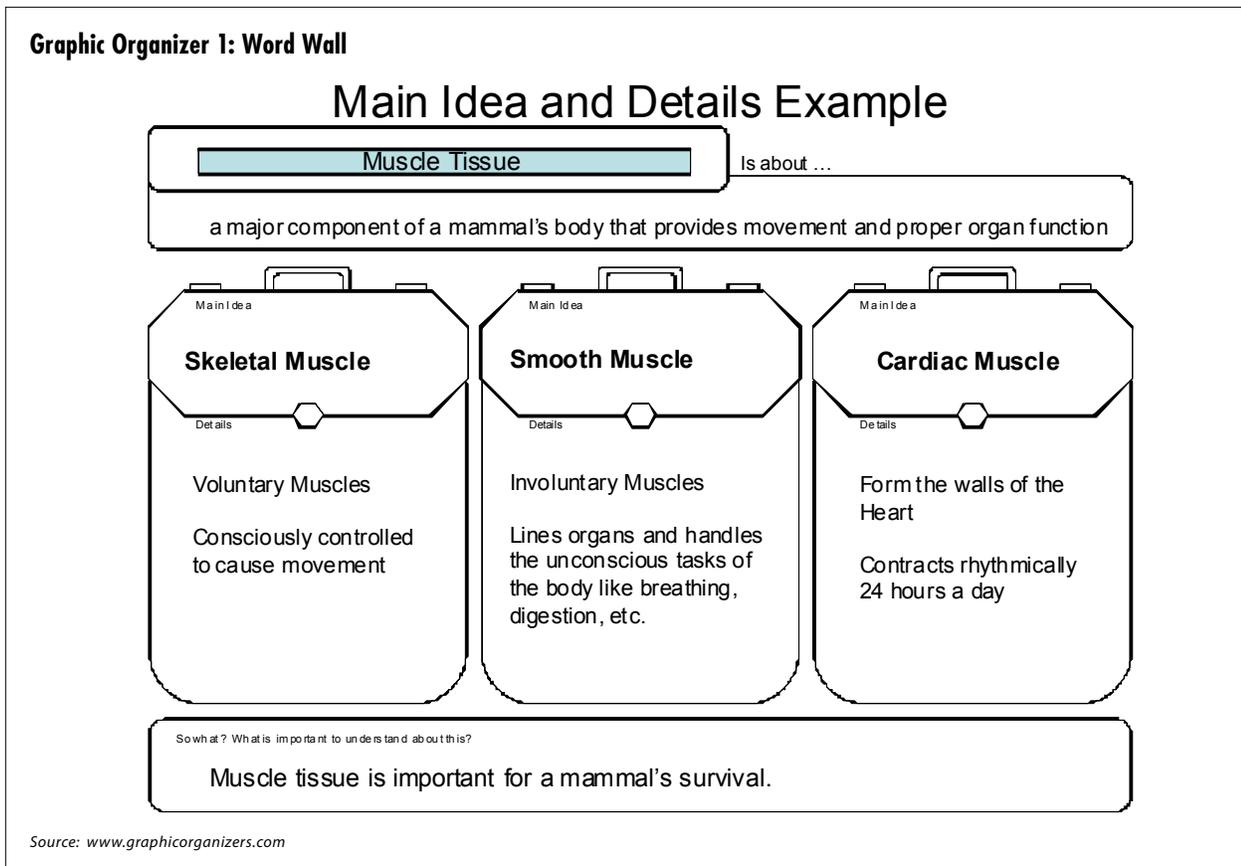
Graphic organizers are a flexible tool for facilitating content learning. They provide a means for organizing key information and portraying the structure of information (e.g., cause and effect, compare and contrast, chronological sequence). Graphic organizers can stimulate comprehension and higher-order thinking while minimizing literacy demands. Teachers can prepare graphic organizers prior to instruction for use as advance organizers, and students can complete graphic organizers during or after instruction to enhance acquisition, retention and integration of knowledge. Graphic organizers are a popular educational tool and have a strong research base as an effective learning tool for individuals with LD (Ellis & Howard, 2007). There are

numerous Web sites and free templates for classroom use (see Resources). Sample 4 in the appendix of this chapter provides sample blank templates.

