LD Resource Guide
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The California State Library
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This guide is the result of the efforts of the Learning Disabilities Task Force of the California Literacy Campaign (now the California Library Literacy Services). The LD Task Force was formed in 1999, and after three planning meetings recommended the creation of this guide. A smaller group of CLC members met in 2001 to develop the guide. Many thanks to the members of these two working groups for bringing this guide into reality and to Carole Talan at the State Library for supporting the vision and finding funding. Thanks to the National City literacy staff for giving the project a home base. Leslie Shelton served as the facilitator for the Task Force and editor/writer for the guide. A special thanks to Sue Nichols of U.C. San Diego for her expert eye for editing and Valerie Reinke for finding a book designer and doing the final editing and logistics.

1999 LD Task Force

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This guide has been developed by a team of library literacy staff members from throughout California. It is the result of the second phase of work by the LD Task Force, which first formed as a working committee of the CLC programs in 1999. The work of the task force is described later in this section. When members met to discuss this guide, we pondered a variety of questions:

How can we provide clarity about a topic of such complexity and lack of agreement?

What useful information can be offered that helps us better meet the learning needs of our participants?

What can research tell us about why some of our learners struggle with even the simplest literacy acquisition tasks?

What is it that we are already doing that works and what new practices can we add to improve our services?

As volunteer programs, what are our limits and who can we serve effectively?

As we found over the course of our work, there are many different points of view and no simple answers to these questions, but there are answers. Many factors affect the complexity of each person’s learning process as well as reading and writing development. We know that practitioners would love an easy-to-use “How-to Guide” which tells them, “if you see this behavior or error, then this is what you do.” Unfortunately, as a book title states, there is No Quick Fix (1995), and there are no simple answers. However, we can offer insights into some of the more common causes of reading and writing difficulties and provide clearer distinctions between disabilities and differences.

As literacy educators who try to practice what we preach, LD Task Force members found it necessary to ask important “comprehension questions” about the paradigms, beliefs, and underlying assumptions that exist in the recent literature and training programs about learning disabilities. Therefore, as you go through the guide, you may find questions that challenge prevailing assumptions and stimulate critical thinking. Each of us must be willing to examine our knowledge, beliefs and assumptions about learning, language acquisition, and disabilities if we are going to act effectively.

Therefore, we intend that this guide will be thought-provoking as well as practical.

**PURPOSE OF THE GUIDE**

The purpose of this guide is to provide literacy practitioners with new perspectives, information and resources that can be used to better understand and evaluate the recent research and practices being promoted to address learning disabilities and learning differences. In addition, it offers insights into actions and approaches that programs can choose from in order to improve their programs and services.
This is a resource guide more than a how-to manual. Chapter III on *Language and Comprehension* provides an overview of the phonological factors and comprehension issues that influence the reading and writing process. This section is intended to help the reader understand where difficulties can occur. In the *Screening and Assessment* section, there are explanations of the types of difficulties literacy providers might see as well as suggestions to assist staff and tutors. As the reader will see reflected in the information about language processing and screening tools, many of the characteristics of one difficulty may also be seen in others. This explains why there is so much confusion in the field and why no single approach addresses all the challenges that learners with reading and writing difficulties may exhibit. Nevertheless, there are a number of effective approaches which rely on multisensory strategies and/or specific structured phonemic activities that can tap into the learning strengths of adults. In the *Methods and Materials Section*, we have asked our CLC colleagues to describe some of the tools they have found most useful.

We have chosen to make this guide as streamlined and straightforward as possible—complimenting but not duplicating information in resources such as the NIFL series, *Bridges to Practice* (1999).

**AN IMPORTANT PERSPECTIVE**

*It is essential to recognize that many difficulties often described as learning disabilities in the LD literature, are for the most part, actually language processing difficulties. Only a small percentage of these difficulties are caused by a specific learning disability.*

Obviously, the majority of the learners who attend our programs have reading and writing difficulties. Most often these difficulties are actually *language processing* problems caused by a variety of factors. During tutor training, most trainers talk about all the different reasons why a person may have had difficulty learning to read and write as a child—i.e. environment, cultural differences, lack of access, illness, poverty, poor teaching, a mismatch between ways of learning and teaching methods, even being left-handed. The list is long and varied, yet many of our clients have been labeled or have “diagnosed” themselves as learning disabled without any formal assessment. With all the emphasis on learning disabilities recently, there is a tendency for anyone who is having trouble learning to read to be labeled as learning disabled. **We urge caution and restraint in doing this.**

There is good reason for this caution. According to a study by the Council for Exceptional Children (1997), 80% of children identified as learning disabled, actually had reading difficulties. The study went on to state that at least 75% of these children had been misdiagnosed as learning disabled and that poor reading skills in children were primarily due to ineffective reading instruction, lack of reading readiness, and/or cultural or environmental factors. Only 5% of the children had actual reading disabilities.
PHILOSOPHY AND PRINCIPLES

Based on the previous comments, it is essential, no matter what our beliefs or understandings about learning differences or disabilities, that we have a common philosophy and set of principles to guide our work in California Library Literacy Services (CLLS) programs. These are the guiding principles members of the LD Task Force suggest.

As literacy providers, we seek to recognize abilities rather than disabilities, to see the whole person rather than a disabled person. We recognize the unique gifts, talents and capacities of each individual learner and focus on strengths to help overcome difficulties. We believe that genius can be found in every human being and seek ways to honor each person’s unique ways of knowing.

CORE THEMES

In developing this guide, the LD Task Force identified the following core themes:

There is a need to define key terms so that literacy members have a common ground of understanding and language to discuss issues and make decisions.

There is a need to be careful about how and when we use labels, and a need to look at the assumptions we make when talking about the adult learners in our programs. (i.e. When we say that 80% of the students in our program are learning disabled, is that based on fact or opinion? How was this estimate determined? Whose needs are we meeting—our own or our learners?)

It is important to emphasize the core concepts and principles of our programs—that we focus on gifts, strengths, and success to address weaknesses.

A key concern is that the label “learning disabled” generates unnecessary fear. Tutors may feel they don’t have the necessary skills and tools to help a person who has language processing difficulties simply because that learner is described as “learning disabled.” This can create unwarranted judgment that adults with reading difficulties are unable to learn.

It is important that tutors have guidelines to understand “pre-learning preparation” and realize that students may need to “unlearn” some old habits.

Multi-sensory learning activities which engage all of the intelligences of an individual and are connected to real-life learning continue to be some of the most effective, enlivening strategies.

A variety of language processing difficulties are the main causes of reading and writing difficulties and can be successfully addressed through phonologic and multisensory approaches.

We are masters of the art of the possible. We focus on possibilities more than problems.

Our programs match students who want to make a change with volunteers who want to make a difference.
UTILIZING THE STRENGTHS OF LIBRARY LITERACY PROGRAMS

In addition to the strengths of our learners and tutors, we recognize the unique qualities and strengths of the library literacy programs that make up California Library Literacy Services. These strengths often help us successfully address learning challenges more than we realize. They include:

The capability to be responsive and innovative.
The ability to provide individualized, self-paced instruction.
The caring connections between learner and tutor.
The focus on real-life learning applied to needs and interests of the individual for oneself, family, work, and/or community.

A fundamental concept in this guide is that those of us who are out in the field offer valuable resources for addressing the issues of language learning difficulties, whether caused by learning differences or specific disabilities. You, whether you have a battery of letters behind your name or not, are on the front lines and have practical experiences and expertise to contribute to your fellow practitioners.

Therefore, this guide is intended to be a living document, and we welcome additions, suggestions, and discoveries, which can be sent to the literacy consultants at the State Library.

A HISTORY OF THE LD TASK FORCE

As those of you who have been in the field for some time are aware, when the CLLS programs began, our focus was on teaching adults to read. We didn’t know how many, if any, of our clients had language processing problems or learning disabilities. We found that many of our learners had been placed in Special Education classes as children and often were not challenged to learn. In fact many were treated as incompetent learners, yet in adulthood they are often quite competent and successful in their work and with families. As CLLS has matured, several major points have become clear:

1. Some clients whom we serve have slight to extensive difficulties with reading tasks and these difficulties have often been “labeled” as learning disabilities, often by people without credentials.

2. Most of our clients are very capable learners, they simply have difficulty mastering print.

3. There is vast disagreement within the research community and educational field about what constitutes a learning disability.

4. Identifying a person as learning disabled is a double-edged sword—it can be helpful in terms of job-related accommodations, yet harmful in terms of isolation and damaged self-worth.
5. There are great concerns regarding the most effective ways to best serve clients who do have specific language processing disabilities.

In response to heightened publicity about LD in literacy programs and increased confusion, the LD Task Force was organized in the Spring of 1999 as a working committee of California Library Literacy Services. Task Force members included literacy coordinators and staff members from 18 library literacy programs representing all geographic areas of the state as well as the Literacy Specialist at the State Library, Carole Talan and a facilitator, Literacy Consultant, Leslie Shelton.

The objectives of the Task Force were to:

- identify the key issues, needs, and concerns that library literacy staff perceive in responding to learning differences and/or learning disabilities of program participants;
- identify existing resources and practices being used to address the issues; and
- develop a plan to address the core issues and needs that were identified.

In order to meet these objectives, the committee developed a survey that was sent to all CLLS programs to gain a broader understanding of how practitioners perceived the topic and what practices were being used to address it. Seventy of 105 surveys were returned.

The LD Task Force Survey results, which are summarized in the Appendix, indicated that the topic was a significant concern to the majority of literacy staff members in the state. It also revealed considerable disparity in levels of understanding, philosophy, perception of the issue, and the practices (or lack of practices) being used to address learning differences and/or language processing disabilities among the different programs. Ninety-eight percent of the respondents stated that the development of a Resource Guide would be very useful to them. After a year’s hiatus, a smaller Task Force of previous and new members reconvened in the Spring of 2001 in order to create the guide you have in your hands. The committee hopes it will be a useful, practical tool to assist you in your daily operations.
Perceptions, Beliefs, Definitions
and Conflicting Paradigms

After reviewing the LD survey results of the library literacy programs, one of the greatest concerns of members of the original Learning Disabilities (LD) Task Force was the realization that the levels of sophistication, understanding, and practice among CLLS programs varied widely from program to program. In several open-ended questions, we asked respondents to tell us how many students they estimated had learning disabilities in their program. We also asked several questions to see how they viewed any distinctions between learning differences and learning disabilities, then asked respondents to write their own definitions of the terms in order to see whether they saw these as different or the same. Here is a sampling of the results.

When we asked what percentage of learners self-identified as either having learning disabilities or being placed in special education classes in school, the estimates from the 70 program respondents ranged across the spectrum from no more than 2% up to 95%. The greatest cluster of respondents (9 of 70) answered 30%, but 6 programs estimated that 80% of their learners had been in special ed or had self-identified as learning disabled (See appendices for chart). While these numbers were based on perceptions and estimates rather than on a longitudinal study of actual records, these
results reflect the disparity of perceptions across programs. In addition, these estimates are not necessarily the same as the staff’s own perceived ideas of how many of their learners might have learning disabilities. This disparity can be problematic because perceptions and assumptions about LD rather than facts often drive program policies as well as instructional strategies. Some programs who perceived that almost all of their learners were learning disabled tended to use one set of instructional methods for everyone, based on their assumptions rather than on actual assessment data.

These disparities are also evident in the definitions that respondents gave when asked to define a learning disability and describe whether it was different than a learning difference. Here is a sampling of definitions offered:

Any disorder which causes the ability to acquire new information to be slowed down. There is no difference between disability and difference.

Students who demonstrate an inability to learn despite numerous attempts using a variety of teaching techniques may be considered learning disabled. Not the same as a learning difference, which may be addressed by changing the type of instruction.

There is no clear and widely accepted definition of “learning disabilities.” Possibly one simple definition is that “A learning disability is a learning problem associated with the way the brain processes information.”

Someone who processes information differently than the norm. Adults who are developmentally delayed are disabled. Those with “learning disabilities” are of average intelligence.

LD = doesn’t have the ability to learn more.

Disability is a limitation on the way the brain is wired. Difference is the need for a new approach to learning.

LD is a physical/chemical imbalance that prevents effective learning. Yes, it is different. We all have differing ways to learn.

A central nervous system processing dysfunction that results in “crossed wires” in the person’s brain making it difficult for the person to use language processes: reading, writing or math.

As one can see, there are differing opinions, confusion, misunderstandings and misinformation reflected in these responses. There are probably several reasons for this. The field of learning disabilities is very specialized and still young, most of the research is based on studies with children, and this research tends to focus only on language and math skill development rather than broader research about cognition and learning itself. Most of the definitions of learning disabilities offered by various learning disabilities organizations, researchers and the education code are vague, confusing, and limited to difficulties related to the two primary intelligences (of eight) which are emphasized in school—language and math.

Some staff members responded that they preferred to focus on abilities and rejected the notion of learning disabilities altogether. In addition, much of the recent training about learning styles emphasizes that we all learn dif-
Although “learning differences” and “learning disabilities” are very similar terms and are often seen as the same, they are not. But both can cause problems which disrupt language development skills. As a result, many staff members are confused about how to screen for learning differences and/or learning disabilities and do not know what instructional strategies to use in response. Additionally, some CLLS staff members responding to the survey gave the impression that people with disabilities can’t learn, or implied that multisensory learning strategies are only helpful for those who learn differently, not for learning disabilities. Both views are myths.

Hopefully, this guide will begin to offer some much-needed clarification on these topics. First, we will present current definitions being used to describe learning disabilities and learning differences, then ask some critical thinking questions about the premises of these definitions and worldviews (paradigms). We then suggest definitions that make common sense and can be more easily applied in volunteer programs.

We have devoted space to this because we believe that unless staff members and tutors have a clear understanding of what they are talking about, myths, assumptions and faulty beliefs will continue to drive program practices, assessment procedures and instructional methods.

THE LD PERSPECTIVE

The efforts to help children having difficulties in school spawned the development of the IQ test. It was intended only as an individualized tool to identify children needing special help until it was introduced in America in the early 1900’s and was mass-produced as a standardized assessment used to predict academic success or failure. This effort led to the field of special education, which evolved into the field of learning disabilities. In an attempt to identify barriers to learning in order to offer help, researchers and educators were drawn to study the causes of children failing in school. Yet they narrowed their focus to the two disciplines reflected in IQ test scores (verbal and mathematics). Because schools and teachers, beyond kindergarten, rely primarily on the use of the language intelligence (text and lecture) and the logical/mathematical intelligence (order, sequence, and logic) to transmit knowledge and to evaluate learning success (Gardner, 1983), those children and adults who happen to have weaker skills in these two intelligences have been singled out and labeled learning disabled by educators and psychologists. In the 1980’s, when children became bored and attention lagged in our fast-paced society, ADD and ADHD (attention deficit) were added to the list of learning disabilities rather than looking at other cultural and societal factors (Armstrong, 2001).

While not necessarily intended, the recent emphasis on learning disabilities has implicated the child or the adult learner as the one at fault—made responsible for their difficulties rather than educational methods or systems (Armstrong, 2000). Despite the fact that prominent cognitive scientists, including Howard Gardner at Harvard University and Robert Sternberg at Yale, have clearly demonstrated a complex set of practical and multiple
intelligences that all human beings use to learn, accomplish daily tasks and succeed, schools tend to prioritize and reward only the two intelligences that are tied to academic success, but not to life success.

We might wonder why 80% of the children identified as learning disabled in the previously cited study by the Council on Exceptional Children, in fact, had reading difficulties. Or why Dr. Reid Lyon of the National Institutes for Health would say, “For most individuals with LD, the primary learning difficulty is one that involves reading” (NIFL Newsletter, 1996). Why are some intelligences singled out and labeled as sources of a learning disability, while others are not? We don’t say that children or adults who can’t carry a tune or are tone deaf (musical intelligence) are learning disabled. We don’t say that people with poor athletic skills or who lack coordination (body intelligence) are learning disabled. Those who get lost in a parking lot looking for their cars or can’t make a simple drawing (spatial intelligence) aren’t labeled learning disabled either. Yet those who have difficulty in math or language skills are identified as disabled. Why? After all they can learn!

It is important to consider the reasons for this bias if we are going to address learning difficulties in our programs effectively. It clearly comes from privileging and emphasizing some intelligences in school and dismissing others. From the perspective of multiple intelligence theory, how many of the adult learners attending our literacy programs are highly intelligent in spatial smarts, people smarts, music smarts or body smarts? Most of them use these intelligences to succeed in the real world at home and at work. Yet, instead of being seen as intelligent by our schools and society, their reliance on their strengths to succeed is characterized as compensation. We wouldn’t make the same judgment of someone who needed help finding his parked car. The reality is that people with reading difficulties have challenges related to only one of the eight distinct intellectual capacities identified by Dr. Howard Gardner nearly twenty years ago, yet they are singled out because our culture deems that reading is an essential skill. While reading and writing skills are important for functioning in our society, labeling those who struggle to read or spell as learning disabled is not only unfair, it is untrue. They are competent learners.

If our society relied more on storytelling, social interaction, or dancing as the primary methods to transmit knowledge rather than on print and logic, most of the learners in our programs would no longer be seen as “learning disabled.” Therefore, it is critical that we first acknowledge that our learners are very capable individuals. In fact, they are, like most human beings, multi-intelligent! As LD definitions often state, “people with LD are of normal intelligence.” In fact, they say this as though it is somehow a great paradox, rather than understanding the complexity of human cognition.

In addition to recognizing an individual’s learning strengths, literacy professionals also need to understand the specific types of language processing difficulties that can affect reading and writing skill development so that we know how to help our students develop the phonological skills that they may lack and gain the tools they need to decode print and spell. In a nut-
shell, in order to help adults in literacy programs we need to use instructional methods that are multifaceted and multi-intelligent so that we can successfully engage the learner’s strengths. In addition, we need to provide some specific phonological awareness tools.

The good news is that most of the recent research in the field of learning disabilities has focused on understanding the causes of reading difficulties. This research is beginning to offer clues and specific methods to help address these difficulties. The bad news is that the label “learning disabled” implies that a person cannot learn. This is an erroneous and harmful implication. Sadly, in order for a person to get help with reading or math difficulties in school, they must fall at least two grade levels behind their classmates, which makes them feel stupid. Then they must be labeled and diagnosed as disabled before assistance arrives. By then, the damage to the emotional self is done. Research on the stigma of illiteracy and the shame that accompanies it (Kauffman, 1992) makes it clear that being seen as stupid by peers and labeled as disabled by educators carries a heavy psychological toll, which is then reflected in the emotional reactions to being “different than the norm.” Unfortunately, the typical responses to shame, which include withdrawal, isolation or anger, are often viewed as indicators that the person is emotionally disturbed or has emotional learning disabilities rather than understood as a psychological response to ongoing shame. Too often the learner is caught in an endless cycle, a no-win situation that is humiliating, defeating, and damaging to the inner self (Shelton, 2001).

DEFINITIONS FROM THE LD LITERATURE

Those who look to current definitions of learning disabilities to help understand or illuminate this issue will find little substantive information that offers clarity or help. However, some of the specific research on language disabilities does provide insight that can help literacy program staff. This information is presented in the second chapter on language processing development. But first, it is important that practitioners be aware of the definitions currently being used by people who portray themselves as LD experts at conferences as well as in today’s courtrooms, classrooms and rehabilitation centers.

Several different definitions of learning disabilities have been written over the years by researchers, government commissions, educators and advocacy groups. The following definition is widely accepted and was selected for use in the Bridges to Practice Guide by the National Adult Literacy and Learning Disabilities Center (NALLD). It was written by the National Joint Committee on Learning Disabilities and revised in 1994.

Learning disabilities is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction, and may occur across the life span.
Problems in self-regulatory behaviors, social perception, and social interaction may exist with learning disabilities but do not by themselves constitute a learning disability. Although a learning disability may occur concomitantly with other handicapping conditions (for example, sensory impairment, mental retardation, serious emotional disturbance) or with extrinsic influences (such as cultural differences, insufficient or inappropriate instruction), they are not the result of those conditions or influences (Bridges to Practice: Guidebook 1, 1999,12).

How does this definition help literacy practitioners gain a deeper understanding of the causes of the difficulties that they may see in their learners or help them develop instructional responses? Unfortunately, it provides little illumination or clarity on either of these aspects. Instead, the definition is global and vague, first acknowledging that the term is general in nature then listing a set of “abilities” that are affected. If one analyzes the list, it is readily apparent that all are associated with either language processing or mathematical functions—the same two intelligences previously described as those singled out as the only intelligences susceptible to learning disabilities.

Now let’s look at the definition used by the United States Office of Education from 1977, which is the basis for determining learning disabilities among school age children.

The term “specific learning disability” means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written which may manifest itself in an imperfect ability to listen, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning disabilities which are primarily the result of visual, hearing, or motor handicaps, or mental retardation, or emotional disturbance, or of environmental, cultural, or economic disadvantage (Federal Register, 1977).

If one examines the language used in these definitions, the terms are medical in nature—disorders, dysfunction, deficits. A person has to be “diagnosed” with the “condition” by a doctor or psychologist. These terms and procedures tend to pathologize individuals with reading difficulties as if they have a problem to be fixed or disease to be eradicated. Dr. Thomas Armstrong, a psychologist and former special education teacher who wrote Seven Kinds of Smart (1999) and In Their Own Way (1987), explains that the roots of Special Education lie in mechanistic, analytic, neurobiological and medical/clinical traditions that tend to break things into parts rather than seeing the whole person, which is found in humanistic, anthropological or phenomenological traditions that study the person within the context of their culture and environment (Armstrong, 2001).

He also notes that the philosophical base of special education and learning disabilities comes from a deficit rather than growth paradigm. He uses the following chart to show the differences between a deficit-oriented paradigm and a growth-oriented paradigm (worldview) of education.
This chart offers insight into the reasons why there might be an inherent conflict between the growth-oriented worldview (philosophy) of most of the library literacy programs in the California Library Literacy Services and the deficit-oriented approach of the learning disabilities frameworks now being promoted as an agenda among the national volunteer literacy and educational organizations. The demand that programs shift their emphasis to viewing their students as learning disabled (because people with reading problems are primarily the ones being given this label) and reorienting their instructional programs in order to have an arsenal of weapons to address (fix) these difficulties requires volunteer literacy programs to change their approach from a growth model to a deficit model. This shift causes confusion, feelings of fear or inadequacy, and frustration for staff and tutors.

The frustration comes when one is told that there are specific fixes for specific problems, but then comes face-to-face with the reality that human beings are unique and that cognition is a complex and varied process. In reality, task force members found there is no quick fix. Contrary to popular computer analogies, human beings are not machines and we can’t just take a person apart and put in a new widget or circuit that makes the brain or learning work perfectly.

Unfortunately, we are a “quick fix” society and it is human nature to look for solutions to problems. There are solutions to reading and writing difficulties, but they are based on recognizing the uniqueness, diversity, and complexity of the human learning experience as well as understanding the specific causes of some reading problems. But beware of the LD hysteria sweeping the country. There are many people making lots of money selling their particular remedy for reading and writing problems. These “remedies” may help some people, but often have no more success than the multi-disciplinary and life-related approaches that literacy programs now use.

**SPECIFIC LANGUAGE PROCESSING DIFFICULTIES**

There is new research that pinpoints the neurological causes of some difficulties that impact specific language processing functions. These are the main difficulties that can truly be described as causes of specific language disabilities. For instance, the Irlen Institute has made an important contribution to the field by identifying how scotopic sensitivity, caused by differ-
ences in the retina of the eye, can affect the refraction of light and cause print to squirm or move around for the viewer.

Their development of colored lenses and overlays helps correct this problem. In the past ten years studies by researchers at the National Institute of Child Health and Human Development at NIH have identified “deficiencies in phonological processing” as a central cause of reading difficulties (NIFL Newsletter, 1996). A research team from the University of California at San Francisco and Rutgers University spent twenty-five years studying how specific language impairment (SLI) interferes with a child’s ability to perceive speech sounds (Tallal, et. al., 1996). Their commercial product called Fast ForWord, is a computer-assisted intervention that slows down speech sounds so the ear is able to perceive them and presents phonemic interventions through computer games. This intervention for children affected by SLI is groundbreaking, but again it is designed specifically to help this particular problem.

Just as some of us wear glasses for being nearsighted, these same glasses would not help someone who is farsighted. Therefore, the interventions just described are, and need to be, specific to the particular cause of reading or writing difficulties. It is also important to recognize that while there are wide-ranging estimates of what percentage of people have learning disabilities, most research continues to affirm that only 5% to 10% of the population is affected by these types of specific language difficulties. Longtime pioneers in speech therapy research, Patricia and Charles Lindamood (1975) estimate that up to 30% of children may have some level of auditory processing difficulty and that about 5 to 10% are cases severe enough to cause significant reading and spelling difficulties. The remainder of reading difficulties are more likely caused by cultural, environmental or learning differences. This is why it is so important to understand the distinction between disabilities and differences.

**CLARIFYING THE DEFINITIONS**

*Language processing difficulties* can arise from any number of causes – cognitive, physiological, psychological, cultural, environmental or emotional. Some causes fit as disabilities, others are simply based on differences or preferences.

For the purposes of this guide, *learning disabilities* refers to reading/writing difficulties caused by specific neurological differences in the way the brain is able to process sound patterns or phonemes.

*Learning differences* refers to the other causes or dynamics which can impact learning, including learning style preferences, multiple intelligence preferences, and cultural and environmental influences.

Many adult learners attending library literacy programs have strongly developed intelligences that were either dismissed or not involved in the way that reading and writing was taught. Many learners are highly body smart, people smart, musically smart, and/or spatially smart, but these intelligences were often specifically discouraged in the classroom. How
many of us grew up in classrooms in which we were told to sit still, be quiet, and not doodle? A body smart learner must be able to move around in order for effective learning to occur. Yet the inability to sit still (an indication of a strong kinesthetic ability) has often been misinterpreted as an attention disorder. Too often the body smart child is drugged rather than engaged. Spatially smart learners need to doodle and draw pictures in order to learn, musically smart students learn better if they can put new information into a tune or beat. Socially smart individuals need to interact with others in order to grasp new information. Self smart learners need to connect learning to their own experience. In order to engage the individual’s learning smarts, their own unique blend of intelligences needs to be engaged. From multiple intelligence theory lingo, each intelligence has its own entry point. Unfortunately, for those with less developed language intelligences, reading and writing skills are not taught using many other intelligences. This is why multisensory, multi-intelligent strategies are so essential to teaching literacy.

THE MIDDLE WAY—
AN INTEGRATIVE APPROACH

There is an approach in Buddhism and other ancient wisdom philosophies that recognizes the power of “the middle way.” This means not living on the edges or extremes. This might be a wise road to take for educators in literacy programs trying to decide how to balance the LD literature with a proactive, strengths-based philosophy. While educators need to understand the barriers that can inhibit or block certain language processing skills, we can still keep our focus on the whole person—discovering, recognizing and engaging all of their gifts and talents while offering activities that help overcome specific limitations. This used to be called integrative learning.

A HUMAN CAPACITIES PERSPECTIVE

At the beginning of the chapter, we discussed the learning disabilities perspective or “worldview” which views persons with language difficulties as having deficits that need to be “remediated.” Despite the prevalence of this perspective dominating the recent adult literacy training landscape, it is important to also recognize that there is an alternative perspective, which is focused on theories about cognition and human capacities. In this worldview, everyone is seen as a having a particular genius—a blend of capacities that is as unique as a person’s face.

From this perspective the purpose of education is not the distribution of information or development of skills, but to help others discover their gifts and talents and realize their potential. Within this context cognitive theories offer insights about how to develop potential by understanding how human beings perform and think. This point of view considers human beings to be complex and capable in a wide variety of ways. The theory of multiple intelligences is one of the theories that comes from this perspective. Other learn-
ing theories, including learning styles theories operate within this paradigm as well. The focus is more on understanding how a person is gifted and capable than on understanding what is wrong with them. In this worldview, it is more important to nurture the individual and support the healthy development and growth of a person than to become identified with what’s not working. This is where Dr. Armstrong’s growth model exists. This paradigm does not deny that individuals have limitations, it simply chooses not to put all its eggs into the basket of a reparative philosophy.
Chapter 3

Language and Comprehension

Note: Much of the recent LD research investigating the causes of reading and writing difficulties has focused on understanding how language is learned and acquired and where breakdowns occur. This chapter focuses on understanding:

- the components of language development—what is often referred to in tutor training as the decoding and encoding processes in “word work,” called phonology in academic terms, and
- the key aspects of comprehension—the meat of what we read.

A New Understanding

Dr. Reid Lyon, director of the research programs on language learning disabilities at the National Institute of Health describes the key role that phonologic awareness plays in language difficulties:

NIH research has uncovered a major cognitive deficit that prevents a child or adult from learning to read. For many years, it was thought that reading disability or dyslexia reflected a visual problem where children tended to
read letters and words backwards. Today, converging scientific evidence shows that it is not the visual, but the language system that is implicated in reading disability. A major core deficit responsible for the majority of cases of reading disability is at the most basic level of the language system—the level of the phoneme. The phoneme is the basic unit of language. As the smallest unit of functional sound, the phoneme represents the common building block of all spoken and written words.

LD children and adults with reading disabilities have difficulties with this most basic step in the reading pathway: breaking the written word into smaller phonologic units. Difficulties in breaking words into their constituent phonemes results in a highly labored, slow, and inefficient approach to reading. In addition, phonologic difficulty is independent of an individual’s intelligence (NIFL Newsletter, 1996, 8).

This synthesis of the recent shifts in understanding the underlying causes of reading difficulties needs to be translated into how we teach adults to read and write. To do that effectively, literacy practitioners and tutors first need to have a deeper appreciation of language processing development.

A FEW WORDS ABOUT LANGUAGE PROCESSING AND ACQUISITION

Marcia H. Tungate
Orange County Public Library

Language processing and acquisition difficulties are the most common barriers that keep many of our tutors and students feeling frustrated and inadequate. They often feel that these difficulties are unconquerable or so intimidating that they are ill equipped to deal with them. The labels that have been applied to students are frightening in the lack of clear definition or teaching direction. Most of us have been taught to remediate difficulties by working backwards from the symbols representing the sounds of our language to the sounds themselves. For example, reading instructors tend to start by saying, “This is the letter b, say ‘buh,’ ‘bird.’” It is almost impossible to make any progress working in this direction because it is in direct opposition to the process of language acquisition.

We learn to produce sounds based on the pattern of our language community; thus, we become familiar, on a conscious level, with the sound system (phonology) of our language community. The sequence through which we acquire language is hearing, speaking, reading, and writing. A baby first hears language as a stream of sound colored by tones, pitch, and pauses that later become the meaningful units of sound we call words. After listening to the sounds, or language, for a period of time, the baby begins to attempt to reproduce those sounds—to speak. Attaching meaning to the spoken sounds develops as the baby receives reinforcement from caregivers for applying the correct sounds to objects, persons, or activities. It is in the written form that separations of groups of letters create what we see (and read) as individual words. And it is in learning to write that we connect the sound system to the symbols chosen to represent the specific sounds. (It is important to
remember that the symbols are chosen to represent sounds, not sounds to represent symbols). Even though language is acquired in this sequence, it occurs on a continuum so that at any given time, a learner may be learning some of each part of the sequence.

Language is a unique form of knowledge in that speakers know a language by virtue of the fact that they speak it (Wolfram and Johnson, 1982).

Even though we may not be conscious of it, we know the sound system of our native language. Becoming aware of our knowledge of the system provides some important insights concerning spelling. Many people think that the English spelling system is highly irregular, representing some sounds inconsistently and others that are not pronounced at all. Although there certainly are some inconsistencies, research in the sound system of English has demonstrated that English spelling is much more systematic than is often recognized. The use of particular letters of the alphabet is important only in the sense that the spelling system of English, with certain exceptions, reflects the sound system. In fact, spelling is a reflection of the actual way the sound system of English is structured, not of the way in which it is represented in writing.

When this system is examined from the perspective of sounds, underlying regularities are revealed. By becoming aware of what you know as an English speaker who understands relations in terms of sounds, you may have an important advantage over one who does not look for underlying regularities. Similarly, a reading teacher who understands the relationship between sounds and symbols from the perspective of sound system analysis is at an advantage. Beginning readers need to know how certain spelling patterns reflect knowledge of the language. An understanding of such processes may ease some of the frustrations new readers experience as they attempt to match sounds and symbols (Wolfram and Johnson, 1982). However, as we will see in the chapter on screening for difficulties, when a learner has an auditory perception problem that interferes with his or her ability to distinguish subtle differences in sounds (such as the short i and e) as well as the order of sounds, this can lead to spelling difficulties.

Despite these difficulties, an individual unconsciously learns the sounds of his or her native language. As the following example shows, the adult learner already has an extensive knowledge of the sound system of English that he or she probably doesn’t know he has.

**Example 1**

Let’s say you are given group of letters, **x l f s e g**, and must make them into a common English word. Your knowledge of the English sound system tells you that there is only one possible word. You know this because you know that the English sound system does not allow words to begin with /xlfs/, nor with /lxfl/, nor with /fxsl/. You know that since you have two vowels, you probably have two syllables and, since none of the consecutive consonant combinations are possible, the vowels will have to be inserted between at least two of them. You know that a common plural ending is /es/ as so you can set it aside while you work with the other
remaining letters of x, l, f, e. Since you only have one vowel remaining, you know that you will have a blend of two of the consonants. Since you know that English doesn’t allow the sound combinations /xl/ or /xf/ you can eliminate those combinations and choose from /fl/, the latter being the only allowed sound in English. Thus you have the letter combinations /fl/ and /es/ assigned, leaving you to place the e and the x. And so you have easily arrived at the English word flexes.

(Note: Slash marks / / surrounding letters represent “sounds like.”) You did not, of course, go through each of the above steps on a conscious level. Rather, you did it on an intuitive level. Applying what you know about the sound system to the spelling system will give both you and your students a great advantage. Making a conscious effort to notice what you know about the sound system will enable you to pass that knowledge to your students who may not have integrated the system at the intuitive level but rather will need direct instruction.

As we move along the continuum from hearing, to speaking, to reading/writing aspects of language acquisition, we are dealing with two levels of phonology: the phonemic and the phonetic. The phonemic level represents what a native speaker of a language thinks he is saying, and the same is true of the native speaker-listener, who may think that she has heard a certain speech sound while that speech sound may, in fact, be quite different from what was conveyed by the physical production of sound.

The phonetic level is what is produced by the physical speech mechanisms such as teeth, tongue, lips, larynx, etc. That is, phonetics are the physical production of sound units. So we can think of the phonetic level as a physically real level and the phonemic level as mentally real. When you are working with reading comprehension, you are working with the phonemic aspects of language. When spelling, you are working with both the phonemic and phonetic aspects of language. Usually, your lessons will bridge the two.

One diagnostic tool that is easy to use to identify phonemic errors during the intake interview or later in the tutoring process is the Rosenthal Diagnostic Phonetic Assessment (RDPA), which can be found in the appendices. This tool helps tutors identify the types of errors being made and helps the tutor target their instruction to address these errors. The book by Rosenthal, *Teach Someone to Read* (1987), explains the assessment tool and gives practical suggestions that tutors can use to work with specific types of errors that are identified.

**Example 2**

If you were to be asked to identify the sound of the letter p in the words spin and pop you would, no doubt, be quite secure in saying the sound is /p/. The most usual way to teach the sound of the letter p is to say that it is /puh/ (hopefully with very little neutral vowel) and it is made by “popping” the upper and lower lips together and expelling a puff of air. Therefore your phonemic or mental reality tells you that p = /puh/.

Although this is usually true for a p at the beginning of an English word, it is not true in all instances. To demonstrate, hold a wet finger or lit match
in front of your lips and say the word **pop**. You will feel a strong puff of air when you articulate the /p/. Now hold up the match or a wet finger in front of your lips and say the word **spin**. The puff of air will be much less, perhaps not even moving the flame. The physical or phonetic production of the sound in the two words is different.

In the example, the speaker may believe (phonemic) that he is using the same consonant twice when he utters the word **pop**, meaning the two occurrences of **p**, one at the beginning and one at the end of the word. The first /p/ starts with the mouth closed so that air pressure can be built up behind the closed lips and released with a popping sound then continuing into the vowel sound /ah/. The first /p/ is followed by a slight puff of breath, called **aspiration** while the second /p/, is simply the production of the /p/ without aspiration. Thus, the phonemic, or mental reality of the speaker says that the there is one sound of /p/ in the words /pop/ and /spin/, the phonetic reality is that there are three different sounds.

The difference between the phonemic and phonetic reality of the speaker causes conflict when we can’t make the connection from one to the other. These conflicts will show up as language processing difficulties. The majority of native speakers of English have internalized the phonological system by the time they begin to speak fluently and have integrated the phonemic idiosyncrasies into their speech. The evidence of awareness of the system is seen in the child who says she “runned to the store” which indicates that she has assimilated the standard past tense verb inflection. It is only upon correction or over time that the child will begin to utilize the irregular verb patterns and switch to “ran” in the appropriate structure. By the time a child enters school and begins to write, he has integrated the phonemic system so thoroughly that when he begins to learn the written symbols for sounds he will make automatic associations of the written representation of sounds in a specific environment to the vocabulary he has acquired, e.g., spelling both **pop** and **spin** with a **p** even though the two **p**’s have different sounds.

When an individual does not make this association between the written representation of sounds and his phonemic vocabulary, she will be unable to recognize the logic of the reading and spelling systems of her language. If the student has not integrated the phonological system and is unable to distinguish **contrasts** between sound units, she will have difficulty understanding the spelling/writing system. Although an individual may not have integrated the phonological system, there is almost always a system to the difficulties the individual experiences.

Understanding the organization of the student’s own system is crucial to determining what the individual knows or does not know about the system of English. If we remember to teach from the sound system to the written system of the language, integrating phonetic (physical) formation of sound with the phonemic (mental) formation of sound combinations and remembering that the symbol is a tool to provide access to those systems, we will find that progress occurs much more rapidly, with less frustration on the part of both the tutor and learner.
In order to help you understand the most common organizations of the student’s systems, we have created some tables in the assessment section which list possible red flags which may help you identify specific difficulties. You will note that some of the indicators may occur in several different areas of difficulties. This reinforces the idea that we must use multi-sensory methods in order to tap into the student’s strengths and address trouble spots.

Note: If you want another way to understand these concepts, take a look at the article by Meg Schofield in the appendices. It’s called, *Getting the Picture: One Adult Educator’s Experience (NIFL Newsletter, 1996)*.

**COMPREHENSION**

**Phyllis Colter, Ed.D.**

*LVA/Imperial Valley*

Sadly, many adults do not make the transition from decoding to reading for information and enjoyment. Reading for them is pain and failure. But learning difficulties need not get in the way.

Corps of volunteer tutors can and do make a difference in the lives of thousands of adults with learning difficulties. They exhibit patience, flexibility, understanding, and inspiration. They match these with bright ideas in techniques and an appreciation of how cognitive skills may be accessed and enhanced. They share poetry, rhymes, songs, make graphs, and models. Do you know that volunteer tutors instinctively use strengths rather than weaknesses, and even capitalize on their student’s multiple intelligences as described by Dr. Howard Gardner? As we train and provide workshops, tutors are validated, empowered, and more effective.

Strong conviction lies with working with strengths, rather than weaknesses. Remediation frequently causes distress in children so you can imagine what adults experience. It will cause another drop-out, another failure, and “I knew I couldn’t do it, I am, and always will be a retard.” It takes courage to ask again for help to be able to read.

One little girl in the fifth grade proclaimed that she was not dumb, and just as smart as her “gifted” friends. She struggled, but never gave up, and found strategies that worked for her. She completed a major university degree in three and a half years, embarked on a business career that was far more lucrative than that of her friends. But, she knows what her strengths and weaknesses are, where and to whom she asks for assistance. Smart lady! Don’t those of us who have not suffered with labels do that too?

Adult educators recognize that adults are not tall children and that the adult learner represents many differences in learning histories, with different reaction speeds, attitudes, values, interests, and motivation.
involvement with the process are extremely important in successful learning.

We need tools in the tool box for reading and writing improvement. However there are divergent thoughts about how to introduce/utilize these tools. Some say, “bottom-up.” Those would start with decoding, word analysis skills, spelling patterns, phonics. Some will say “top-down.” Initial importance would be placed on the reader’s mind, general knowledge, literature-rich, and high expectations. The third process is the “interactive view,” in which readers are constructing meaning while decoding print, and are doing so with materials that are of interest to the reader.

The third process brings more of the learner’s and the tutor’s thinking together for understanding relevant text. Decoding skills, memory techniques, and higher order thinking skills are extremely important. It would be very difficult to build a house with only a saw, or only a saw and hammer and nails. Many tools, plans, and materials are indispensable. We need to balance skill with explicit instruction, and use all four components of language—hearing, speaking, reading, and writing.