The previously discussed diagram on world climates is an example of a graphic organizer that arose from an analysis of content. Other examples of filled-in graphic organizers appear on pages 119 and 120, and at the end of this chapter.

6. Using technology to support and accommodate content learning.

Technology can play two overlapping roles in content instruction for adults with LD: (1) providing access and (2) supporting learning. In providing access, its most common function is to compensate for reading deficits through text-to-speech, recorded human voice or alternate presentations of content. A range of software is available for translating text to speech, including capabilities built into popular computer operating systems, and the quality of speech synthesis continues to improve. In addition, some portable e-reading devices,



such as the Kindle and the iPad, have built-in text-to-speech capabilities, although copyright restrictions may constrain this capability on certain materials. Text-to-speech and other access features generally require materials in digital formats, and educators have often been required to scan and convert hard copies to obtain these formats. However, many content sources, including commercial and open-source textbooks, are increasingly becoming available in digital forms, reducing the need for scanning. Sources such as Bookshare (bookshare.org) and Recording for the Blind and Dyslexic (rfd.org) make accessible materials available to persons with qualifying disabilities.

Another approach to providing access to content for students with LD is to present it in formats that require little reading. For example, content can be presented using multimedia, Web-based media, podcasts, com-

puterized lessons, simulations, and a variety of other technology and media options. This brings us to technology's second role: supporting learning. Research has demonstrated the potential efficacy of technology in improving learning for individuals with LD (Gajria et al., 2007). There is an expanding variety of options for using technology both to provide access and to support content learning for students with LD. Examples include using voice recognition, word prediction and spell-check software to facilitate student writing projects; using technology-based projects to increase motivation and provide an opportunity for higher-order thinking about content; and using assistive technologies to enable students with LD to participate in cooperative learning activities (Silver-Pacuilla, 2007). Many of the approaches for using technology for access and support fall within a general approach termed "Universal

Graphic Organizer 2: Summarize and Compare Matrix

<i>President</i>	<i>Party</i>	<i>Prior position</i>	<i>Challenged faced</i>
Obama	Democrat	Senator	Economy
Bush	Republican	Governor	Terrorism attack
Clinton	Democrat	Governor	Impeachment trial

Source: TATC

Design for Learning” (UDL). UDL calls for flexible means of presentation, engagement and expression of learning, and technology is often required to provide such flexibility. The Additional Resources section provides sources for information about UDL and examples of its application.

7. Elaboration.

Elaboration is the process of transforming an idea to extend a learner’s understanding of its meaning. The power of elaboration lies in thinking about new information, connecting it with prior knowledge and then re-presenting it while keeping its essential meaning. Content instruction should provide opportunities for learners to engage in elaboration activities that include explaining a concept in the learner’s own words (paraphrasing), comparing and contrasting ideas, creating visual representations, role-playing and developing discussion questions. Students with language-based learning challenges such as LD and learners with limited vocabulary (e.g., English language learners) may need to be taught elaboration skills (Ellis, Farmer, & Newman, 2005). This need calls for a consideration of learner-centered instruction. While teacher-focused strategies are important for content instruction, learners also need to develop strategies and skills they can use independently to comprehend content.

STUDENT-FOCUSED STRATEGIES

Instructors can teach strategies that show learners how to engage in content learning. These strategies focus on teaching how to actively engage with content to make sure information is meaningful and memorable. The materials an instructor chooses for teaching strategies for content learning are important. Strategies are most effectively taught when the content is at a learner’s reading instructional level and contains familiar vocabulary and concepts, which connect with the learner’s background knowledge (Cromley, 2005).