The bottom line, the reason we read, is to take language symbols, translate them into meaning, and be able to construct understanding or action from them. Successful reading requires basic processes, such as those described in this guide—identification of letters, mapping the letters into sounds, recognition of words within the language, and giving them syntax. The ultimate goal is to learn from text, and to share this acquired knowledge. This requires higher-order thinking processes. To use the words, definitions, and construct meaning, we need to “put it into a sense-making package.” Cognitive science, psychology, and neuroscience have helped us understand how readers comprehend, store, and retrieve text information.

Researchers have suggested that there are three sources of higher-order processes of reading:

1. Characteristics of the reader.
2. Properties of the text.
3. The reading context.

Simply put:

1. Characteristics of the reader may include five traits:
   a. General cognitive capacities—recognize the individual and his/her needs.
   b. Background knowledge—converse to build recognition of what they already know.
   c. Reading strategies and metacognition—develop mental activities to help/know self needs.
   d. Inferential and reasoning ability—realistic references to connection, cause and conclusion.
   e. The basic text—background knowledge for understanding all text.

2. Properties of text—use of authentic materials, ones that the student REALLY wants to know how to read.
3. Reading context is the purpose for which the reader is reading, his/her need.

These contexts can be as simple as a shopping list, a letter from a loved one, a note from a child’s teacher, a new policy at school, an application for a new job, the safety manual at work, the Department of Motor Vehicles Driver’s Code, or a politician’s dreams for the future—authentic learning.

Recently a tutor used color blocks to indicate sound when she observed that the learner was not “catching on” to the auditory approach of sounding-out a word. Indeed, the adult learner could now “see” the difference in the sound, but could not “hear” the difference. With the word in place they moved forward with constructing meaning. For the sake of comprehension, it is important to be able to read the text in order to hook it up to experiences. Further, articulating what a student has read will add another dimension/intelligence.

Library and adult literacy programs have been successful because they take the time, energy, and caring to sit on a one-to-one basis to guide, encourage, inspire, and practice what needs to be done. At the time of registration, during the interview process at student in-take, the evaluator estimates what the individual’s specific needs are, and suggests to the volunteer tutor what familiar, interesting, or important materials they can use for instruction.

The student and the tutor need to talk about what makes learning interesting and fun. This will help identify what the strengths of the student are. Time and patience, with practice, will be required. Many topics and genres will be used. If a student does not understand the first time, repetition is not a dirty word. Different techniques may be used such as the tutor reading the passage aloud, reading it together, or drawing pictures and diagrams. Making sense is the reason we read, so any way we can do it, is the right way. The exciting extenuation of this process, is the life-long learning that will be shared by the learner, tutor, and practitioner.

It makes a great deal of sense that we begin with adult learners in a context that is their reason for being with us. It may well be a job application, a letter from the school, or a newspaper article about their neighborhood. This is a true story one of our tutors told us. The names have been changed.

Lisa just began work with Henry, a graduate from a local high school special education program. At the time of registration with the literacy program, he was told that he was 50% of the lesson planning team for his literacy instruction. He asked Lisa if this were really true. She affirmed it, and then began to worry—expecting Playboy—or worse! The next time they met, Henry brought his senior yearbook. He wanted to know what his friends had written.

What joy Henry and Lisa experienced as they decoded, thought about the meanings of words, and then constructed the thoughts that friends wanted to share and remain on record of their association with Henry. In every message, Henry was loved and respected for his indomitable spirit to learn and made his school and his friends better for knowing him.
Think of what he would have missed without constructing meaning from these thoughts and how much more it meant to him to “work-over” the words that were written for him.

Adults do not have 20 years to learn, unlearn, and relearn. Common sense and patience are needed to guide, inspire, and celebrate. The best strategies for developing comprehension are one-to-one instruction and authentic learning materials, not a classroom of 20 nor a rigid curriculum that must be taught in x number of hours.

We know that children’s literacy levels increase when parents are involved actively in their activities at school. Family involvement is also critical for the adult learner. One of the safest places for parents to learn is at the local library, and it’s one that can be shared by child and parent. It is in the interest of national literacy that the whole family has library privileges and each member is a regular at the library. Environment and belonging are important elements in learning too, at any age.

**SUMMARY**

We read because we want to or need to. Every student should have the opportunity to learn how to decode symbols to make meaning and bring thought to a subject. By using materials essential to the adult learner’s survival and quality of life, we authenticate those skills. Sensitive tutors, in a one-to-one situation can observe, listen, and analyze the student’s needs. Does he/she need help decoding, building vocabulary, or placing the text within context of understanding? To facilitate the learning process, adult learners and tutors could apply strategies such as:

1. Review of text for reason of communication.
2. Predict what it is about.
3. Read, reflect on past knowledge.
4. Add what they have just read in the text.
5. Recap in their own words.

The literature is blessed with current thinking on literacy, cognitive processing, and reading difficulties. Some of the practitioner-friendly items on the neurological explanations, brain research, and the thoughtful methods being tried and proved in decoding, building vocabulary, definitions, and constructing meaning can be found in the list of references provided on page 00 and 00.
CHAPTER 4

Assessment and Screening

THE DIFFERENCE BETWEEN ASSESSMENT AND SCREENING

Assessment

Initial and ongoing assessment provides vital information that shapes the cornerstone of instruction in most literacy programs. Assessment provides information for lesson planning, monitoring progress, and program planning. The initial assessment helps identify demographic information, past school and work experiences, learning strengths, skill levels, interests and needs, and areas of difficulty. The assessment that is done at intake helps the tutor and staff determine skill level, develop an instructional plan, select appropriate materials, provide effective instruction, and have a baseline from which to evaluate progress. Most California Library Literacy Services programs have an intake questionnaire, selected assessment instruments, and various ways to identify the learner’s strengths and learning needs.

Assessment tools are not designed to screen for learning disabilities. Most assessment materials are used by programs to help staff and tutors gain a better

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understanding of the skills and weakness that learners demonstrate in the four main components that make up reading and writing, including:

- decoding *(sounding out letters and phonemes—word pronunciation)*
- encoding *(spelling and writing)*
- vocabulary *(the meaning of words)*
- comprehension *(the meaning of text)*

These tools may include:

- **standardized assessments**, such as the TABE, CASAS, or BADER
- **reading level inventories** such as the San Diego Quick, Slosson SORT or LVA’s READ
- **decoding/phonemic diagnostics** such as the Rosenthal Diagnostic (RDPA), Schofield, Wilson
- **writing samples** taken as part of a more comprehensive test or stand alone
- **comprehension passages** from various products
- **a description of interests and needs** related to family, work, community, and self, i.e. EFF model
- **a learning strengths inventory** such as multiple intelligence profiles or learning styles inventories.

**Assessment** should occur routinely throughout the instructional cycle—at the beginning, periodically during instruction, and at the end of one’s program. Assessment focuses on the products and process of each person’s learning. **Screening** has a different purpose, which is discussed later in this chapter.

Over the years, CLLS Program staff have invested considerable time in planning when and how much assessment to do while also selecting which tools to use. However, responses on the LD Survey indicated that staff and volunteers want to know more about **how to screen for potential learning difficulties** and what to do about them. That is the main focus of this chapter.

**Assessing Learning Abilities**

Before talking about how to screen for learning difficulties or “disabilities,” it is important to talk about how to identify learning **abilities**. While many books on learning difficulties speak of working from strengths, few suggest concrete ways to identify a person’s **learning** strengths. They tend to describe strengths in terms of character qualities such as persistence, a positive attitude, and creative problem solving, for example. While these certainly are important qualities that support learning, they are not cognitive strengths. While some texts suggest using a learning style inventory, few help the adult learner, tutor, or teacher understand how to identify a student’s learning abilities. Fortunately, when the theory of multiple intelligences was first introduced by Harvard psychologist Howard Gardner in the mid-'80’s, educators intuitively recognized its value as a framework for
understanding and describing different ways of knowing and learning
strengths. The theory is focused on describing human capacities—how we
do what we do—rather than on one’s deficits.

Understanding the ways in which a person is smart is vital to helping
them overcome any difficulty in learning, whether it is learning how to
spell or program a computer. But it is especially important for adults with
reading difficulties who have spent a lifetime believing that they are stupid
or learning disabled. Harry Sylvester, an adult learner who served as the
President of the Learning Disabilities Association in New Hampshire once
described his experience of growing up with reading difficulties and strug-
gling through college:

I’m a mechanical engineer. I’m very good at advanced math and science. I can read
well what I can understand, like chemistry and computer manuals. But I couldn’t
read a novel until recently. What’s happened to those of us with so much school
failure is that we think that what we do well (what comes naturally to us), we
think everyone can do that. So we just think we’re dumb. We don’t realize that we
have talents that other people don’t have.

I managed to go to college because I was good in math. My field was engineering,
but I really majored in freshman English. That’s because I spent more time trying
to pass freshman English than I did learning in my field of studies! The thing is, I
understood my disability very well, but I didn’t understand my ability side at all!
How I found out about my abilities was when I was introduced to Howard
Gardner’s theory of multiple intelligences just recently. I design sail boats. I can
make a model and then blow it up to full scale and all the dimensions are perfect.
So I’m very spatially smart. But my language processing skills are awful.

When adult learners are presented with a brief chart describing the
many ways that people are smart during the initial intake meeting, they
can begin to recognize the ways that they are successful in life and as learn-
ers. The staff at Project Read at the South San Francisco Library began
teaching their tutors and learners about MI theory in 1989 to help tutors be
more effective. Understanding ways that a person is smart helps balance
the feelings and internal messages of “being stupid.” Shelton, Fulghum-
Nutters, and Conan (1992) published a book and kit of activities, Honoring
Diversity, to help tutors learn practical activities that utilize all of a student’s
intelligences in literacy instruction. Many CLLS programs cite this kit as a
resource they continue to use to address learning difficulties. Ideas for
assessing intelligences can be found in the kit or on the website: litera-
cynet.org/diversity.

Understanding Our Many Intelligences

Dr. Howard Gardner, a professor of psychology at Harvard University, first
described his research and theory of multiple intelligences in Frames of Mind
(1983). He originally identified seven cognitive processes, which he called
intelligences, in order to challenge the concept that human beings have
one general intelligence as measured by the IQ test. Based on his research
to identify and describe human capacities, he found that the IQ test only
measures 2 of the 7 intelligences he first named. Since that time he has continued to add new intelligences to the list. At this time he has named eight and is considering two more. In a nutshell, the theory of multiple intelligences states that:

- Human beings have evolved to have a number of distinct intelligences not one.
- Each intelligence is relatively independent of the others, but any significant achievement involves “a blend.”
- All human beings have capacities in all intelligences, but some capacities are more developed than others.
- Our own blend of intelligences is as unique as our face. Intelligences are biologically based and learned.

The following chart can be used as a handout during intake to help the learner identify their smarts.

<table>
<thead>
<tr>
<th>Intelligence</th>
<th>Description</th>
<th>How to Engage</th>
</tr>
</thead>
<tbody>
<tr>
<td>LANGUAGE</td>
<td>Sensitive to language, meanings, and the relationship of words.</td>
<td>Vocabulary activities, grammar, poetry, essays and plays.</td>
</tr>
<tr>
<td>SPATIAL</td>
<td>Keen observer, able to think in three dimensions, likes to use metaphors.</td>
<td>Graphs, charts, color codes, guided imagery, pictures, posters, mind maps.</td>
</tr>
<tr>
<td>LOGIC/MATH</td>
<td>Abstract thinking, counting, organizing; prefers logical structures.</td>
<td>Critical thinking activities, breaking words into smaller parts and reassembling them.</td>
</tr>
<tr>
<td>BODY MOVEMENT</td>
<td>Good body control and fine motor skills; often active and animated.</td>
<td>Needs “hands-on” learning opportunities, manipulatives; likes games, skits, plays.</td>
</tr>
<tr>
<td>MUSICAL</td>
<td>Sensitive to rhythm, pitch, intonation. Can remember tunes and rhythms easily.</td>
<td>Likes poems, plays, jazz chants, rap music, songs, and musically guided imagery.</td>
</tr>
<tr>
<td>SOCIAL</td>
<td>Sensitive to others’ moods, feelings, and motivations; outgoing and interactive.</td>
<td>Likes to talk with people, enjoys discussion groups, good at verbal problem solving</td>
</tr>
<tr>
<td>SELF</td>
<td>Has a strong sense of self, able to understand and access one’s own feelings.</td>
<td>Likes poetry, meditation, guided imagery, journal writing, storytelling.</td>
</tr>
<tr>
<td>NATURE</td>
<td>Sensitive to nature and environment; knows the names of rocks, flowers, birds; loves to be outdoors.</td>
<td>Likes to work in the garden, read plants and animals, study habits of fish or birds, read nature magazines, go hiking, walk.</td>
</tr>
</tbody>
</table>
In terms of learning, most importantly, effective lessons engage as many intelligences as possible!

Screening for “Learning Disabilities”

Informed by the previous working definition that learning disabilities are primarily language processing difficulties, we now turn our attention to the issue of how and when to screen for these difficulties. To discuss this issue, we first review perspectives from the LD field, then present some practical suggestions from the language processing perspective in order to help you recognize potential red flags. From the LD literature perspective, the Bridges to Practice Guide: Book 2 (1999) offers several useful insights about the distinctions between assessment, screening, and diagnostic testing; and it also clarifies the purpose for screening for “learning disabilities.”

As mentioned previously, assessment helps identify a person’s skills, competencies, and difficulties in academic subject areas such as reading and math. Assessment helps to inform instruction and monitor progress. Screening, on the other hand, is like its name. Its purpose is to quickly flush out those who exhibit signs of difficulty that suggest more in-depth diagnostics and analysis. For example, when a person goes to the Department of Motor Vehicles to renew a driver’s license, part of the application renewal process involves a vision screening. Each person is asked to read printed material on a card held at a distance. If a person is unable to read the card, he or she will be referred to a vision specialist for more extensive evaluation and corrective action. The optometrist is the expert who “diagnoses” the specific type of vision problem and recommends remediation, not the person conducting the vision screening at the DMV.

In the same way, according to the guide, the purpose of a literacy program choosing to screen for learning disabilities or learning difficulties is not to “diagnose” disabilities, but rather to determine whether a learner needs further testing that can identify the underlying causes of his or her difficulties or lack of progress. As stated in the Bridges to Practice Guide on Assessment: Book 2 (ibid.), “Screening for a learning disability is not a diagnosis of a learning disability. Screening alone does not identify whether a person has learning disabilities. It’s the first step in a longer testing process” (15). The guide further states that diagnostic testing must be conducted by a qualified professional (a psychologist, clinician, or educational diagnostician) and that only diagnostic testing, not screening, can answer whether a person has learning disabilities (17).

Given these perspectives, literacy program staff then need to ask: What are the benefits and drawbacks of sending someone for further testing?

In schools, the main purpose for testing and identifying children or adults as learning disabled is to be able to provide appropriate interventions and accommodations for instruction. This often translates into individualized learning plans, extended time for testing, and assistive devices such as calculators, tape recorders and electronic devices. However, in volunteer literacy programs such as the California Library Literacy Services, these
services tend to become less relevant or necessary. Instruction is already individualized and tends to be more specific and life-related, lessons are individually paced, and timed-tests are not done. Learners can bring tape-recorders, spell-checkers, or calculators to lessons if they wish. Programs may provide information on how to purchase some of these electronic devices, but otherwise, there is little practical instructional purpose in gaining a diagnosis of a learning disability for adult learners in literacy programs. (There is a benefit in screening for specific language processing difficulties that may impact instruction.)

The “Diagnosis”

Why is there little practical instructional benefit for adult learners to be diagnosed as learning disabled? First of all, benefits of diagnosis tend to only apply to classroom or workplace settings. In terms of instruction, most psychologists are not going to send back a plan that will help program directors or tutors improve instruction for their adult tutoring situations. Most of the standard “accommodations” that would be suggested for a classroom setting are already being addressed through the individualized tutoring environment. In fact, instructional accommodations are most often used in the K-12 educational system or college settings because teaching is not individualized.

While some adult learners say that knowing that they are “dyslexic” helps them feel better because it explains why they struggle to read and spell, there is also a great risk that the testing and labeling process will cause more harm than good. During the planning meetings for the development of this guide, several staff members related experiences in which adult learners were demeaned or disturbed by the testing experience with psychologists. One learner who was tested by a psychologist with the Department of Rehabilitation was told that she would never improve beyond the second grade reading level because her “disability” was so severe. Therefore, the psychologist told her she was “wasting her time” getting tutoring and setting herself up with “false hope.” This learner, who was making significant progress by applying her new skills to her life (i.e. reading the Bible and filling out job applications) came back from the meeting depressed and resigned to failure. It took weeks to convince her that she was very capable of learning and that her personal reading goals were good.

For these reasons, it appears that the most practical and potential benefits of referring someone for testing and having them receive a “diagnosis” of a learning disability are for self-awareness and to be able to advocate for appropriate accommodations in the workplace.

However, in terms of instruction, what is most helpful to screen for are a number of potential language processing difficulties. Identifying whether a student has phonemic difficulties that interfere with decoding, spelling and comprehension can help a tutor select instructional strategies to improve phonological processing skills while also drawing upon a student’s interests and learning strengths.
Screening for Language Processing Difficulties

As the previous chapter on language processing pointed out, one of the most basic components of successfully learning to read and write is having the ability to recognize the phonological units of sound that make up words (in order to read) and then understanding what letters combine to represent those sounds (to write). Successful spelling and pronunciation require the eye, ear and mouth to work together. The areas of the brain that recognize the shapes and meaning of letters have to work with the speech areas that store and recognize sound. But this isn’t enough. To pronounce a word correctly, a person has to use the tongue and shape the mouth correctly to produce the word.

These components of language processing are complex functions that involve:

- Auditory processing
- Visual processing
- Kinesthetic processing

In a moment, we will describe some of the red flags to watch for in each of these areas. However, first it is important to understand how these functions operate in terms of learning.

Each one of these three functional areas requires five distinct stages or processes described by speech therapists Patricia and Charles Lindamood (1975). These processes include:

- sensory input
- perception
- conceptualization
- storage
- retrieval

A breakdown in processing can occur in any one of these phases and disrupt the learning process.

These five processes are sometimes described in learning theory as three phases of the learning cycle (Shelton, Conan, Fulghum-Nutters, 1992). In order to read, write and comprehend language, the cycle begins with sensory input that is both visual and auditory. Once sensory input registers and a person becomes aware, the process of perception occurs.

If a person has vision or hearing difficulties, the second phase of perception is affected. For example, scotopic sensitivity breaks down the ability to decipher the visual input of letters because it can cause print to squirm or appear to move off the page. This affects visual perception. If a person is not able to perceive the sounds of letters correctly, this is called an auditory perception problem. If one’s perception is distorted, then it is difficult to move on to the next stage and comprehend information accurately—whether it is the ability to pronounce a word accurately or know the difference in how to write the letters b and d.
Once something is perceived or recognized then the third stage, **conceptualization**, can take place. What is perceived can now be understood and talked about as a concept. In the learning cycle, this is the **synthesis** stage where information is understood and interpreted. This is when comprehension occurs. Once information is received and comprehended, it can be stored and used in future situations. Information can be stored in any number of ways—visually, auditorily, kinesthetically, or emotionally. The ability to **store and retrieve** information is commonly referred to as **memory**, and poor memory is often listed as a characteristic of persons with learning disabilities. However, this is a global assessment that is both inaccurate and unfair. Dr. Gardner’s research about the many different human intelligences found that memory is specific to each intelligence. In other words, a person with a highly developed spatial intelligence will remember shapes and patterns easily, but may have difficulty recognizing sounds of letters because that is a language intelligence function.

**RED FLAGS! What to Look for and Do**

In preparation to consider the red flags that can indicate language processing difficulties, it is important to remember that language is only one of the eight intelligence systems. Just because a person may have difficulty processing language does not mean that they are not good with words or smart in many other ways. Relying on the other non-language based intelligences, including a person’s bodily, musical, spatial, social, self and nature smarts can help the adult learner improve his reading, writing and comprehension skills a great deal. Although teaching phonemic awareness without the context of the real world may work for children, it is less effective for adults. Even though it is important for adults to learn the building blocks of the language system, it is also essential that instructional practices use real-life learning, are functional, and are culturally respectful.

Because language processing involves a combination of functions that enable a person to synthesize visual, auditory and kinesthetic information, a disruption of any one of these processes along the cycle of learning will impact the development of language skills. However, the most recent research on specific language disabilities points to auditory processing difficulties as the major culprit in disrupting the learner’s ability to identify the basic phonemes (sound units) of language.