As described in Chapter 3 of this guide, strategy instruction follows an explicit instruction format: Provide explanations, model, engage learners in scaffolded practice and provide feedback throughout. This model of instruction can be applied to any content learning strategy. Please refer to Chapter 4, which describes reading comprehension strategies that are directly applicable to content learning. Below are two examples of student-focused instruction applicable to expository text.

Summarizing text.

The ability to summarize text is essential to successful reading in school and the workplace. It is particularly important for identifying and remembering the main points in employment-related reference material and communications. Developing summarizing skills takes practice because it is challenging to learn how to identify the most important information and to express it

succinctly. Below is an example of teaching summarizing (Central Florida Community College, 2007, p. 92):

Step 1: Provide students with a short workplace document and a graphic organizer.

Step 2: Read the document and guide students to fill in the graphic organizer.

Step 3: Have students circle key words or ideas based on the graphic organizer.

Step 4: List the key words on the board.

Step 5: Have students work in groups to combine the related ideas into phrases.

Step 6: Model how to combine phrases into a short summary.

Step 7: Discuss how the summary expresses the main point of the document.

Step 8: Allow for enough scaffolded practice and feedback for students to be able to summarize independently.

Making inferences.

Thinking beyond literal information is crucial to developing higher-order thinking skills. Inferring means finding clues in text that connect with the reader's background knowledge. This allows the reader to draw conclusions about the writer's intentions and what is important to remember in a passage. An instructor can "think aloud" to model different ways of connecting with text and then guide learners to stop and use one of the tactics below to extend their thinking while reading. The list below provides five ways to infer meaning along with examples of "think aloud" statements (Central Florida Community College, 2007, p. 97):

1. Make predictions

- On the basis of the first paragraph, I think this article is about ...
- When I read the chapter title I think I am going to read about ways to get rich.

2. Describe visual images

- I can picture in my mind that the young woman is smiling as she begins to answer her first job interview question.
- For a tropical climate I am visualizing a palm tree.

3. Develop an analogy or make a link with prior knowledge

- I wonder why they call it rush hour when there is so much traffic that you can only move slowly.
- To remember net income, I think of fish in a net. Those are the fish that a fisherman gets to take home.

4. Identify a confusing point

- I wonder why they said he felt excited. From what he said, I thought he was unhappy.
- I am not sure what this sentence means. I am going to read the next sentence to see if that helps me understand.

5. Use fix-up strategies

- I don't understand what this word means. Maybe I should look it up or ask someone.
- That last sentence confused me. Let me read it again.

Summary

- Successful content teaching involves integrating both declarative (knowing that) and procedural (knowing how) knowledge.
- Content learning can be difficult for adults with LD because of problems in one or more of the following areas: reading comprehension, listening comprehension, working memory and higher-order thinking skills.
- Effective content instruction can be teacher-focused, with the instructor selecting the most important content to teach and presenting it in focused and meaningful ways.
- Effective content instruction can be student-focused, targeting developing learners' ability to use strategies for understanding content.

Additional Resources

GED: Beyond the Basics.

This manual provides a curriculum guide and specific teaching strategies for GED preparation focused on developing higher-level skills to better prepare adults for postsecondary education and increasing employer expectations for reading, writing and math performance. The appendices contain many blank graphic organizer forms.¹

CAST Universal Design for Learning.

CAST is a nonprofit research and development organization that works to expand learning opportunities for all individuals, especially those with disabilities, through UDL. The CAST Web site has free access information and online tools to enable educators to incorporate UDL into their instruction. Examples include the UDL Book Builder and the UDL Lesson Builder.²

Content Enhancements.

Examples of concept enhancements can be accessed at the Portland Public Schools Striving Readers Web site.³

Assistive Technology and Learning Disabilities.

Assistive technology can offer powerful tools to students with LD by providing remedial or compensatory support in the classroom and for independent learning. This article, which contains links to additional information and examples, includes an overview of various hardware, software and low-tech tools for students and teachers with a focus on literacy.⁴

The LD Access Manual: A Practical Guide for Using Technology with Learning Disabled Adults in Adult Literacy Programs.

The purpose of this manual is to provide practitioners in the fields of adult literacy with practical information to help them devise and deliver literacy instruction for

¹ <http://www.floridatechnet.org/GEDBeyond/>

² <http://www.cast.org/learningtools/index.html>

³ <http://www.pps.k12.or.us/departments/striving-readers/2715.htm>

⁴ <http://www.sc.edu/scatp/ld.htm>

adults with LD that includes a technology component. The manual is geared toward teaching individuals who are reading at an elementary-school level. The goal is

to provide information that will benefit adults who are reading at low levels of literacy.⁵

5 http://www.einstein.yu.edu/CERC/LD_ACCESS.pdf

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SAMPLE 1: OVERVIEW OF BLOOM'S TAXONOMY CATEGORIES APPLICABLE TO THE GED TESTS (GED TESTING SERVICE, 2009)

KNOWLEDGE

Knowledge questions require the candidate to observe and recall information, including major ideas or concepts and a basic mastery of subject matter. Although the GED Tests do not assess basic recall of information, candidates should have knowledge of ideas and concepts that can be used in answering other questions.

COMPREHENSION

Comprehension questions require the candidate to understand the meaning and intent of written and visual text. Comprehension questions measure the ability to:

- Understand and restate information.
- Summarize ideas.
- Translate knowledge into new contexts.
- Make inferences.
- Draw conclusions.

APPLICATION

Application questions require the candidate to use information and ideas in a concrete situation. Other higher-order questions, such as those involving analysis or synthesis, require application as a part of the thinking process. Application questions measure the ability to:

- Use information in a new context.
- Solve problems that require skills or knowledge.

ANALYSIS

Analysis questions require the candidate to break down information and to explore the relationship between ideas. These questions measure the ability to:

- Identify patterns.
- Distinguish fact from opinion.
- Recognize hidden or unstated meaning.
- Identify cause and effect relationships.
- Make a series of related inferences.

SYNTHESIS

Synthesis questions require the candidate to produce information in the form of hypotheses, theories, stories, or compositions. Synthesis questions require the candidate to bring together pieces of information to create new ideas or thoughts. Synthesis questions measure the ability to:

- Use old ideas to create new ones.
- Make generalizations based on given facts.
- Relate knowledge from a variety of areas.
- Make predictions based on information provided.

EVALUATION

Evaluation questions require the candidate to make judgments about the validity and reliability of information based on criteria provided or assumed. These questions measure the candidate's ability to:

- Compare and discriminate among ideas.
- Assess the value of theories, evidence, and presentations.
- Make choices based on reasoned argument.
- Recognize the role that values play in beliefs and decision making.
- Indicate logical fallacies in arguments

SAMPLE 2A: CULINARY ARTS

The Unit Organizer NAME D.L. Johanson
DATE 3-11-08

④ BIGGER PICTURE
← Tools and Equipment →

② LAST UNIT Experience Basic Equipment	① CURRENT UNIT Basic Knife Skills	③ NEXT UNIT Experience Fundamentals
⑧ UNIT SCHEDULE	⑤ UNIT MAP	
<ol style="list-style-type: none"> 1. Demonstration 2. Prepared Demo. 3. Student Practices 4. Handouts 5. Perform Required Knife Cuts. 	<p style="text-align: center;">Learning Knife Safety, Sharpening Skills, AND Knife cuts Required to Perform A Recipe!</p> <p>is about</p> <p>By Practicing</p> <p>To Know</p> <p>Knows how to</p> <p>Knows how to</p>	
⑦ UNIT SELF-TEST QUESTIONS	<ol style="list-style-type: none"> 1. Why is it important to use a sharp knife? 2. What are the safety skills required using a knife? Why? 3. What equipment is necessary to sharpen a home knife? 4. Name the basic cuts used in most recipes! 5. What are the required surfaces to cut on? 6. Why is it important to know & understand how to perform these steps? 	<p style="text-align: center;">⑥ UNIT RELATIONSHIPS</p> <p style="text-align: center;">IDENTIFY</p> <p style="text-align: center;">EXPLAIN</p> <p style="text-align: center;">UNDERSTAND</p> <p style="text-align: center;">Demonstrate</p> <p style="text-align: center;">PRACTICE</p>