For this reason, we have chosen to focus first on the red flags that indicate **auditory processing difficulties**, then possible red flags suggesting **visual processing** difficulties, and conclude with descriptions of **kinesthetic** areas of difficulty. The format we have chosen to use for this section first presents an overview of the language function and how it works for those who have no difficulties. This description is followed by a chart describing how difficulties may show up in reading, writing, speaking and listening. Then we provide a few illustrations of real people’s stories, and conclude with suggested strategies to address these difficulties. The next chapter gives in-depth descriptions of the different types of instructional materials available to enhance learning and improve skills.
AUDITORY PROCESSING DIFFICULTIES

Auditory Discrimination, Perception, and Memory

Description: Letter symbols represent speech sounds (phonemes). People who understand this and perceive the connection between the sequences of sounds and sequences of letters in written words have a strong base for independent reading and spelling. Those who cannot perceive the contrasts between speech sounds or the correct order of letters in syllables may learn more effectively through visual memory than understanding sound/symbol associations.

Auditory processing difficulties include problems in areas of auditory discrimination, auditory perception, and auditory memory. They are the most significant cause of language processing difficulties and “dyslexia.”

Definitions: Auditory discrimination is the ability to distinguish one speech sound from another. Auditory perception is the ability to perceive the number, order, and difference of speech sounds within a spoken pattern. Auditory memory is the ability to remember information that is given verbally. (Charles and Patricia Lindamood, Auditory Discrimination In-Depth, 1975.)

How Auditory Processing Works

Many tutors have good auditory processing skills, which is why it is often hard for them to understand why a learner can’t learn phonics or can’t remember how to spell a word that they drilled on the week before. Those with good auditory skills recognize the difference between speech sounds (such as i and e or t and d), they can easily connect sounds with letters, and are able to distinguish the order, number and sequence of sounds when moved around in syllables or words. These skills make it easy for them to spell accurately. They notice changes in the order of sounds in a syllable and can show these changes in spelling. For example, they understand which letters move in a sequence when these syllables are spoken: asp, aps, and sap. They usually read without guessing at words and pronounce words correctly, enunciating all letters in a word.

RED FLAGS! Indicators of Auditory Processing Difficulties

<table>
<thead>
<tr>
<th>Function</th>
<th>Indicators of Difficulties</th>
</tr>
</thead>
<tbody>
<tr>
<td>READING</td>
<td>May have difficulty remembering names of letters.</td>
</tr>
<tr>
<td></td>
<td>Cannot perceive contrasts between speech sounds such as short i and e.</td>
</tr>
<tr>
<td></td>
<td>Cannot associate sounds with letters and isolate them so that they can pronounce words</td>
</tr>
<tr>
<td></td>
<td>correctly, pronouncing ask as aks. “I aksed my mother to go to the store.”</td>
</tr>
<tr>
<td><strong>WRITING</strong></td>
<td>Has trouble remembering how to write letters or what letters go with what sounds: i.e., ( t ) and ( d ). May find it difficult to remember what sound a particular letter makes. Cannot isolate how sounds change in a word and show that change in spelling. Has a great deal of difficulty encoding (spelling).</td>
</tr>
<tr>
<td><strong>SPEAKING</strong></td>
<td>Mispronounces words such as saying “ax” for the word <em>ask</em>. Does not pronounce all the letters in a word. i.e., “<em>libery</em>” for <em>library</em>. Guesses at words based on the first few letters and context. Substitutes words (often accurately understands meaning.) Makes up words of their own based on how they perceive a word, i.e., “<em>frigater</em>” for <em>refrigerator</em>.</td>
</tr>
<tr>
<td><strong>LISTENING</strong></td>
<td>Does not accurately “hear” (perceive) how words are pronounced. Does not hear all the sounds in a word or drops off endings of words. Will hear one thing but say another: i.e., hear forty-nine but say ninety-four. Has difficulty remembering main ideas from a lecture. Can’t remember oral instructions and may not remember the sequence of actions to take.</td>
</tr>
</tbody>
</table>

**Sources of Indicators**

Intake interview discussion and assessment. Errors on basic reading skills assessment tests. Observation of above indicators in tutoring sessions. Errors on written activities (homework). Auditory discrimination tests such as Lindamood Auditory Conceptualization test or Wepman Auditory Discrimination Test.

**What Auditory Difficulties Look Like in Real Life**

People with these various auditory processing difficulties are not able to rely on their ears alone for accurate decoding and encoding skills. Emphasizing phonics is often an exercise in futility. Reading and writing requires the ears, eyes and mouth to all work together for accurate pronunciation and spelling. Those with auditory problems are often frustrated because
they cannot spell accurately or “remember” how to spell a word from week to week. This is not a hearing problem but an auditory perception difficulty that occurs in the speech center of the brain. They often have very good memories, but not good auditory memory. In other words they may have difficulty remembering how specific sounds are made because they don’t perceive the sounds. They need to rely less on their ears for clues and more on their eyes and mouth—how a word or letter looks and the mouth feels when saying the letter or word.

Many learners with auditory difficulties are strong visual and spatial learners. They often think in pictures as they read. This is one reason that learners can often read “big words” such as restroom but miss little words, including of, the, but, and. The reason for this is that the learner has a visual memory of the word restroom and sees a picture in her head immediately. However, there are no images associated with many of the small connector words—of, then, but. Patty, a learner in South San Francisco, could never read the word but in a sentence without losing her concentration. She had no image for the word so it would stop her in her tracks every time. Using a tip from Ron Davis’s book, The Gift of Dyslexia (1994), Patty made a clay scene to illustrate what but meant to her. As soon as she made the scene, she had visual and kinesthetic references for the word and it never stopped her again.

**Instructional Strategies that Help!**

Use multisensory activities that bring in the musical, spatial and body intelligences of students. Use activities that help them gain clues from visual clues and kinesthetic clues from the mouth and tongue.

Use color-coding for letters that are left out during pronunciation or letters that are difficult to remember when spelling. For example, when spelling library, use a red marker to write the r that follows the b in the br combination. This will call attention to the letter for spelling and speaking.

Act out difficult words, make up stories to remember spelling rules, draw outlines around the shape of a word so the learner can see and feel the overall pattern of the word.

Use Scrabble letter tiles or other letter tiles to work on the sequence of letters in spelling a word and help the learner kinesthetically “feel” how letters move around in a word.

Make up songs or write lyrics to songs to practice pronunciation and spelling.

Because listening to quiet classical music in the background allows the ear to perceive unnoticed sounds, use background music to help those who are learning to speak English or often mispronounce words to actually hear the subtle sounds. Say a word, have the learner repeat it after you. Do this at least four times or more until they are able to pronounce the word correctly.
Many of the resources described in the Materials and Methods section of this guide describe programs designed to address auditory processing difficulties. Check them out.

A Case Study: Ray spells “hundred.”

Here is an example how some of these strategies were used to help Ray learn a difficult word.

One day at a workshop on Using All Your Smarts to Learn we asked if someone had a word that they always struggled to spell. Ray jumped in, saying, “I can never remember how to spell hundred when I’m writing checks to pay bills.”

Another learner asked, “How much of it can you spell?”

Ray replied, h u n I wrote these first three letters on chart in blue: h u n

The rest is d r e d,” I replied. “What is the first letter in “dred? Feel how your mouth makes the word.”

Another learner replied, “It’s a d.” So I added a d in green.

Then Patty chimed in, “Oh, the rest is red!” I wrote out red in the color red.

Then we made a little chant for the word: Hun dee red, bringing in the musical intelligence. Patty added, “Gee it’s “hun—d—red,” just like my red Hundai car!

Ray repeated the word only once and had it firmly in his memory. Now he could see and hear the letter that stumped him, the d in dred. He replied, “Hun—d—red, I’ll never forget how to spell it again.”

VISUAL PROCESSING DIFFICULTIES

Visual Perception, Discrimination and Memory

Description: To be able to read and write well, a person also has to have good visual processing skills. In addition to being able to see well, this includes other kinds of visual perception such as:

- noticing the shapes of letters and words,
- recognizing subtle differences in symbols and patterns, and
- remembering what symbols or shapes look like.

Visual processing involves not only the functioning of the eye and transmittal of information from the retina through the optic nerve, but it also involves the areas of the brain which process visual information.

Definitions:

Visual perception is the ability to perceive shapes and colors accurately. When print squirms or moves on the page this is a visual perception problem called scotopic sensitivity.
Visual discrimination is the ability to see the difference between similar shapes or objects and to isolate an image or line of print from a busy or competing background. It also includes the ability to notice the sequence or order of shapes, letters or numbers and how they may move in a word. Visual memory is the ability to store information and retrieve it from storage whenever needed. It includes the ability to remember how letters, words and numbers “look” and reproduce them when writing (Skinner, et. al., 1996, 320).

**How Visual Processing Works**

Good visual processing skills help a person to spell effectively and notice when a word doesn’t “look right” or a letter is out of place. Good visual thinkers like to play word games like Scrabble, crossword puzzles and word searches. They recognize the shapes of letters which look similar, such as b and d and easily distinguish what is the same and different about the shapes. They can recognize sight words in isolation and/or context and often know words by the shape of the word. Visual processing includes the ability to form a mental picture of a scene or vocabulary word, and it helps people recall and comprehend information from written material. Good visual thinkers are able to “see” their mistakes immediately when writing or spelling. They have good visual memories and often have good vocabularies to match. In addition, they can easily remember and apply rules that govern our writing and spelling system. When listening to a story, they often “see” vivid images and can describe the scenes in great detail. Visual processing skills can be a great asset for a person who struggles with auditory processing difficulties.

**RED FLAGS! Indicators of Visual Processing Difficulties**

Before introducing a list of indicators for these types of difficulties, it should be noted that these descriptions do not include vision acuity. While poor vision can lead to difficulties in reading or writing, poor vision is not considered a learning disability.

<table>
<thead>
<tr>
<th>Function</th>
<th>Indicators of Difficulties</th>
</tr>
</thead>
<tbody>
<tr>
<td>READING</td>
<td>Loses place easily and reads words incorrectly because he does not notice all the letters in a word, i.e., the first r in library is not perceived. Has difficulty memorizing sight words or words with no clear image. Has difficulty recalling written material; may have poor comprehension. Cannot recognize letters of the alphabet either in or out of sequence.</td>
</tr>
</tbody>
</table>
Eyes tire easily, print squirms on the page, loses attention, distracted.
Headaches or eyes water a lot.

**WRITING**
Has difficulty spelling long or unusual words such as *restaurant* because she cannot remember how the word looks or the vowel combinations.
Struggles with writing tasks, even simple ones such as writing his name.
Has difficulty storing and retrieving information connected with rules such as *i* before *e* except after *c*.
Reverses letters such as *b* or *d*, *p* or *q* and confuses *h* and *n*.

**SPEAKING**
Has difficulty pronouncing many common words because of a difficulty remembering the visual order and sequence of letters. Person relies on her ear—how she has heard a word pronounced—rather than her eyes.
Uses limited vocabulary because he may not have a mental picture of a word to aid memory.
Repeatedly asks for clarification of pronunciation, written directions and questions.

**LISTENING**
Has difficulty forming images for words when read to aloud.
May get lost in a story or be unable to remember details because he is unable to create visual clues to keep track of main ideas.

**Sources of Indicators**
Intake interview discussion and assessment of alphabet knowledge and writing sample.
Pronunciation errors on basic reading skills assessment tests or miscue analysis.
Observation of above indicators in tutoring sessions.
Errors on written activities (homework).
Irlen test for scotopic sensitivity.

**What Visual Processing Difficulties Look Like in Real Life**
Persons with visual processing difficulties will tend to rely on their ears or body sensations to spell or pronounce words. They may have difficulty remembering details on a comprehension test because they have no images to help put concepts into long-term memory, and therefore they cannot
store the ideas for later recall. If a tutor tries to use the “Visualizing—Verbalizing” techniques taught by Lindamood-Bell to improve comprehension, she will find the student struggling to come up with images for scenes or words. This will lead to even greater frustration for both learner and tutor. They also struggle to use a dictionary because they don’t know what the beginning letters of a word are.

Visual perception and memory difficulties also make it more difficult to spell because the learner will not be able to remember how a word or set of letters looks or their patterns. For example, a learner will struggle to remember to write down the silent letter found in words (such as ea in each or wh in white) because there are no auditory clues given for the silent letter. Even if all the letters in a word are voiced, this does not assure correct spelling. A good friend and camp nurse from many years ago recently wrote a note describing her frustration when she went to paint the name of the camp on the side of her new canoe. After she was all finished painting the name, she looked and looked at it, knowing that it didn’t look right but she could not tell what was missing. After hours of frustration she called her daughter in another state to ask how to spell the camp’s name MIAKONDA. Even though she said the name over and over aloud as she looked at her canoe’s lettering, she could not see what letter was missing from her written version. It was the first A in this Canadian tribal name. At age 65 she wrote in her email note, “After all those years of looking at and saying that name, how could I not know how to spell it! I felt so stupid.” She knew something was wrong, but could not isolate the missing letter no matter how hard she tried.

Instructional Strategies that Help!

Note: Just a reminder to say that if the learner is having difficulty with visual cues and sequences, you want to use their other strengths to help them overcome the difficulty. Don’t insist on drilling words or comprehension by using new visually dominated strategies. (Sometimes we have a misguided notion that if something doesn’t work, just try harder!) In other words, don’t stress having the learner make mental pictures in order to remember letters or words. Don’t have them draw pictures or trace shapes of words. These strategies work for those with strong spatial smarts, not those who are challenged in this area. Instead, try some of these ideas:

Use a highlighter to help the learner visually distinguish key concepts or information.

Present written information in short, concise amounts of print with plenty of space so that information stands out from other text material.

Use musical tunes or memory games to help teach the differences between similar words such as when and then, where and there; and highlight what has changed and what stays the same.
Cut up root words and endings and play word games. Use scrabble tiles to teach spelling so that the student can manipulate the letter tiles while saying the words or letter sounds.

Use different colors to mark the letter or syllable that the learner has difficulty remembering.

Give clear verbal and written instructions.

Use properly assigned color overlays from the Irlen Institute to cut down distorted print.

Use creative storytelling to help improve comprehension rather than visualizing strategies.

Teach alternative techniques for note taking such as diagrams, flow charts, graphs, and outlining.

Use dictionaries that are organized by how a word sounds rather than how it looks.

A Case Study: Jo “feels the letters.”

Jo came into our program at Project Read in San Francisco as a beginning reader. Some of the most difficult things for her to learn were the little words that didn’t have pictures attached to them. Since she works in a hospital, she sometimes has to write reports and was terrified every time she faced a writing task.

After months of frustrating work with flash cards and drill and practice sessions, she and her tutor Melinda were ready for a change. Melinda realized that Jo has strong body intelligence and decided to use clay to help Jo remember words. Jo described the technique in the following way: “Feeling the letters helps them go right up to my brain.”

Here are the steps they used:

They chose a story to read together.

As they read, they underlined the words that were difficult, which they wrote on a piece of paper. Then Jo picked two or three words she wanted to learn.

Next, they formed the letters out of play dough. As Jo formed each letter, Melinda asked her to say the name of the letter and the sound it makes. They said the word aloud repeatedly while spelling the word in clay.

Once Jo knew the word, she walked around the room visualizing it and saying it aloud.

She then came back to the table to write the word down.

When they met again, they reviewed the words that Jo had recently learned. Amazingly, Jo knew many words that she could never remember before.
**BODILY–KINESTHETIC PROCESSING DIFFICULTIES**

**Sensory-motor Perception, Discrimination and Memory**

**Description:** Successful reading and writing depends on this third language processing function to complete the integrated tasks involved in **decoding, pronunciation, and writing**. When a person is learning a new language it is more obvious that the placement of the tongue and shape of the mouth play an important role in the production and articulation of speech sounds. For a person who has difficulty perceiving how sounds are made, learning body clues such as how the lips pop open when pronouncing a **b** or **p**, or where the tongue is in the mouth to make the sounds for an **l** or **r** provides another system for learning correct pronunciation. In addition, a person needs to have good visual motor coordination to hold a pencil to write and to copy information from the board or a book.

**Definitions:**

In terms of language processing, **sensory-motor perception** is the body’s awareness of how the mouth and tongue work to form words.

**Sensory-motor discrimination** is the ability to feel, analyze and self-correct how the mouth moves to make specific sounds.

**Sensory motor memory** is the capacity of the body to remember how to form the mouth to make certain sounds and also the body memory of how to hold a pencil and write letter symbols.

**Dysgraphia** is a term used to describe a person’s difficulty holding a pencil, forming letters correctly, and writing legibly.

Poor **visual motor integration** is the term given to the mechanical problem of copying text from the board or writing information in a poorly organized manner with little spacing. *(Understanding Processing Difficulties, 2001)*.

**How Bodily–Kinesthetic Processing Works**

Most of us are unaware that our body must go through a series of complex activities in order to say a word correctly. It seems that we intuitively know how to make certain sounds when trying to pronounce a new word. Unless we struggle to pronounce a word, this process is nearly unconscious. But it provides a vital link in the brain, which works to recognize a written symbol, associate a sound or set of sounds with it, and then produce the word aloud. We seem to learn this process intuitively as we are growing up and begin to read and write. Unless a person has a speech problem as a child, most people don’t understand the critical collaboration required by the ear, eye and mouth. Good auditory processing skills are essential for the body to know how to make certain sounds with the mouth. Those who have good sensory-motor skills (bodily-kinesthetic) usually do not have difficulties with this language processing function. These individuals can usually hear a
word one time and correctly replicate the sounds accurately as long as they also have good auditory perception.

**RED FLAGS! Indicators of Bodily–Kenesthetic Processing Difficulties**

<table>
<thead>
<tr>
<th>Function</th>
<th>Indicators of Difficulties</th>
</tr>
</thead>
<tbody>
<tr>
<td>READING</td>
<td>Difficulty looking at words and knowing how to pronounce them.</td>
</tr>
<tr>
<td>WRITING</td>
<td>Has difficulty holding a writing tool and using it easily.</td>
</tr>
<tr>
<td></td>
<td>Labored effort to print and difficulty forming letters correctly.</td>
</tr>
<tr>
<td></td>
<td>May have poor eye-hand coordination.</td>
</tr>
<tr>
<td></td>
<td>Cannot read their own writing.</td>
</tr>
<tr>
<td></td>
<td>Has difficulty copying information off a board or out of a book.</td>
</tr>
<tr>
<td></td>
<td>Written work looks disorganized and sloppy.</td>
</tr>
<tr>
<td></td>
<td>Has difficulty following and taking written tests.</td>
</tr>
<tr>
<td>SPEAKING</td>
<td>Struggles to form words and pronounce them correctly.</td>
</tr>
<tr>
<td></td>
<td>Unable to remember how the mouth or tongue is moved or placed to make certain sounds.</td>
</tr>
<tr>
<td></td>
<td>Gets tongue-tied easily.</td>
</tr>
<tr>
<td>LISTENING</td>
<td>Can hear a word pronounced correctly many times and not understand or remember how to shape the mouth to replicate the pronunciation.</td>
</tr>
</tbody>
</table>

**Sources of Indicators**

Intake interview and assessment may reveal this.

Pronunciation errors or difficulty writing legibly on a writing sample.

Observation of the above indicators during tutoring sessions.

Errors in written homework.

Prior testing results that may indicate dysgraphia.

**Instructional Strategies that Help!**

Use integrated strategies that involve auditory and visual clues to help a person analyze sounds based on how they are heard and look first before moving to how the sound is made.

Use music in the background to help the ear open to all possible nuances of sound.
Use the Lindamood-Bell mouth diagrams which show mouth and tongue positions for all the speech sounds and give each one a label which describes the action, i.e. “Lip popper, tip tapper.”

Read books aloud and listen to books on tape to develop fluency, vocabulary and enjoyment.

Use a tape recorder, oral reports, or visual diagrams to demonstrate learning rather than emphasizing a lot of writing activities in work books.

Provide other tools such as a computer and calculator to help overcome the physical challenges of handwriting in order to produce legible work.

Suggest using a tape recorder to capture important presentations rather than note taking.

Give the student a mirror so they can see how they form words or sounds, and teach them the Lindamood method of putting a hand under the chin to feel the degree of difference in pronouncing vowels on the “vowel circle.”

CONCLUDING THOUGHTS

As stated at the beginning of this guide, many of the characteristics of one difficulty may also be seen in others. This explains why there is so much confusion and why no single approach addresses all the challenges that learners with reading and writing difficulties may exhibit. Nevertheless, there are a number of effective approaches which rely on multisensory strategies and/or specific structured phonemic activities that can tap into the learning strengths of adults.