Source: University of Kansas Center for Research on Learning

SAMPLE 2B: HEALTH OCCUPATIONS

Christy Barrm 3-12-08

Adult Literacy Programs

The FRAME Routine

Key Topic
Residents Rights to Treatment

is about...
easy to violate patient's rights.

<input type="checkbox"/> Main idea <i>Confidentiality</i> <i>private info.</i>	<input type="checkbox"/> Main idea <i>Neglect</i> <i>not doing/ failure to do job correctly</i>	<input type="checkbox"/> Main idea <i>Conduct</i> <i>your actions</i>	<input type="checkbox"/> Main idea <i>Abuse</i> <i>infliction of harm or injury (physical/sexual/emotional)</i>
<input type="checkbox"/> Main idea <i>-example of breaking confidence</i> <i>Telling others not involved in pt care pt's diagnosis talking about salary or eval.</i>	<input type="checkbox"/> Main idea <i>example of neglect</i> <i>to stop feeding a resident who takes "too long to eat"</i>	<input type="checkbox"/> Main idea <i>example of conduct</i> <i>is how you act daily remembering to say please/ thank you -</i>	<input type="checkbox"/> Main idea <i>example of</i> <i>slapping a resident playing with residents guitars pt becomes shy/ withdrawn when son visits</i>

So What? (What's important to understand about this?)

These are terms to remember respect

Date: _____

Name: _____

University of Kansas Center for Research on Learning Job Corps Vocational Literacy Project, Grant # R365B070129

Source: University of Kansas Center for Research on Learning

SAMPLE 3: IMPROVING ADULT READING OUTCOMES WITH STRATEGIC TUTORING AND CONTENT ENHANCEMENT ROUTINES

Literacy Instruction in Job Corps Programs: Improving Adults Reading Outcomes with Strategic Tutoring and Content Enhancement Routines

Award # R305B078129

Institute of Educational Sciences

Daryl Mellard, Principal Investigator

**University of Kansas, Center for Research on Learning Division of Adult Studies, Lawrence,
KS**

June 27, 2009

	YES	NO	
M			12. Do titles of main headings and subheadings clearly reflect the main idea structure of information presented?
			13. Do subheadings follow a clear sequence of information directly related to the main headings?
			14. Does the author use size, shape, color, and/or placement to distinguish types of headings?
			15. Are new/key vocabulary highlighted in the text? <input type="checkbox"/> In bold print or italics? <input type="checkbox"/> Listed at end of chapter, bottom of page, or margin?
			16. Does the text provide <input type="checkbox"/> A definition of key terms? <input type="checkbox"/> A pronunciation guide for key terms?
			17. Do graphics enhance the most important information contained in the chapter and/or related directly to headings?
			18. Do graphics depict information in a succinct, easy-to-read format with instructions provided for interpretation or use of charts and graphs?
	S		
			20. Does the summary synthesize chapter contents?
			21. Does the summary review chapter goals/objectives?
			22. Does the summary focus student attention on the most important concepts, ideas, and information?
			23. Are there chapter review/study questions?
			24. Are chapter review questions based on the critical key concepts and ideas?
			25. Is there a good balance among main idea, detail/fact, and critical thinking (applications, analysis, synthesis) questions?