The ideas presented in this chapter are just the tip of the iceberg to get your creative mind to expand to new ideas. Most recent packaged instructional programs that have been developed to improve phonologic processing skills use a blend of auditory, kinesthetic and visual activities. However, they often lack any connection to real-life learning. So, try adding some of a blend of your students’ most developed intelligences to the mix and use their every day experiences to make learning lively. Use quiet music in the background to help with auditory perception of difficult vowel sounds and words, and add spatial diagrams to present information in a clear concise format. Take a walk in nature and make sure to involve the student’s personal learning goals. Most of all, have FUN!

The next section on Materials and Methods presents a wide variety instructional methods that fellow CLLS staff members are using. Read their descriptions of what works for them!

REFERENCES


CHAPTER 5

Materials and Methods

This chapter is intended to share information about the kinds of materials and tools that literacy staff members at various CLLS programs are using with adults with learning difficulties. The LD Task Force invited staff members who were familiar with specific programs to give us their “review.” The following pages contain each reviewers comments and recommendations. While one method may be ideal for a particular individual, another person's difficulties may not be resolved by the approach. The methods and materials are as varied as the students who visit our programs. However, the information in the previous chapter may help you select the appropriate interventions that you see described in this chapter. Some of the approaches specifically target phonemic awareness, others are more multisensory and life skills oriented.

A few words of caution: Inclusion of a description does not imply an endorsement by the LD Task Force or the State Library. The opinions stated are solely those of the reviewer. Read and consider the questionnaires carefully.

The following materials or methods are included in this chapter and organized in alphabetical order:

- Bright Solutions (Barton)
- Honoring Diversity Kit: A multidimensional learning model for adults
- Irlen Institute Screening and Overlays
- Learning 2000
- Lindamood-Bell
CLC LEARNING DIFFICULTIES AND DISABILITIES TASK FORCE—
MATERIALS SURVEYS

Name of Materials: Bright Solutions (Barton)
Reviewed by: Lisa Valore, Second Start Literacy, Covina Public Library

1. Please describe these instructional materials and how you use them in your literacy program.

   The Barton Reading and Spelling System has ten levels, each containing 2 tutor training videos, complete fully scripted lesson plans, color coded letter tiles, spelling lists, stories, and games. There are 10 to 15 lessons per level from “phonemic awareness” through “Greek words and Latin roots.” We use the Barton Reading and Spelling System with individuals who have a demonstrated need for a multi-sensory approach to learning.

2. Are these materials organized by level? Y If so, how do they correlate to adult learners and other types of assessment levels?

   They are similar to the Laubach Way to Reading series in material covered, however the approach is more “user friendly” and effective for LD students. I’ve heard it described as “like Wilson, but not as labor intensive.”

3. What does this tool include? (books, tapes, videos, etc.)

   There are 10 levels in the series. Each level contains 2 tutor training videos, complete fully scripted lesson plans, color coded letter tiles, spelling lists, stories, and games.

4. How long has your program been using it? One year

5. Are you using Selected individuals?___________________________
   it with: One-on-one tutoring? X yes ___ no
   Small groups _____yes X no
   Other, explain ______________________________

   a. What is needed for staff?

      Staff must preview each level and teach 1 student to become familiar with each level.

   b. For tutors?

      The system is turn key. Lesson are scripted and the videos demonstrate each lesson in the series before the tutor teaches it to their student.
7. Where can this material be purchased?

   Bright Solutions for Dyslexia is the sole source for this material. Series can be purchased by phone at (408) 559-3652 or on the web at www.bartonreading.com.

8. Cost? ______*(as a package or in parts)?

   *Levels may be purchased separately. $250.00 each for levels 1 and 2.
   $300.00 each for levels 3-10. Site license is available. Cost is $750.00 each for levels 1 and 2. $1000.00 each for levels 3-10.

9. Pros: How has this tool benefitted your students who have difficulty with language processing skills such as: decoding, phonemic awareness, spelling, sequencing, or comprehension?

   The Barton Reading and Spelling System has benefited our students in that it enables them to identify sounds which is the cornerstone of decoding which opens the door to the above-mentioned skills.

10. Cons: What are the limits or drawbacks of this material or methodology?

   Not recommended for learners who aren’t LD. Progress is too slow. The cost is very prohibitive for smaller programs, and outside training is also costly.

11. Do you know of other CLC programs that use this approach? If so, which ones?

   Read to Live, Walnut Creek, CA; Project Read, Redwood City, CA; Second Start, Oakland, CA.

12. Other comments about these materials:

   Excellent purchase for LD students. Worthwhile purchase. Buy it if at all possible.

13. If possible, please include a few samples of these materials.

14. Do you use other materials and methods to assist students with learning difficulties or identified learning disabilities?  X yes     no. If so, what?

   Phonics Game, Computer Training, Right/Left Brain exercises.

15. How do they differ/compare?

   They are used more as peripherals than as a primary curriculum for LD students.

Name of Materials:  Honoring Diversity: A Multidimensional Learning Model for Adults

Reviewed by:  Leslie Shelton, Holly Fulghum-Nutters, principle authors and literacy staff

1. Please describe these instructional materials and how you use them in your literacy program.

   This kit helps people identify learning strengths and create strategies that use those strengths. It offers practical ideas based on the theory of multiple intelligences that assist tutors and learners to discover all the ways learners are smart and use those smarts to improve reading, spelling, writing, and comprehension. It is designed as a tool kit for tutors and learners to use together and includes a book, set of 100 teaching strategy cards, and audiotape, which
presents the first seven (of eight) intelligences in story form for adult learners to discover their smarts. These materials are fun, easy-to-use, and are some of the most successful ways to take the “dis” out of disabilities by using all the student’s abilities. They focus on what’s working rather than what’s not working. This puts the learner in the driver’s seat. It’s a great resource for Tutor/Student Coordinators. The kit was selected by the Michigan State Literacy Resource Center as the best material available to help address learning differences and language disabilities.

2. Are these materials organized by level? **N** If so, how do they correlate to adult learners and other types of assessment levels?

The materials are organized in a variety of ways—by intelligence, by type of reading or writing skill, and by types of activities. They apply to learners at all levels.

3. What does this tool include? (books, tapes, videos, etc.)

The kit includes an overview guide with brief theory, core concepts, description of how we learn; a set of 100 teaching strategy cards featuring ideas that engage each intelligence, and an audio tape which gives an overview of the original seven intelligences identify by Dr. Gardner.

4. How long has your program been using it?

12 years (Project Read—South San Francisco)

5. Are you using Selected individuals? __No, anyone can use it__

   it with: One-on-one tutoring? **X** yes ____no
   Small groups **X** yes ____no
   Other, explain _Could be used for computer lab, creative ideas_

6. Training: Is training ____ required or **X** optional? Certification required? **N**

   a. What is needed for staff?

   A one to three hour workshop is preferred.

   b. For tutors?

   We integrate an overview of multiple intelligence theory, describe each intelligence, and teach multi-intelligent strategies throughout tutor training. We also offer 2 to 3 hour workshops to learners so they can learn the ways they are smart.

7. Where can this material be purchased?

   California State Library Foundation (916) 447-6331 or www.literacy.net/diversity

8. Cost? **$27.95** (as a package or in parts)? Comes as a boxed kit. Not separate.

9. Pros: How has this tool benefitted your students who have difficulty with language processing skills such as: decoding, phonemic awareness, spelling, sequencing, or comprehension?

   1. It helps students and tutors discover all the ways a student is smart and use those smarts to learn reading and writing skills more quickly and effectively.
2. It gives power to the student. They can suggest ideas about what works best for them.
3. Moves beyond focus on basic skill development to helping students understand how they learn and how their mind works. This enables them to take charge of their learning.
4. Offers creative strategies for the times that tutors or learners are stuck or blocked.
5. Gives students multiple ways to connect to what is being taught.
6. Offers strategies for higher levels—GED and writing. Features how to use music to learn.

10. Cons: What are the limits or drawbacks of this material or methodology?
    1. It is a non-traditional and requires people to think outside the box.
    2. It is not a set of sequential lesson activities like a skill book. It encourages creativity.

11. Do you know of other CLC programs that use this approach? If so, which ones?
    We presented training sessions and conference workshops to many CLC programs and other states in the early to mid–1990’s. Program staff choose how to use the materials.

12. Other comments about these materials:
    This is a tool kit intended to expand creativity. Many tutors comment that they are surprised by their own ideas that are stimulated. Tutors discover more about how they learn and think as well as their students.

13. If possible, please include a few samples of these materials.

14. Do you use other materials and methods to assist students with learning difficulties or identified learning disabilities?  _X_ yes  ___ no. If so, what?
    Although these are not instructional materials, we use the Lindamood Auditory Discrimination assessment tool and Irlen overlays to identify scotopic sensitivity.

15. How do they differ/compare?
    These are assessment tools not instructional materials. So there is no comparison.
HONORING DIVERSITY

A Multidimensional Learning Model for Adults

Leslie Shelton
Joan Sheldon Conan
Holly Fulghum-Nutters

CALIFORNIA STATE LIBRARY FOUNDATION
SACRAMENTO
1992

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Sample of Honoring Diversity materials
Name of Materials: Irlen Institute Screening/Overlays
Reviewed by: Marcia H. Tungate, READ/Orange County, Orange County Public Library

1. Please describe these instructional materials and how you use them in your literacy program.

The Irlen Institute Screener determines whether an individual has Scotopic Sensitivity Syndrome (SSS). SSS, as it effects reading, causes print to move on the page, sometimes to such an extent that it completely leaves the page. After determining that the learner does have SSS further assessment is conducted and the learner is provided with a colored transparency. If that proves to be valuable to the student, he is referred to the Irlen Institute to have colored lenses prescribed.

2. Are these materials organized by level? N If so, how do they correlate to adult learners and other types of assessment levels?

3. What does this tool include? (books, tapes, videos, etc.)

Screening assessment tools, colored overlays.

4. How long has your program been using it? 10 years

5. Are you using Selected individuals? yes

it with: One-on-one tutoring? yes

Small groups yes

Other, explain

6. Training: Is training X required or _____optional? Certification required? *

Training and licensing are required to become a screener.

a. What is needed for staff?

Training consists of two 8 hour days at the Irlen Institute. Several of our staff are licensed as screeners.

b. For tutors?

Tutors are periodically provided with in-service workshops providing an overview of the syndrome and its symptoms.

7. Where can this material be purchased?

Training can be obtained through the Irlen Institute in Long Beach, CA or at their web site, www.irlen.com

8. Cost? Initial training is between $300 and $400 (as a package or in parts)?

Materials to maintain the screenings and overlays are relatively inexpensive. For current price list, see web site at www.irlen.com.

9. Pros: How has this tool benefitted your students who have difficulty with language processing skills such as: decoding, phonemic awareness, spelling, sequencing, or comprehension?

Because a properly selected overlay “holds” the print still, the student is able to read better and more fluently.
10. **Cons: What are the limits or drawbacks of this material or methodology?**

   The overlays can be cumbersome and make writing awkward. The lenses are a better choice but are expensive ($500-$700) and are usually not covered by insurance.

11. **Do you know of other CLC programs that use this approach? If so, which ones?**

12. **Other comments about these materials:**

   For many of our students, the overlays provide instant relief from problems which have plagued them their entire lives. I don't consider them a cure-all, and our students still need remediation, but they certainly have made a difference in our students ability to progress.

13. **If possible, please include a few samples of these materials.**

14. **Do you use other materials and methods to assist students with learning difficulties or identified learning disabilities?**

   Yes ☒  No ☐

   If so, what?

   Phonics Game, Wilson Reading System

15. **How do they differ/compare?**

   Phonics Game is reinforcement for Wilson. Irlen Overlay is a supplement to reading rather than a system.
Irlen Institute
5380 Village Road Long Beach, CA 90808 (562) 496-2550 Fax (562) 429-8699

OBSERVATION FORM

Please complete and bring to your appointment. Please print.

Name ____________________________  Age _____  Grade _____
Address ___________________________  Phone ________________
Completed by ________________________  Date ________________

CHARACTERISTICS  Please Circle Answer

Are you light sensitive?

Bothered by sunlight  Yes  No  ?
Bothered by glare  Yes  No  ?
Bothered by bright or fluorescent lights  Yes  No  ?
Tired or drowsy under bright or fluorescent lights  Yes  No  ?
Become anxious under bright or fluorescent lights  Yes  No  ?
Get a headache from bright or fluorescent lights  Yes  No  ?
Feel antsy or fidgety under bright or fluorescent lights  Yes  No  ?
Harder to listen under bright or fluorescent lights  Yes  No  ?
Performance deteriorates under bright or fluorescent lights  Yes  No  ?
Feel like there is not enough light when reading  Yes  No  ?
Feel like there is too much light when reading  Yes  No  ?
Read in dim light  Yes  No  ?
Use fingers or other marker to block out part of the page  Yes  No  ?
Shade the page with your hand or body  Yes  No  ?

Types of reading difficulties:

Skip words or lines  Yes  No  ?
Repeat or reread lines  Yes  No  ?
Read for less than one hour  Yes  No  ?
Lose place  Yes  No  ?
Read in a “stop and go” rhythm  Yes  No  ?
Omit small words  Yes  No  ?
Poor reading comprehension  Yes  No  ?
Read progressively worse as reading continues  Yes  No  ?
Avoid reading  Yes  No  ?
Avoid reading for pleasure  Yes  No  ?

Sample of Irlen Institute materials
<table>
<thead>
<tr>
<th>While reading or using a computer, do you?:</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rub eyes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Move closer to or further away</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Squint</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open eyes wide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incorporate breaks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Move around to reduce glare</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close or cover one eye</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Move head</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Read word by word</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unable to skim or speed read</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Do you feel strain, fatigue, tired, or have headaches when?:</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listening</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doing paper and pencil tasks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working on the computer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching TV or movies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copying material</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doing math assignments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Playing video games</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing long assignments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doing visually intensive activities like needlepoint, sewing,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cross stitching, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working under bright or fluorescent lights</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Handwriting:</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write up or down hill</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unequal or no spacing between letters or words</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unequal letter size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unable to write on the line</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty with scantron answer sheets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leave out words, letters, or punctuation marks</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attention/Concentration:</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems concentrating with reading or writing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easily distracted when reading or writing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easily distracted when listening</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daydreams in class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problems staying on task</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problems starting tasks</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Copying:
- Lose place (book, chalkboard, whiteboard, overhead)
  - Yes
- Leave out words (book, chalkboard, whiteboard, overhead)
  - Yes
- Slow (book, chalkboard, whiteboard, overhead)
  - Yes
- Incomplete (book, chalkboard, whiteboard, overhead)
  - Yes
- Careless errors (book chalkboard, whiteboard, overhead)
  - Yes
- Blink or squint (book chalkboard, whiteboard, overhead)
  - Yes
- Difficulty refocusing
  - Yes
- Difficulty copying things onto computer or typewriter
  - Yes

### Writing:
- Disorganized
  - Yes
- Problems with punctuation
  - Yes
- Problems proofreading
  - Yes
- Leave out letters or words
  - Yes
- Write without rereading
  - Yes

### Mathematics:
- Misalign digits in number columns
  - Yes
- Difficulty seeing numbers in the correct column
  - Yes
- Sloppy or careless errors
  - Yes
- Use finger, graph paper, or other marker when working with columns of numbers
  - Yes
- Difficulty seeing signs, symbols, numbers, decimal points
  - Yes
- Reversals of numbers
  - Yes

### Music:
- Problems sight reading the notes
  - Yes
- Prefer to memorize rather than read music
  - Yes
- Prefer to play by ear
  - Yes
- Use finger to track notes
  - Yes
- Lose your place
  - Yes
- Trouble reading the notes
  - Yes
- Difficulty interpreting the music notations
  - Yes
- Little progress in spite of regular practice
  - Yes

### Depth Perception:
- Difficulty getting on and off escalators
  - Yes
- Clumsy
  - Yes
- Bump into table edges or door jams
  - Yes
- Difficulty walking up and/or down stairs
  - Yes
- Difficulty judging distances
  - Yes
- Drop or knock things over
  - Yes
- As a child, accident prone or have bruises on your shins
  - Yes
- When walking next to someone, do you drift into the person
  - Yes
- When walking, do you feel dizzy or light headed
  - Yes
- Difficulty getting on or off moving objects
  - Yes

---

Sample of Irlen Institute materials
## Driving:

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty parallel parking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you feel like you will hit the car in front when parking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When parking, do you hit the curb or leave too much space</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty judging when to turn in front of oncoming traffic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertain about making lane changes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extra cautious when making lane changes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the passengers tense when you make lane changes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do passengers tell you that you tailgate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are you overly cautious, leaving extra room between you and the car ahead</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Sports Performance:

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a child, problem catching a small fly ball</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trouble following the ball when watching sports on TV such as tennis, football or basketball</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When watching sports on TV, can you follow the ball but not see anything else</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty playing pool</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty knowing when to hit the ball when playing tennis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trouble learning how to ride a bike</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trouble jumping rope? Jump in at the wrong time or jump into the rope</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trouble playing games such as volley ball or four square</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On playground equipment such as rings or bars, was it hard to go from one to the other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Fatigue While In A Car:

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Become drowsy when you are a passenger</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Become drowsy when driving</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bothered by chrome on cars</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bothered by glare off the windshield of the car in front of you</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bothered by headlights and street lights</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoid driving at night</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have night blindness</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you answered yes to three or more of these questions in any one of the above sections, then you might be experiencing the effects of a perception problem called Scotopic Sensitivity/Irlen Syndrome.
Name of Materials: The Laubach Way to Reading Series
Reviewed by: Jackie Miller, Sacramento Public Library

1. Please describe these instructional materials and how you use them in your literacy program.

The series consists of four skill books and correlated readers for student use. The teacher’s manual for each skill book gives detailed instructions and lesson plans. The series provides a systematic development of basic reading and writing skills. Each lesson includes vocabulary development, phonic or structural analysis of words, the reading of a short story, comprehension checks, and writing practice. The lessons progress from the sounds and regular spellings of basic consonants to those of the short vowels, the long vowels, and finally to irregular spellings and more difficult reading, writing, and grammar skills.

2. Are these materials organized by level? _Y_ If so, how do they correlate to adult learners and other types of assessment levels?

The LWR is a comprehensive, phonics-based writing series developed primarily for adults with little or no reading ability. We generally say from 0-6 grade.

3. What does this tool include? (books, tapes, videos, etc.)

LWR core materials are the skill books 1–4, correlated readers to encourage independent reading while using words and structures taught in the skill books. Supplemental materials include: the Workbook for sentence writing development; Focus on Phonics for coverage of all phonic elements; More Stories for additional reinforcement. For students who enjoy them, we also provide the LWR crossword puzzles and Read-Along Tapes for all levels.

4. How long has your program been using it? Since 1984

5. Are you using _Selected individuals?_ _______  
   it with:  
   One-on-one tutoring? _X_ yes _X_ no  
   Small groups _______yes _______no  
   Other, explain _______ _______ _______

   a. What is needed for staff?
      All staff have taken the training. The coordinator and one other staff member are certified Laubach Trainers. (We also have 2 volunteer trainers).
   b. For tutors?
      All tutors are required to take 14-hours of training prior to tutoring. The regular schedule consists of a 1-1/2 hr. evening orientation and two consecutive Saturdays from 9–3 p.m. We ask the tutors to attend inservices during the year, to learn about other materials and teaching methods.

7. Where can this material be purchased?

New Readers Press

8. Cost? _______ *______ (as a package or in parts)?

*The cost per student varies because not all will start with Level 1, and not all will complete the series. Tutor materials are recyclable. The cost for each level
LWR Teacher’s Manual is $7.50, Focus on Phonics $7.75. In addition, all tutors receive Teaching Adults—A Resource Book—$12.80. Student materials levels 1–4: skillbook $6.60–7.60; workbooks $5.60; Focus on Phonics $5.80; correlated readers $3.80; and More Stories $4.60.

9. Pros: How has this tool benefitted your students who have difficulty with language processing skills such as: decoding, phonemic awareness, spelling, sequencing, or comprehension?

The letters of the alphabet and the sounds they stand for are taught in a systematic manner. The series uses existing phonetic regularities, emphasizing regular spellings, and providing aids to irregular spellings. Adults learn better through association than through rote memory. Letters and sounds are presented through key words with picture associations. Moving from the known to the unknown, the student starts with the spoken word, which he knows, and moves in short steps to the written word. Each word is repeated several times soon after it is introduced, using repetition to strengthen the visual image. Because the lessons are easy to teach, it makes it possible for inexperienced tutors to use the materials successfully.

10. Cons: What are the limits or drawbacks of this material or methodology?

Like any method, it doesn’t work for everyone.

11. Do you know of other CLC programs that use this approach? If so, which ones?

12. Other comments about these materials:

None at this time.

13. If possible, please include a few samples of these materials.

14. Do you use other materials and methods to assist students with learning difficulties or identified learning disabilities? Yes No. If so, what?

Teaching Adults—A Literacy Resource Book has been a valuable tool to supplement the LWR series.

15. How do they differ/compare?

LWR is very structured and gives the tutor a “script” to follow. Teaching Adults gives them ideas and examples and encourages them to look further.

Name of Materials: Learning 2000

Reviewed by: Phyllis Colter, Imperial County

1. Please describe these instructional materials and how you use them in your literacy program.

Lifetime library software consists of 47 CDs with over 450 hours of instruction. Students like being read to and ESL students appreciate the dictionary. We think it is an excellent tool for lifelong learning for all families. We have 2 tutors who purchased it to “have at home.”

2. Are these materials organized by level? Yes If so, how do they correlate to adult learners and other types of assessment levels?

Each CD moves us along—math, reading, writing.
3. What does this tool include? (books, tapes, videos, etc.)

47 CDs, neatly packaged.

4. How long has your program been using it? Since April 2001

5. Are you using Selected individuals? _______ yes _______
   it with:
   One-on-one tutoring? _______ yes _______ no
   Small groups _______ yes _______ no
   Other, explain __________________________________________

6. Training: Is training _____ required or _____ optional? Certification required? ______
   a. What is needed for staff?
   Awareness is important if volunteers are to use successfully.
   b. For tutors?
   Our tutors are not as friendly with computers as their students—sometimes.

7. Where can this material be purchased?
   Toll free 888-968-5327 ext. 104. We purchased on a special offer to LVA for $99, plus S&H.

8. Cost? _______* _______ (as a package or in parts)?
   *Regular price after 6/30/01, or without special is $599.

9. Pros: How has this tool benefitted your students who have difficulty with language processing skills such as: decoding, phonemic awareness, spelling, sequencing, or comprehension?
   We have had it a very short while but our feedback is mostly positive. Many LVA programs have been using it, especially on the East Coast.

10. Cons: What are the limits or drawbacks of this material or methodology?
    Having equipment that can run the program. Our libraries are very poor. One tutor suggested that it would be quite good for intermediate to advanced students and in preparation for GED, BUT, the vocabulary and process is quite advanced.

11. Do you know of other CLC programs that use this approach? If so, which ones?
    Not in California.

12. Other comments about these materials:
    See above.

13. If possible, please include a few samples of these materials.

14. Do you use other materials and methods to assist students with learning difficulties or identified learning disabilities? _______ X _______ yes _______ no. If so, what?
   Teaching Adult Who Learn Differently Skinner, Gillespie, Balkam
   The Writing Road to Reading, Spalding & Spalding
   Literacy Solutions, Meg Schofield

15. How do they differ/compare?
    Both of these are books that require tutor motivation to use. Meg’s program is a good tutor training to assist a student with difficulties.
1. Please describe these instructional materials and how you use them in your literacy program.

   These materials are specifically designed to address auditory processing difficulties and help build auditory perception (ability to perceive phonemic sounds accurately) and auditory discrimination skills (the ability to associate the sound of a letter with its symbol and put it in the right sequence in a word). Strategies specifically focus on teaching letter sounds and blends by giving them names (like tip-tapper for T and D), having the person analyze how the sound is made in the mouth, and using color blocks to work with sequence of sounds. The design is multisensory—blending visual, auditory, and kinesthetic processes. All word building is based on nonsense words. Once the phonemic system they teach is mastered, then learners can begin to build words and move to spelling. Nancy Bell’s work adds visualizing-verbalizing strategies to help improve comprehension.

2. Are these materials organized by level? [N] If so, how do they correlate to adult learners and other types of assessment levels?

   Most appropriate for children just learning the alphabet and reading or low level adults with auditory processing difficulties.

3. What does this tool include? (books, tapes, videos, etc.)

   When we purchased materials, it included two books, an auditory discrimination assessment kit, and a packet of colored wood blocks, letter tiles (like Scrabble), individual cards.

4. How long has your program been using it?

   We tried using with specific learners. 2 years.

5. Are you using it with:  Selected individuals? [X] learners with major auditory diff.

   One-on-one tutoring? [X] yes [ ] no
   Small groups [ ] yes [X] no
   Other, explain [X] used as a supplement to regular lessons


   a. What is needed for staff?

   We arranged for a week-long training for staff and included local community college—40 hours.

   b. For tutors?

   Extensive. We included several tutors in the training and tried to make them specialized tutors using Lindamood.

7. Where can this material be purchased?

   Lindamood

8. Cost? __________* (as a package or in parts)?

   *I need to get updated information.
9. **Pros:** How has this tool benefitted your students who have difficulty with language processing skills such as: decoding, phonemic awareness, spelling, sequencing, or comprehension?

The intensive training helped our staff gain a much better understanding of the complex aspects of language acquisition and to understand why some of our learners appeared to make little progress. Although it has the potential to help students learn phonemic awareness skills, we found it was too demanding of a process. Some learners gained some help with distinguishing certain letter sounds.

10. **Cons:** What are the limits or drawbacks of this material or methodology?

Requires extensive training and is less appropriate for adult learners. We found that learners were bored because of the lack connection to real life learning, and they also tired of how tedious the process was.

11. **Do you know of other CLC programs that use this approach? If so, which ones?**

I only know that some staff at Santa Clara recently attended a workshop or training on the method.

12. **Other comments about these materials:**

We found that they did not work well with adults in our program who are looking for real-life results.

13. **If possible, please include a few samples of these materials.**

14. **Do you use other materials and methods to assist students with learning difficulties or identified learning disabilities?**  

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   **If so, what?**

   Our own material, the Honoring Diversity kit, seemed to help people work around their auditory difficulties by using their strong spatial, musical or body smarts.

15. **How do they differ/compare?**

   Totally different approaches.

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**Name of Materials:** Literacy Solutions “Tutoring Techniques” vol. 1 and 2.

**Reviewed by:** Patrice O’Halloran, Chula Vista Literacy Team Center

1. **Please describe these instructional materials and how you use them in your literacy program.**

   Tutoring techniques vol. 1 and 2 includes two, one-hour instructor training videos and an accompanying 60-page guidebook with reproducible masters. The lesson plan format includes Multisensory Sight Word Practice, Systematic Phonics, Reading Comprehension, Vocabulary, Writing, and Homework activities. The accompanying guidebook provides tutors with blank masters of the lesson plan format, and completed samples. It also provides succinct tips on effective strategies for each section. The most valuable component of the Tutoring Techniques materials is the “phonics progression,” a table that outlines a specific order in which to introduce phonics concepts to students so that they are presented systematically and logically.
2. Are these materials organized by level? **Y**. If so, how do they correlate to adult learners and other types of assessment levels?

The learners featured in the videos were selected because they each had many “classic” characteristics commonly encountered in literacy programs in California. The beginning level student is a Latino male who was raised in Spanish but who speaks English fluently, a middle school dropout, able to read very limited sight words, unable to write at all, who wished to be able to read and write so he could help his son who was having difficulty in school. The intermediate level student had attended high school, was able to read fairly comfortably at about a fourth grade level, and could write at about the same level. Beyond words that he knew by sight he resorted to guessing and memorizing.

3. What does this tool include? (books, tapes, videos, etc.)

Two one-hour training videos, accompanying guidebook (which includes a systematic phonics progression).

4. How long has your program been using it? **Since 1998.**

5. Are you using Selected individuals? **Yes**
   
   it with: **One-on-one tutoring?** **X yes** **no**
   
   **Small groups** **X yes** **no**
   
   **Other, explain** **ESL learners—Yes**

6. Training: Is training **required or optional? Certification required?**

Meg Schofield conducts a series of two outstanding two-day trainings for interested programs, staff and tutors, but many programs (and individual tutors/instructors/trainers) have purchased the materials independently.

7. Where can this material be purchased?

Literacy Solutions 5045 September Street, San Diego, CA 92110. Fax orders or leave a voice message at (619) 275-3945

8. Cost? **$119 plus tax; shipping approx. $6 per set** (as a package or in parts)?

9. Pros: How has this tool benefitted your students who have difficulty with language processing skills such as: decoding, phonemic awareness, spelling, sequencing, or comprehension?

The phonemic awareness and structured phonics components go straight to the heart of the problem for the vast majority of our learners. The Literacy Solutions materials provide a method and structured sequence to follow, which is enormously beneficial to students. Their use has increased learner retention and program accountability dramatically. Unlike other programs, this method does not require strict adherence to reading phonetically controlled stories, in fact it shows tutors/instructors how to balance direct decoding and phonemic awareness instruction with meaningful, authentic, high interest texts. The Literacy Solutions videos are the primary tool used to train our tutors.

10. Cons: What are the limits or drawbacks of this material or methodology?

It would be great to have supplementary materials to give students more opportunity to practice the concepts at home.
11. Do you know of other CLC programs that use this approach? If so, which ones?

A great many programs all over the country have purchased the videos/manual. For more info. On this contact Meg at 619-585-5764.

12. Other comments about these materials:

The Literacy Solutions approach represents the best of both worlds, in that it advocates a whole new way of approaching phonics instruction that really WORKS for students, while tailoring comprehension, vocabulary, and writing instruction to the real life needs and concerns of adult learners. Nothing else like it really exits.

13. If possible, please include a few samples of these materials.

14. Do you use other materials and methods to assist students with learning difficulties or identified learning disabilities? \( \text{X} \) yes \( \_\_\_ \) no. If so, what?

We also use the Wilson Reading System for selected students.

15. How do they differ/compare?

Wilson is a thorough program which provides and requires quite extensive training and which uses phonetically controlled vocabulary almost exclusively.

**Name of Materials:** Reading Revolution

**Reviewed by:** Kathy McDonald, Contra Costa County Library

1. Please describe these instructional materials and how you use them in your literacy program.

Reading Revolution™ is more a method and an approach rather than a set of materials. It uses all the “intelligences” to support reading and writing skills. It teaches phonics with hand signals for the sounds, using the signals as a bridge between the printed letters and the sounds they make. Its decoding system (S.O.S. or Sound Out Strategy) teaches a clear sequence of steps for attacking any unknown word. Reading out loud and “Finger Sliding” are fluency tools. Comprehension is taught with visualizing and questioning techniques. For spelling, learners identify which words follow the rules and which words “clown around.” Learners are encouraged to discover spelling rules and patterns with guided questioning. All skills are reinforced with activities that use a relaxed, playful mode rather than a formal, “school” mode.

2. Are these materials organized by level? \( \text{Y} \) Yes if so, how do they correlate to adult learners and other types of assessment levels?

Not much! As students master the skills that allow them to perform the Sound Out Strategy, the teaching emphasis shifts from decoding to improving fluency and comprehension. Students read whatever is of interest to them, with the tutor coaching them to decode words they can decode, and supplying the others. There are few materials provided for practicing reading at different skill levels.

3. What does this tool include? (books, tapes, videos, etc.)

4. How long has your program been using it?

We began a pilot with RR in 1992 and have used it with a small number of tutors and students ever since.

5. Are you using Selected individuals?_________Yes_________

it with:
One-on-one tutoring? X yes ___ no
Small groups X yes ___ no
Other, explain ________________________________

6. Training: Is training X required or ___ optional? Certification required? ___ *

*Yes, for trainers, but not for tutors.

7. Where can this material be purchased?

From Reading Revolution: (925) 945-3535

8. Cost? ______* ______ (as a package or in parts)?

*The cost of training depends on the intensity of the training. Watch for Reading Revolution trainings at literacy conferences.

9. Pros: How has this tool benefitted your students who have difficulty with language processing skills such as: decoding, phonemic awareness, spelling, sequencing, or comprehension?

Very effective, lots of fun, interesting, wonderful for confident tutors with a strong kinesthetic or creative bent. The students whom we match with RR tutors thrive.

10. Cons: What are the limits or drawbacks of this material or methodology?

Requires significant training of the tutors (after significant training of a staff member or two), and a high level of commitment and ability from them since they must create or choose so many of their materials. There are no “readers” or textbooks or workbooks for the student. The tutors must be confident and capable of proceeding without a lot of external structure. RR tutors often need a fair amount of support from the staff.

11. Do you know of other CLC programs that use this approach? If so, which ones?

A children’s after school program in Chula Vista.

12. Other comments about these materials:

It is our hope that Reading Revolution will arrange to have paid organizational memberships for adult literacy programs in exchange for training and newsletter support and permission to use the materials.

13. If possible, please include a few samples of these materials.

14. Do you use other materials and methods to assist students with learning difficulties or identified learning disabilities? X yes ___ no. If so, what?

Wilson Reading System (often in conjunction with Reading Revolution).
15. How do they differ/compare?

Since WRS has many materials for students to read and practice with, we're willing to use its teaching order so we can combine its materials with the RR approach. Wilson students “tap” the sounds in a word—generically. A “B” gets the same tap as an “E” or a “CH.” Reading Revolution students signal each sound specifically: B, E (short), E (long) and CH have 4 different signals. The signals can help straighten out both auditory sequencing problems, and B/D reversals.
Dear Parents, Professionals and Volunteers,

Do you remember when you first tried to learn to read? For most people reading comes easily. But for many, reading is a struggle. They are not alone. Two-thirds of high school seniors are not proficient readers. The earlier we intervene, the better.

Active Reading Clinic of Walnut Creek, California has begun a revolution in how reading is taught — the Reading Revolution™ system. Children and adults who didn’t learn by sitting, listening, filling in the blanks and repeating, are being given a whole new chance.

Our lessons are fun and active. Students discover ways of learning that use their learning strengths. They then do the same learning process for other things they need to learn in school and life. The Reading Revolution™ system understands that they are not learning disabled, they simply learn differently.

Call the Active Reading Clinic Director at (925) 944-5559 for more information.

Sincerely,

Cheryl Barber
Director
(925) 944-5559

Judy Kranzler
Reading Revolution

---

What’s the secret to reading success? The Reading Revolution™

Its dynamic interactive curriculum draws upon multiple learning strengths and offers:

- interactive games
- large motor movements to reinforce sound and word recognition
- a consistent way to decode and spell complex words
- the stimulation of logical and critical thinking skills
- innovative comprehension strategies

What students, parents, and teachers say about their Active Reading Clinic:

**Sound Signals**

"It’s working! My son read his first chapter book. The hand signals help reading so easy for dyslexic children."

"This program is made for my ADHD students because it is so physically engaging. They can learn to read while on the move. The hand signals really clear up the vowel sounds."

**Sound Out Strategy**

"The Sound Out Strategy has helped me tremendously. With this logical set of steps, I can sound out long words that I would have guessed at. I can use the same steps on any word."

"It’s great! This system works wonders with three and four syllable words which used to give me trouble."

**Fluency**

"His fluency improves dramatically when he reads with his finger and it pulls his eyes ahead. The Finger Guide is simple and very effective."

**Comprehension**

"I love this program. My students read more and faster than before. They visualize as they read and ask questions as they read which keeps them focused."

**General**

"I do not find dumb any more. I used to hate reading because it was too hard. These games make reading fun and make school exciting."

"My daughter has no more reading problems thanks to this invaluable program."

---

Sample of Reading Revolution materials

**Name of Materials:** Scottish Rite Tapes

**Reviewed by:** Phyllis Colter, Imperial County

1. Please describe these instructional materials and how you use them in your literacy program.

   This is a very complete package with 180 tapes (each 45–55 min.); students workbooks, teachers’ guide, plus plastic alphabet, strips, writing paper, flash cards.

   This program is used only with special students whose assessment suggested very many difficulties in learning. These would include phonological awareness; visual, auditory, directional, tactile perception; sensory motor, memory; ADD and/or ADHD; and their own perception of self.

2. Are these materials organized by level? Y If so, how do they correlate to adult learners and other types of assessment levels?

   They are very sequential and start at the beginning with letters, sounds, symbols. They do a great job of reinforcing and repetition as well.

   3. What does this tool include? (books, tapes, videos, etc.)
3. What does this tool include? (books, tapes, videos, etc.)

See above.

4. How long has your program been using it?

Since 1995, but not for everyone—in fact, we are quite selective.

5. Are you using Selected individuals? __________ Yes _______
   it with: One-on-one tutoring? __X__yes ______no
           Small groups ___X__yes ______no
           Other, explain __________________________*

*Small groups—we were not pleased with our results, though another program at Community College level used small groups well.

   a. What is needed for staff?
      Understanding of what it can do for the individual. The video orientation is ok, experienced users are better.
   b. For tutors?
      If they don't know the dimensions, they probably won't encourage student enough—and completion is necessary.

7. Where can this material be purchased?

   We purchased ours from EPS 1-800-225-5750. Texas Scottish Rite 2222 Welborn St. Dallas,TX 75219

8. Cost? _____$1,500____ (as a package or in parts)?

   As a package plus consumables. These are about $25-30/student per quarter.

9. Pros: How has this tool benefitted your students who have difficulty with language processing skills such as: decoding, phonemic awareness, spelling, sequencing, or comprehension?

   This program really helps the dysfunctional reader. It takes his buy-in to stay with the program, and a tutor's patience and understanding about what we are trying to accomplish.

10. Cons: What are the limits or drawbacks of this material or methodology?

    It takes commitment, patience, and understanding from the student as well as the tutor. And, maybe even more from the tutor because if he/she doesn't think it will “work,” the student won't either.

11. Do you know of other CLC programs that use this approach? If so, which ones?

    Heard several years ago that Riverside used it. They have not returned my call.

12. Other comments about these materials:

    This program is very expensive and takes up a lot of space. It required a separate room or ear phones.

13. If possible, please include a few samples of these materials.
14. Do you use other materials and methods to assist students with learning difficulties or identified learning disabilities? **X**yes **_**no. If so, what?

We use combinations of programs based on needs. A very inexpensive, but effective book with small record is *The Writing Road to Reading*, Spalding and Spalding $13.

15. How do they differ/compare?

Scottish Tapes is very complete and everything is there. The Spalding book takes the tutor’s talents to “pull-it-off.”

**Name of Materials:** Teaching Adults Who Learn Differently

**Reviewed by:** Joanne Wright, Solano County Library

1. Please describe these instructional materials and how you use them in your literacy program.

*Teaching Adults Who Learn Differently* is an extensive guide for literacy teachers and tutors. The text moves from an overview of LD through instructional strategies (Reading, Spelling, Writing). Lesson development and teaching tips are provided. The anatomy of the English language is reviewed (phonograms; rules; affixes, roots and stems; dividing words into syllables; nonphonetic “sight” words; nonsense words). Reproducible masters are included to accompany lessons. These outlined approaches are especially beneficial for tutors working with students who demonstrate a need for multisensory and multimotor learning strategies. The text is available through the Literacy office.

2. Are these materials organized by level? **_**N If so, how do they correlate to adult learners and other types of assessment levels?

Some exercises make distinctions between basic to intermediate levels.

3. What does this tool include? (books, tapes, videos, etc.)

One book, 333pp. containing multisensory teaching/intervention strategies for reading, spelling, writing; sample lessons; reproducibles; resources.

4. How long has your program been using it? 1 year

5. Are you using it with: Selected individuals? ____________________________
   One-on-one tutoring? **X**yes **_**no
   Small groups **X**yes **_**no
   Other, explain ____________________________

6. Training: Is training ____required or **X**optional? Certification required? **_**N
   a. What is needed for staff?

   The text is a self-explanatory guide with teaching techniques clearly defined.

   b. For tutors?

   Stress of multisensory-multimotor techniques is provided as part of our basic tutor training. This resource is not specifically addressed.
7. Where can this material be purchased?
   Farnsworth Books, 3911 Pacific Highway, Suite 105 San Diego, CA 92110-2025
   1-800-540-4097

8. Cost? $49.95 (as a package or in parts)? 1 text

9. Pros: How has this tool benefitted your students who have difficulty with language processing
   skills such as: decoding, phonemic awareness, spelling, sequencing, or comprehension?
   Self-contained, self-explanatory manual. Well organized, easy to understand
   lessons involving multisensory-multimotor techniques, accompanied by
   reproducible aids. Tutors can use parts or whole—work at own pace.