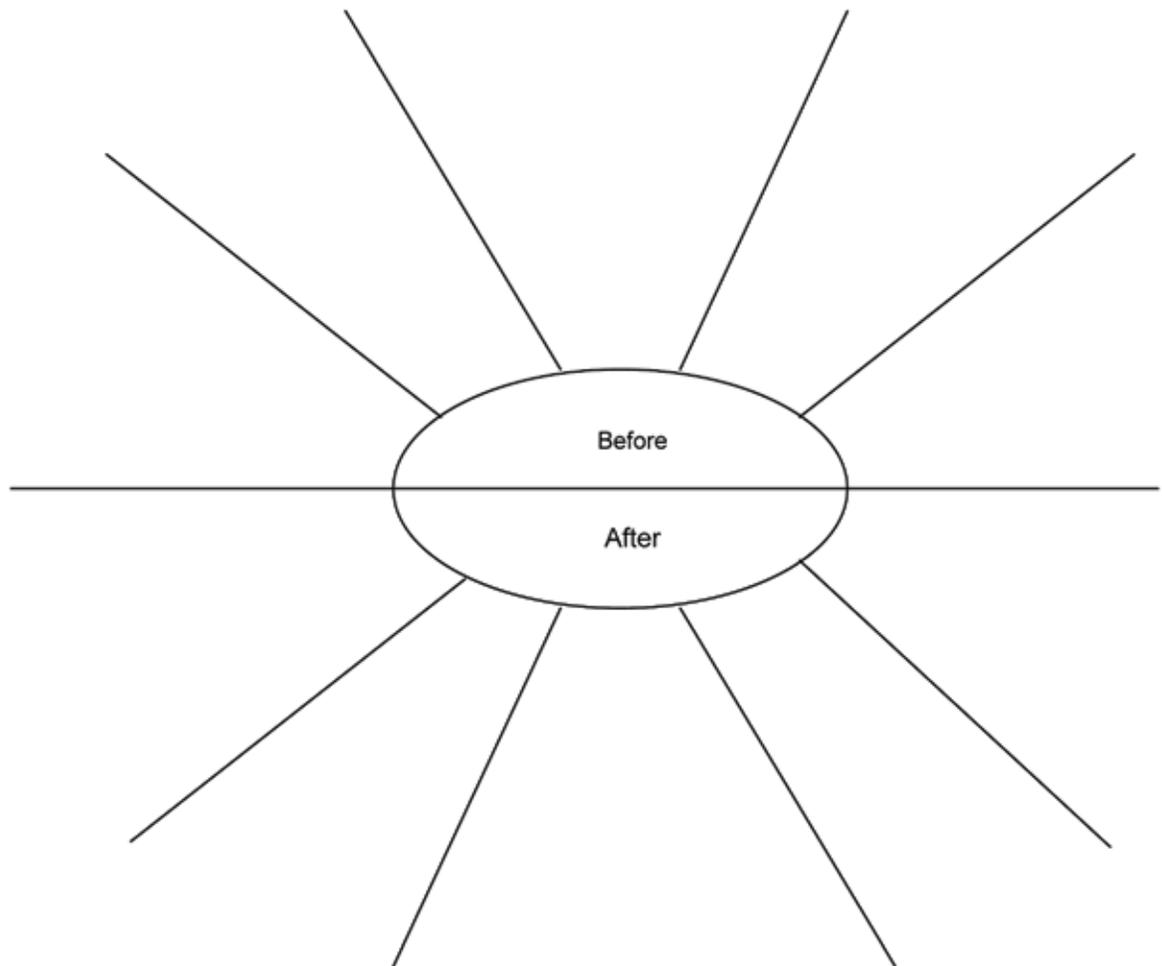
Total number of questions answered "YES" _____

The higher the score, the more considerate and "user friendly" the textbook. The more considerate a textbook, the more likely that students will be able to use it independently. The more inconsiderate a textbook, the more teacher facilitation and intervention will be required.

SAMPLE 4: GRAPHIC ORGANIZERS

Before/After Graphic Organizer

Subject _____



Cause and Effect Graphic Organizer

Topic/Subject:

Causes (Because of . . .)	Effects (. . . these conditions result)
•	•
•	•
•	•
•	•
•	•
•	•
•	•
•	•
•	•
•	•