10. Cons: What are the limits or drawbacks of this material or methodology?
    Only as good as the teacher or tutor—need for patience, repetition and discovery
    of what does and does not work for each student. The mass of material can be
    overwhelming.

11. Do you know of other CLC programs that use this approach? If so, which ones?
    Recommended to us by Project Second Chance, Pleasant Hill, CA

12. Other comments about these materials:
    An inexpensive investment; something even the smallest programs can afford.

13. If possible, please include a few samples of these materials.

14. Do you use other materials and methods to assist students with learning difficulties or
    identified learning disabilities?  _X_ yes  ___ no. If so, what?
    Computer games, cooperative learning, Laubach Way to Reading

15. How do they differ/compare?
    Laubach Way to Reading is phonics driven—not for all students. Teaching Adults Who
    Learn Differently is an added resource available to accompany other methods.
Teaching Adults Who Learn Differently

An Extensive Guide for Literacy Teachers and Tutors

Louise Skinner  Phyllis Gillespie  Lynda Balkam

Sample of Teaching Adults Who Learn Differently materials
Sample of Teaching Adults Who Learn Differently materials
# Sample of Teaching Adults Who Learn Differently materials

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Name of Materials: Wilson Reading System (WRS)
Reviewed by: Gail Nyhan, Literacy Program Specialist, Partners in Reading, San Jose Public Library

1. Please describe these instructional materials and how you use them in your literacy program.

The Wilson Reading System is currently used by approximately 40% of our tutor/learner pairs. The WRS was designed for one-on-one teaching of adults with dyslexia. It is based on the Orton-Gillingham philosophy and principles, which are also incorporated in the Slingerland method, among others. Each sound is introduced with a key word to provide a meaningful association and aid retention. Color-coded sound cards are manipulated by both the learner and the tutor to build words for both decoding (reading) and encoding (spelling). A sound tapping or finger-tapping technique is introduced to help the student analyze the component sounds in a word.

2. Are these materials organized by level? Yes. If so, how do they correlate to adult learners and other types of assessment levels?

Each learner begins in the first “step” of a 12-step system with built-in review. The first step begins with three letter CVC (consonant-vowel-consonant) short vowel words at a beginning first grade level. Each step builds on the previous step. The 12th step seems to be at approximately the eighth grade reading level.

3. What does this tool include? (books, tapes, videos, etc.)

Instructor Materials: manual, 2 dictation books, rules notebook, WADE (assessment tool), sound cards, words cards, syllable cards. Student Materials: readers 1-12, workbooks 1-12 (A or B), “Stories for Older Students” (3 levels-supplemental)

4. How long has your program been using it? Since 1994

5. Are you using it with: Selected individuals? Yes
   One-on-one tutoring? X yes  no
   Small groups  yes  X no
   Other, explain

6. Training: Is training X required or ___ optional? Certification required? *

Recommended by WRS

a. What is needed for staff?

There are informative videos available from WRS: “Ten Critical Points,” & “Lesson Plan Format.” Also WRS staff present 2-day training workshops at various locations around the country.

b. For tutors?

We devote about three hours of our tutor training to the WRS principles and teaching techniques, including demonstration and pair practice of a sample lesson.
7. Where can this material be purchased?


8. Cost? (as a package or in parts)? Available as a set or in parts

9. Pros: How has this tool benefitted your students who have difficulty with language processing skills such as: decoding, phonemic awareness, spelling, sequencing, or comprehension?

The WRS is excellent for developing decoding skills. For most learners, phonemic awareness and sound sequencing skills definitely improve due to the multisensory, structured approach. Spelling usually becomes more phonetic, according to basic spelling rules, so that the learner can use a spell-checker or dictionary more effectively. The WRS also appeals to tutors who like to work within a structured system.

10. Cons: What are the limits or drawbacks of this material or methodology?

An ESL learner who does not have learning disabilities can make faster progress using a more traditional approach that introduces sight vocabulary much more quickly and develops comprehension through a richer selection of reading material. It takes two to three years to complete all 12 steps.

11. Do you know of other CLC programs that use this approach? If so, which ones?

Recommended to us by Project Second Chance, Pleasant Hill, CA

12. Other comments about these materials:

If an adult literacy program does not choose to adopt the entire WRS, there are a number of valuable teaching techniques that could be extracted to make reading instruction more effective for learners with learning disabilities. We suggest that all tutors use key words to introduce new sounds to establish more meaningful sound-symbol association. The sound-tapping technique is very useful to improve visual-to-auditory analysis for phonetic decoding and auditory analysis for phonetic spelling.

13. If possible, please include a few samples of these materials.

14. Do you use other materials and methods to assist students with learning difficulties or identified learning disabilities? X yes no. If so, what?

Another series that is helpful for students with learning difficulties is the “WORDS: Writing, Reading, Spelling” series by Skinner & Tucker-LaPlount. Cambridge Adult Education (a division of Simon & Schuster), Upper Saddle River, NJ 07458.

15. How do they differ/compare?

The WORDS series does not include the strong hands-on component of the WRS sound cards. The four workbooks could be completed in less time than the WRS. This series has the advantage of more flexibility, as learners could be placed in an appropriate level in any of the four workbooks. (The WRS requires all learners to begin at Step 1.)
Sample of Wilson Reading System materials

<table>
<thead>
<tr>
<th>S T E P 1 - Closed Syllables (3 Sounds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 f, m, n, r, s (initial) and d, g, p, t, (final) a, i, o (Blending of 2 and 3 sounds)</td>
</tr>
<tr>
<td>1.2 b, sh • u • h, j • c, k, ck • e • v, w, x, y, z • ch, th • qu, wh (Introduced gradually)</td>
</tr>
<tr>
<td>1.3 Practice with above sounds (wish, chop, wet)</td>
</tr>
<tr>
<td>1.4 Double consonants, -all (bill, kiss, call)</td>
</tr>
<tr>
<td>1.5 am, an (ham, fan)</td>
</tr>
<tr>
<td>1.6 Adding suffix ‘s’ to closed syllable words with 3 sounds (bugs, chills)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S T E P 2 - Closed Syllables (4 - 6 Sounds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 - ang, ing, ong, ank, ink, onk, unk (bang, pink)</td>
</tr>
<tr>
<td>2.2 - Closed syllables with blends - 4 sounds only + suffix, s (bled, past, steps)</td>
</tr>
<tr>
<td>2.3 - Closed syllable exceptions - ild, ind, old, ost, olt (mold, host)</td>
</tr>
<tr>
<td>2.4 - 5 sounds in a closed syllable + suffix, s (blend, trumps)</td>
</tr>
<tr>
<td>2.5 - 3 letter blends and up to six sounds in a closed syllable (sprint, scrap)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S T E P 3 - Closed Syllables (Multisyllabic Words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 - Two-syllable words with two closed syllables combined - no blends, schwa (catnip, wagon)</td>
</tr>
<tr>
<td>3.2 - Two-syllable words with two closed syllables, including blends (disrupt, fragment)</td>
</tr>
<tr>
<td>3.3 - Words with two closed syllables ending in et blend (contract, district)</td>
</tr>
<tr>
<td>3.4 - Multisyllabic words, combining only closed syllables (Wisconsin, establish)</td>
</tr>
<tr>
<td>3.5 - ed, ing suffixes added to unchanging basewords with closed syllables (slashing, blended)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S T E P 4 - Vowel - Consonant - E Syllable</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 - Vowel - consonant - e syllable in one-syllable words (hope, cave)</td>
</tr>
<tr>
<td>4.2 - Vowel - consonant - e syllable combined with closed syllables (combine, reptile)</td>
</tr>
<tr>
<td>4.3 - Multisyllabic words combining two syllable types (compensate, illustrate)</td>
</tr>
<tr>
<td>4.4 - ive exception: no word ends in v (olive, pensive)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S T E P 5 - Open Syllable</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 - Open syllable in one-syllable words, y as a vowel (be, hi, shy)</td>
</tr>
<tr>
<td>5.2 - Open syllables combined with vowel - consonant - e and closed syllables in two-syllable words (protect, decline)</td>
</tr>
<tr>
<td>5.3 - y as a vowel at the end of two-syllable words when combined with a closed syllable or another open syllable (handy, pony)</td>
</tr>
<tr>
<td>5.4 - Multisyllabic words, combining 3 syllable types: open, closed, vowel - consonant - e (instrument, amputate)</td>
</tr>
<tr>
<td>5.5 - ‘a’ and ‘i’ in unaccented, open syllables (Alaska, indicate)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S T E P 6 - Suffix Endings (unchanging basewords) and Consonant - l - e Syllable</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1 - Suffix endings - er, est, en, es, able, ish, y, ive, ly, ty, less, ness, ment, ful added to unchanging basewords (thankful, classy)</td>
</tr>
<tr>
<td>6.2 - Suffix ending ed: /d/, /t/ added to unchanging basewords (thrilled, punished)</td>
</tr>
<tr>
<td>6.3 - Combining 2 suffixes to an unchanging baseword (constructively, helpfulness)</td>
</tr>
<tr>
<td>6.4 - Stable final syllable: consonant - le, stle exception (dribble, whistle)</td>
</tr>
</tbody>
</table>

Instruction Manual - WRS 3
Materials and Methods

12 Steps of the WRS

STEP 7 - Introduction to Sound Options, Contractions
7.1 - Sound options: c {e, i, y} (concentrate, concede) g {e, i, y} (gentle, pungent)
7.2 - ge, ce, dge (lunge, indulgence, fudge)
7.3 - New trigraph and digraph: tch, ph (fetch, pamphlet)
7.4 - tion, sion (subtraction, expansion)
7.5 - contractions (we’ve, I’ll)

STEP 8 - R-Controlled Syllable
8.1 - R-controlled syllable: ar, er, ir, or, ur in -1 syllable words (firm, turn, barn)
8.2 - ar, or in - multisyllabic words (market, cortex)
8.3 - er, ir, ur in - multisyllabic words (skirmish, surgery)
8.4 - Exceptions: vowel rr (hurry, barren), para
8.5 - Exceptions: ar, or in final syllable (beggar, doctor), ard ward (blizzard, on-ward)

STEP 9 - Vowel Digraph - Diphthong Syllable
9.1 - ai, ay (plain, display)
9.2 - ee, ey (tweezer, valley)
9.3 - oa, oe, ue (croak, toe, revenue)
9.4 - oi, oy, au, aw (thyroid, employ, saucer, squawk)
9.5 - ou, ow, oo (trousers, drowsy, spoon)
9.6 - ea (eat, bread, steak)
9.7 - eu, ew, ui (Europe, few, suit)

STEP 10 - Adding Suffixes to Changing Basewords
10.1 - v-e exceptions: ice, ace, age, ate, ible, ite, ine
10.2 - Spelling Rule: Adding a suffix to a baseword ending in e (taping, lately)
10.3 - Spelling Rule: Adding a suffix to a one syllable closed or r - controlled baseword (starred or shopful)
10.4 - Spelling Rule: Adding a suffix to a multisyllabic baseword when the final consonant must double (regretting, controlled)
10.5 - Additional suffixes: ic, al, ible, ous, ist, ism, ity, ize, ary, ery, ence, ant, ance

STEP 11 - Additional I, E, Y Vowel Work
11.1 - y in open, closed, v-e syllables (reply, gym, type)
11.2 - The Y spelling rule (enjoyable, player)
11.3 - i in an open syllable /e/ (orient), i pronounced as /y/ (genius, million)
11.4 - ie/ie (piece, ceiling, vein)
11.5 - igh, eigh (light, eight)

STEP 12 - Advanced Concepts
12.1 - Split vowels: vowel team exceptions (create, violin)
12.2 - Silent letters: rh, gh, mb, mn, gn, wr (rhyme, ghost, lamb, column, knife, gnat, wrist)
12.3 - ‘w’ effecting vowels: (water, worship)
12.4 - ch, que /k/ (chorus, clique)
12.5 - ti, ci, tu, ture (patient, official, actual, torture)
12.6 - Chameleon prefixes (correct, accent)

Instruction Manual - WRS

Sample of Wilson Reading System materials
Wilson Lesson Plan - 10 Parts

Parts 1 through 5 - Emphasis: Decoding
1. Sound Cards: This includes a "quick drill" of the phonemes with the teacher showing a sound card and the student(s) naming the letter(s) and corresponding sound(s). Key words are always used with vowels and as needed with other sounds.

2. Teach/Review Concepts for Reading: Blank cards and letter cards are used to teach phoneme segmentation and blending (initially). Students are taught to segment sounds using a finger tapping procedure. Beyond Step 2, syllable and suffix cards are used to teach total word structure. Every lesson involves this manipulation of cards to teach word structure and practice reading.

3. Wordcards: Skills learned in section 2 of the lesson are applied to reading single words on flashcards. Review words are included in the stack of cards presented.

4. Wordlist Reading: Skills are applied to the reading of single words on a controlled wordlist in the Student Reader containing only those elements of word structure taught thus far. In 1:1 lessons, the student is charted daily for independent success. In group lessons, students are charted before progressing to the next substep. The list changes with each lesson so that students never memorize the list.

5. Sentence Reading: Word attack skills are applied to reading within sentences. All sentences contain only the elements of word structure taught thus far.

Part 6 through 8 - Emphasis: Encoding
6. Quick Drill (in reverse): Letter formation is taught as needed. Every lesson includes a phoneme drill with the teacher saying a sound and the student identifying the corresponding letter(s).

7. Teach/Review Concepts for Spelling: Initially, the student spells words with phoneme cards and blank cards. Students apply the finger tapping procedure to segment sounds for spelling. Beyond Step 3, students use syllable and suffix cards. Students spell words using the cards to sequence sounds, syllables, and word parts.

8. Written Work: Sounds, single words, and sentence dictations are included. The teacher dictates sounds, words, and sentences that are controlled; they only contain the word structure elements directly taught thus far. The student repeats the dictation prior to writing. Sounds and words are spelled orally before they are written. A formal procedure is followed for independent sentence proofreading.

Part 9 and 10 - Emphasis: Reading Comprehension
9. Passage Reading: The student silently reads a short passage with controlled vocabulary containing only the studied word elements. The student retells the passage in his own words linked to visualization of the passage. The student then reads orally.

10. Listening Comprehension: In this part of the lesson, the teacher reads "non-controlled" text to the student. The student uses visualization and retelling to develop comprehension skills at a higher level than current decoding.

Sample of Wilson Reading System materials
Wilson Lesson Plan with Time Estimates

### Materials and Methods

**Sample of Wilson Reading System materials**

<table>
<thead>
<tr>
<th>Sound Cards Quick Drill</th>
<th>2-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teach and Review Concepts for Reading</td>
<td>5</td>
</tr>
<tr>
<td>Wordcards</td>
<td>3-5</td>
</tr>
<tr>
<td>Wordlist Reading</td>
<td>5</td>
</tr>
<tr>
<td>Sentence Reading</td>
<td>5</td>
</tr>
<tr>
<td>Quick Drill (in reverse)</td>
<td>1-2</td>
</tr>
<tr>
<td>Teach and Review Concepts for Spelling</td>
<td>5</td>
</tr>
<tr>
<td>Written Work Dictation: sounds, words, sentences</td>
<td>15</td>
</tr>
<tr>
<td>Controlled Passage Reading</td>
<td>10-15</td>
</tr>
<tr>
<td>Listening Comprehension</td>
<td>10-30</td>
</tr>
</tbody>
</table>
The following definitions and descriptions of terms have been selected from several sources on learning disabilities, and have not been written by members of the LD Task Force.

**AMERICANS WITH DISABILITIES ACT (ADA)**

The Americans with Disabilities Act (ADA) prohibits discrimination on the basis of disability in employment, state and local government, public accommodations, commercial facilities, transportation, and telecommunications. The act also applies to the United States Congress.

To be protected by ADA, one must have a disability or have a relationship or association with an individual with a disability. An individual with a disability is defined by ADA as a person who has a physical or mental impairment that substantially limits one or more major life activities, a person who has a history or record of such an impairment, or a person who is perceived by others as having such an impairment. ADA does not specifically name all the impairments that are covered.
This federal legislation requires that “no qualified individual with a disab-
ility shall, by reason of such disability, be excluded from participation in
or be denied the benefits of the services, programs, or activities of a public
entity or be subjected to discrimination by any such entity.”
The ADA is divided into five sections (known as “titles”):

**Title I** prohibits employment discrimination.

**Title II** deals with discrimination in public settings.

**Title III** protects the rights of persons with disabilities in privately
operated settings.

**Title IV** requires telephone companies to install telecommunications
relay services for persons with speech and hearing impairments.

**Title V** includes a number of miscellaneous provisions.

**INDIVIDUALS WITH DISABILITIES
EDUCATION ACT (IDEA)**

The Individuals with Disabilities Education Act of 1997 (IDEA) (formerly
called P.L. 94-142 or the Education for all Handicapped Children Act of
1975) requires public schools to make available to all eligible children with
disabilities a free, appropriate public education in the least restrictive envi-
ronment appropriate to their individual needs. IDEA is an education law
that applies to young people with disabilities from birth to 21 years of age
(defined as up to the 22nd birthday) who require special education and
related services. The sections pertaining to school-age students also apply to
young adults under the age of 22 who have not obtained a regular high
school diploma. All education programs that receive federal funds, which
includes all public schools, must adhere to the provisions of the law.

IDEA requires public school systems to develop appropriate Individual-
ized Education Programs (IEPs) for each child. The specific special education
and related services outlined in each IEP reflect the individual needs of each
student.

**REHABILITATION ACT OF 1973
(PL 93-112), SECTION 504**

Section 504 of the Rehabilitation Act states that “no individual with a disab-
ility in the United States shall, solely by reason of his or her disability, be
excluded from participation in, or be denied the benefits of, or be subjected
to discrimination under any program or activity receiving Federal financial
assistance or any program or activity conducted by an Executive Agency.” A
“program or activity” is defined as including all of the operations of a local
education agency, system of vocational education, or other school system.
Section 504 applies to entities that receive federal funds.
DEFINITIONS OF LEARNING DISABILITIES

The following definitions are useful to know; however, they are limiting in that they are focused on dysfunction rather than capabilities, and tend to use medical, dehumanizing language.

The United States Office of Education’s definition is the basis for determining learning disabilities among school age children. The Learning Disabilities Association of America’s definition reflects the views of one of the largest advocacy groups for learning disabilities (LD) in the country. The Interagency Committee on Learning Disabilities’ definition was acceptable to federal agencies on the committee, except for the US Department of Education. The National Joint Committee on Learning Disabilities’ more recent LD definition was acceptable to most advocacy and professional organizations.

The 1977 U.S. Office of Education

The term “specific learning disability” means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning disabilities which are primarily the result of visual, hearing, or motor handicaps, or mental retardation, or emotional disturbance, or of environmental, cultural, or economic disadvantage (United States Office of Education, 1977). Definition and criteria for defining students as learning disabled, Federal Register, 42:250, p.65083. Washington, DC: U.S. Government Printing Office.

The Learning Disabilities Association of America

Specific Learning Disabilities is a chronic condition of presumed neurological origin which selectively interferes with the development, integration, and/or demonstration of verbal and/or nonverbal abilities. Specific Learning Disabilities exist as a distinct handicapping condition and vary in their manifestations and in degree of severity. Throughout life, the condition can affect self esteem, education, vocation, socialization, and/or daily living activities (Association for Children with Learning Disabilities, 1986. ACLD Description: Specific Learning Disabilities, ACLD Newsbriefs, Sept/Oct(166), 15.) Note: The Association for Children with Learning Disabilities is now the Learning Disabilities Association of America.
The Interagency Committee on Learning Disabilities

Learning disabilities is a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities, or of social skills. These disorders are intrinsic to the individual and presumed to be due to central nervous system dysfunction. Even though a learning disability may occur concomitantly with other handicapping conditions (e.g., sensory impairment, mental retardation, social and emotional disturbance), with socio-environmental influences (e.g., cultural differences, insufficient or inappropriate instruction, psychogenic factors), and especially attention deficit disorder, all of which may cause learning problem, a learning disability is not the direct result of those conditions or influences. (Interagency Committee on Learning Disabilities, 1987). Learning disabilities: A Report to the US. Congress. Bethesda, MD: National Institutes of Health, p.22.

The National Joint Committee on Learning Disabilities

Learning disabilities is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction and may occur across the life span. Problems in self-regulatory behaviors, social perception, and social interaction may exist with learning disabilities but do not by themselves constitute a learning disability. Although learning disabilities may occur concomitantly with other handicapping conditions (for example, sensory impairment, mental retardation, serious emotional disturbance) or with extrinsic influences (such as cultural differences, insufficient or inappropriate instruction), they are not the result of those conditions or influences (National Joint Committee on Learning Disabilities, 1988). Collective perspectives on issues affecting learning disabilities: Position papers and statements. Austin, TX: PRO-ED.

Other Related Terms Commonly Referred to Learning Disabilities

Dyslexia—a language-based disability in which a person has trouble understanding words, sentences, or paragraphs.

Dyscalculia—a mathematical disability in which a person has a difficult time solving arithmetic problems and grasping math concepts.

Dysgraphia—a writing disability in which a person finds it hard to form letters or write within a defined space.

Auditory and Visual Processing Disabilities—sensory disabilities in which a person has difficulty understanding language despite normal hearing and vision.
Dr. Reid Lyon of the National Institute for Child Health describes dyslexia more specifically:

A working operational definition of dyslexia has been presented that evolved from the substantial amount of evidence that indicates that reading disability is most precisely measured at the single word level and causally associated with phonological deficits. In contrast to other definitions of dyslexia, this definition does not specify that an IQ-reading achievement discrepancy be present and does not exclude any conditions or handicaps where a specific phonological deficit could exert a primary causal influence on subsequent reading development. All statements within the definition have an empirical basis and it has been noted that converging data relevant to genetic and neurobiological factors are emerging. The objective nature of the criteria included with the definition should both aid in clinical diagnosis and help researchers (Lyon, R., “Toward a Definition of Dyslexia”).

The chart on the following page provides other definitions. This chart is found in the “In-depth” section of the web page for ldonline.org.

Glossary with Acronyms

Notes: The terms listed in this glossary have been pulled from a variety of sources without credits. The Task Force does not necessarily endorse the points of view given in some of these definitions and advises critical analysis and reflection before using them (L. Shelton, editor).

**ABE**—Adult Basic Education

**Accommodations**—Techniques and materials that allow individuals with LD to complete school or work tasks with greater ease and effectiveness. Examples include spellcheckers, tape recorders, and expanded time for completing assignments.

**ADA**—Americans with Disabilities Act; or average daily attendance

**Attention Deficit Disorder (ADD)**—A term frequently used to describe the academic and behavioral problems of children who have difficulty focusing and maintaining attention. Also called Attention Deficit Hyperactivity Disorders (ADHD) or a severe difficulty in focusing and maintaining attention. Often leads to learning and behavior problems at home, school, and work.

**ADHD**—Attention deficit with hyperactivity disorder

**Aptitude Test**—A test designed to measure a person’s ability to learn and the likelihood of success in future school work or in a specific career.

**Articulation (Speech)**—Refers to the production of speech sounds resulting from the movements of the lips, jaw, and tongue as they modify the flow of air.

**ASL**—American Sign Language
<table>
<thead>
<tr>
<th>Processing Deficits</th>
<th>Manifestations</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditory Processing</td>
<td>Confusion with number sequences, lists or lists of directions. Hears “ninety-four” instead of “forty nine.”</td>
<td>Provide written instructions as reinforcement of oral instruction. Use visuals with lectures.</td>
</tr>
<tr>
<td>Auditory Memory</td>
<td>Difficulty remembering what was heard. Difficulty remembering important items from a lecture. Spells poorly.</td>
<td>Provide written instruction to look back on. Don’t penalize spelling, just correct. Provide basic outlines of what is being presented.</td>
</tr>
<tr>
<td>Auditory Discrimination</td>
<td>Often seems to misunderstand. Trouble telling the difference between similar sounds or words. Hears ‘seventeen’ for ‘seventy.’ Seems to hear but not to listen.</td>
<td>Offer written lectures so student can follow along. Talk at a slower pace. Give on task at a time.</td>
</tr>
<tr>
<td>Auditory Figure Ground</td>
<td>Trouble hearing sounds over background noises.</td>
<td>Seat student near you.</td>
</tr>
<tr>
<td>Dysgraphia</td>
<td>Inability to form letters correctly— student cannot read his/her own writing.</td>
<td>Oral tests. Let student use tape recorder for projects.</td>
</tr>
<tr>
<td>Visual Memory</td>
<td>Difficulty remembering what was seen. Reading with comprehension is a challenge. Difficulty with math equations. Poor recall of information.</td>
<td>Provide handouts that are clearly written. Provide oral instruction.</td>
</tr>
<tr>
<td>Visual Motor Integration</td>
<td>Mechanical problems in test taking. Difficulty copying from board or book. Spaces poorly. Poor written work. Disorganized.</td>
<td>Allow use of computer and tape recorders for lectures. Assign oral reports. Provide individual written outlines so there are fewer steps to process. In math or science, require answers only for calculations. Have ‘note check.’ Provide note-buddy. Lower standards for acceptable writing.</td>
</tr>
<tr>
<td>Visual Figure Ground</td>
<td>Trouble seeing an image within competing background or separating one line of print from another while reading.</td>
<td>Use an index card or marker when reading to blot out the distraction of other words.</td>
</tr>
<tr>
<td>Visual Discrimination</td>
<td>Trouble seeing the difference between two similar objects.</td>
<td>Clearly space words or math problems on a page.</td>
</tr>
<tr>
<td>Spatial Orientation</td>
<td>Loses materials. Late to class. Difficulty with oral reading. Disorganized homework. Difficulty judging time.</td>
<td>Provide more time for assignments or shorten them. Encourage silent reading. Provide less reading material and more reading time. Provide guidance in organizational skills.</td>
</tr>
<tr>
<td>Expressive Language</td>
<td>Difficulty expressing himself/herself. May sound “cynical.”</td>
<td>Provide opportunities for written reports. Allow adequate time to respond to questions.</td>
</tr>
<tr>
<td>Receptive Language</td>
<td>Appears to be “not listening.” Incomplete work</td>
<td>Have student repeat directions back to you for understanding.</td>
</tr>
<tr>
<td>Organization</td>
<td>Incomplete assignments. Disorganized notebook and/or notes.</td>
<td>Provide a course outline and a calendar with a weekly or monthly plan (include homework). Provide written detailed explanation for projects. For long-term projects, have periodic checkpoints. Show by example (your own notebook is organized).</td>
</tr>
</tbody>
</table>
Assistive Technology—Equipment that enhances the ability of students and employees to be more efficient and successful. For individuals with LD, computer grammar checkers, an overhead projector used by a teacher, or the audiovisual information delivered through a CD-ROM would be typical examples.

Association—Ability to relate concepts presented through the senses (visual, auditory, tactile, or kinesthetic).

Attention Span—The length of time an individual can concentrate on a task without being distracted or losing interest. (See also Distractibility)

Auditory Discrimination—Ability to detect differences in sounds; may be gross ability, such as detecting the differences between the noises made by a cat and dog, or fine ability, such as detecting the differences made by the sounds of letters “m” and “n.”

Auditory Figure-Ground—Ability to attend to one sound against a background of sound (e.g., hearing the teacher’s voice against classroom noise).

Auditory Memory—Ability to retain information which has been presented orally; may be short term memory, such as recalling information presented several seconds before; long term memory, such as recalling information presented more than a minute before; or sequential memory, such as recalling a series of information in proper order.

Aut.—Autism

Basic Skill Area—Includes such subjects as reading, writing, spelling, mathematics.

BASIS—Basic Adult Skills Inventory System

BD—Behaviorally disordered; behavior disorders; brain-damaged

BI—Brain injury

Bil.—Bilingual

CA—Chronological age

CAI—Computer-assisted instruction

Central Nervous System (CNS)—The brain and spinal cord.

Cerebral Cortex—The outer layer of the brain; controls thinking, feeling, and voluntary movement.)

Channel—The routes through which the content of communication flows. It includes both the modalities through which impression is received and the form of expression through which the response is made. Ex: Auditory—Vocal

CIL—Center for independent living

CLLS—California Library Literacy Services—the statewide system of library-based adult and family literacy programs offered in local public libraries

Cognitive Ability—Intellectual ability; thinking and reasoning skills.
Cognitive Style—A person’s typical approach to learning activities and problem solving. For example, some people carefully analyze each task, deciding what must be done and in what order. Others react impulsively to situations.

Conceptualization—The process of forming a general idea from what is observed. For example, seeing apples, bananas, and oranges and recognizing that they are all fruit.

Conceptual Disorder—Disturbances in thinking, reasoning, generalizing, memorizing.

Configuration—The visual shape or form of words; may be used as a cue in word-attack skills.

Decoding—The process of getting meaning from written or spoken symbols. (See Receptive Language.)

Directionality—The ability to know right from left, up from down, forward from backward, and direction and orientation.

Distractibility—The shifting of attention from the task at hand to sounds, sights, and other stimuli that normally occur in the environment.

DOE—Department of Education

DSM—Diagnostic and Statistical Manual (for Mental Disorders)

Dysarthria—A disorder of the speech muscles that affects the ability to pronounce words.

Dyscalculia—A severe difficulty in understanding and using symbols or functions needed for success in mathematics.

Dysfunction—Any disturbance or impairment in the normal functioning of an organ or body part.

Dysgraphia—A severe difficulty in producing handwriting that is legible and written at an age-appropriate speed.

Dyslexia—Difficulty with the ability to deal with language (speaking, reading, spelling, writing). A severe difficulty in understanding or using one or more areas of language, including listening, speaking, reading, writing, and spelling. A dyslexic person may see letters, syllables, or words upside down, reversed, blurred, backwards, or otherwise distorted.

Dysnomia—A marked difficulty in remembering names or recalling words needed for oral or written language.

Dyspraxia—A severe difficulty in performing drawing, writing, buttoning, and other tasks requiring fine motor skill, or in sequencing the necessary movements.

ELL—English language learner

ERIC—Educational Resources Information Center

ESL—English as a second language

ESOL—English for speakers of other languages
Expressive Language—Communication through writing, speaking, and/or gestures.

Far Point Copying—Writing while copying from a model some distance away, e.g., copying from the blackboard.

Figure-Ground Discrimination—The ability to sort out important information from the surrounding environment. For example, hearing a teacher’s voice while ignoring other classroom noises (air conditioners, heaters, etc.) or seeing a word among others on a crowded page.

Fine Motor—The use of small muscles for precision tasks such as writing, tying bows, zipping a zipper, typing, doing puzzles.

Gross Motor—The use of large muscles for activities requiring strength and balance. Examples are walking, running, and jumping.

Handicapped—Any person with any physical and/or mental disability who has difficulty in doing certain tasks such as walking, seeing, hearing, speaking, learning, or working. Federal law defines handicapped children as those who are mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, blind, or having specific learning disabilities who require special educational services.

HOH—Hard of hearing

HOTS—Higher-order thinking skills

Hyperkinesis—Another term for hyperactivity.

Hyperactivity (or Hyperkinesis)—Disorganized and disruptive behavior characterized by constant and excessive movement. A hyperactive child usually has difficulty sticking to one task for an extended period and may react more intensely to a situation than a normal child.

Hypoactivity—Underactivity; child may appear to be in a daze, lacking energy.

IDEA—Individuals with Disabilities Education Act

Informal Tests—Task-oriented tests to provide information concerning specific skills. Are not standardized.

Insertions—in reading/ spelling, or math, the addition of letters or numbers which do not belong in a word or numeral, e.g., sinceare for sincere.

Inversions—in reading, spelling, or math, confusion of up/down directionality of letters or numbers, e.g., m for w, 6 for 9, etc.

IQ—Intelligence quotient. The ratio between a person’s chronological age (measured in years) and mental age (as measured by an intelligence test), multiplied by 100.

JTPA—Job Training Partnership Act

Kinesthetic—Pertaining to the muscles or body.
**Kinesthetic Method**—A way of teaching words by using the muscles. For example, a student might trace the outline of a word with a finger while looking at the word and saying aloud the word or its letters, in sequence.

**LA**—Language arts

**LD**—Learning disability, learning disabled, learning disabilities.

**LDAA**—Learning Disabilities Association of America.

**LDP**—Language development program

**LEA**—Local education agency

**Learned Helplessness**—A tendency to be a passive learner who depends on others for decisions and guidance. For individuals with LD, continued struggle and failure can heighten this lack of self-confidence.

**Learning Disabilities (LD)**—Disorders of the basic psychological processes that affect the way a person learns. Many people with learning disabilities have average or above average intelligence. Learning disabilities may cause difficulties in listening, thinking, talking, reading, writing, spelling, or arithmetic. Included are perceptual handicaps, dyslexia, and developmental aphasia. Excluded are learning difficulties caused by visual, hearing, or motor handicaps, mental retardation, emotional disturbances, or environmental disadvantage.

**Learning Disorder**—Damage or impairment to the nervous system that results in a learning disability.

**Learning Modalities**—Approaches to assessment or instruction stressing the auditory, visual, or tactile avenues for learning that are dependent upon the individual.

**Learning Strategy Approaches**—Instructional approaches that focus on efficient ways to learn, rather than on curriculum. Includes specific techniques for organizing, actively interacting with material, memorizing, and monitoring any content or subject.

**Learning Styles**—The channels through which a person best understands and retains learning. All individuals learn best through one or more channels: vision, hearing, movement, touching, or a combination of these. Also, approaches to assessment or instruction emphasizing the variations in temperament, attitude, and preferred manner of tackling a task. Typically considered are styles along the active/passive, reflective/impulsive, or verbal/spatial dimensions.

**LEP**—Limited English proficient

**Linguistic Approach**—Method for teaching reading (decoding skills) which emphasizes use of word families. For example, the child is taught to read “at” and then subsequently is taught to decode words such as “cat,” “bat,” “sat,” “mat,” etc. Early stories adhere strictly to the words which have been taught previously and so may sometimes seem nonsensical, e.g., “Sam sat on a mat. The cat sat on a mat. The cat is fat,” etc.
**Metacognitive Learning**—Instructional approaches emphasizing awareness of the cognitive processes that facilitate one’s own learning and its application to academic and work assignments. Typical metacognitive techniques include systematic rehearsal of steps or conscious selection among strategies for completing a task.

**MI Theory**—The Theory of Multiple Intelligences by Howard Gardner, Harvard University.

**Minimal Brain Dysfunction (MBD)**—A broad and unspecific term formerly used to describe learning disabilities.

**Modality**—The sensory channel used to acquire information. Visual, auditory, tactile, kinesthetic, olfactory (odors), and gustatory (taste) are the most common modalities.

**NALLD**—National Adult Literacy and Learning Disabilities Center

**NCES**—National Center for Education Statistics

**NCSALL**—National Center for the Study of Adult Learning and Literacy

**NCLD**—National Center for Learning Disabilities.

**NEA**—National Education Association

**Near Point Copying**—Writing while copying from a model close at hand, e.g., copying from a textbook.

**NIFL**—National Institute for Literacy

**Norm-Referenced Test**—See Standardized Test.

**Norms**—Statistics that provide a frame of reference by which meaning may be given to test scores. Norms are based upon the actual performance of pupils of various grades or ages in the standardization group for the test. Since they represent average or typical performance, they should not be regarded as standards or universally desirable levels of attainment. The most common types of norms are standard scores such as stanines or deviation IQ, percentile rank, grade or age equivalents.

**OCD**—Obsessive compulsive disorder

**OCR**—Office of Civil Rights

**Oral Language**—Those verbal communication skills needed to understand (listen) and to use (speak) language.

**Orton Dyslexia Society**—Organization of professionals in the field of LD as well as scientists and parents.

**Orton-Gillingham Approach**—An approach to teaching individuals with learning disabilities. The technique, devised by Dr. Samuel Orton, Anna Gillingham, and Bessie Stillman, stresses a multisensory, phonetic, structured, sequential approach to learning.

**OSEP**—Office of Special Education Programs, US Department of Education

**Perceptual Abilities**—The abilities to process, organize, and interpret the information obtained by the five senses; a function of the brain.
**Perceptual Handicap**—Difficulty in accurately processing, organizing, and discriminating among visual, auditory, or tactile information. A person with a perceptual handicap may say that “cap/cup” sound the same or that “b” and “d” look the same.

**Perceptual-Motor**—Muscle activity resulting from information received through the senses.

**Perceptual Speed**—Specific meaning of this term varies, depending upon the manner in which a given test measures this ability. May refer to motor speed, how fast something is copied or manipulated, or to visual discrimination, e.g., how quickly identical items in a given series are identified, etc.

**Phonics Approach**—Method for teaching reading and spelling in which emphasis is placed on learning the sounds which individual and various combinations of letters make in a word. In decoding a word, the child sounds out individual letters or letter combinations and then blends them to form a word.

**PLATO**—Programmed logic automatic teaching operations

**PLOP**—Present level of performance

**Psychomotor**—Pertaining to the motor effects of psychological processes. Psychomotor tests are tests of motor skill which depend upon sensory or perceptual motor coordination.

**RDD**—Reading disorder-dyslexia

**Readiness**—Acquisition of skills considered prerequisite for academic learning.

**Reasoning Ability**—Specific meaning of this term varies, depending upon the manner in which a given test measures this ability; generally refers to nonverbal, deductive, inductive, analytical thinking.

**Receptive Language (Decoding)**—Language that is spoken or written by others and received by the individual. The receptive language skills are listening and reading.

**Remediation**—Process in which an individual is provided instruction and practice in skills which are weak or nonexistent in an effort to develop/strengthen these skills.

**Reversals**—Difficulty reproducing or pronouncing letters individually or in words, or placing words in sentences in their proper position in space or order. May also refer to reversal of mathematical concepts – add/subtract, multiply/divide or other symbols.

**SB L-M**—Stanford-Binet, Form L-M (language/memory) Intelligence Test.

**Scatter**—Variability in an individual’s test scores.

**Section 504**—A part of the Rehabilitation Act of 1973 making it illegal for any organization receiving federal funds to discriminate against a person solely on the basis of disability.

**Semantics**—The meaning or understanding given to oral or written language.
Sensorimotor—Relationship between sensation and movement. Sometimes spelled sensory-motor.

Sensory Acuity—The ability to perceive sensation at normal levels of intensity.

Sequence—The detail of information in its accustomed order (for example, days of the week, the alphabet, etc.).

Sight Words—Words a person can recognize on sight without aid of phonics or other word-attack skills.

Sight Word Approach—Also known as whole word approach; method for teaching reading which relies heavily upon a student's visual memory skills, with minimal emphasis on sounding out a word; person memorizes the word based on its overall visual configuration.

Specific Language Disability (SLD)—A severe difficulty in some aspect of listening, speaking, reading, writing, or spelling, while skills in the other areas are age-appropriate. Also called Specific Language Learning Disability (SLLD).

Slingerland Method—A highly structured, multisensory teaching method designed for group instruction of persons with specific language disabilities. Named for its developer, Beth Slingerland.

Sound Blending—The ability to combine smoothly all the sounds or parts of a word into the whole.

Spatial Orientation—Awareness of space around the person in terms of distance, form, direction, and position.

Spatial Relationships—The ability to perceive the relationships between self and two or more objects and the relationships of the objects to each other.

Standardized Test—A test that compares a student’s performance with the performance of a large group of similar students (usually of the same age). Also called a norm-referenced test. IQ tests and most achievement tests are standardized.

Structural Analysis—Using syllabication, prefix, suffix, and root word clues, etc. to read or spell a word.

Substitution—Using similar words for concepts in reading, spelling, or math. Interchanging a given letter, number, or word for another, e.g., cereal for cereal.

Syntax—Grammar, sentence structure, and word order in oral or written language.

Syndrome—A set of symptoms which indicate a specific disorder.

Tactile—Having to do with the sense of touch.

Task Analysis—The technique of carefully examining a particular task to discover the elements it comprises and the processes required to perform it.

TDD—Telecommunication devices for the deaf.

TESOL—Teachers of English for speakers of other languages.
**Thinking Skills**—Refers to the manner in which humans acquire, interpret, organize, store, retrieve, and employ knowledge.

**Transposition**—In reading, spelling, or math, confusion of the order of letters in a word or numbers in a numeral, e.g., sliver for silver, 432 for 423, etc.

**TTY**—Teletypewriter (phone system for deaf individuals—see TDD)

**VAK**—Acronym for visual, auditory, and kinesthetic-tactile learning styles. A multisensory teaching approach which emphasizes using all of the senses to teach skills and concepts.

**Verbal Ability**—Specific meaning of this term varies, depending upon the manner in which a given test measures this ability. Generally refers to oral or spoken language abilities.

**Visual Association**—Ability to relate concepts which are presented visually, through pictures or written words. For example, given a picture of a dog, house, flower and bone, the child is able to indicate that the dog and bone go together.

**Visual Closure**—Ability to see only the outline of an item or picture, or a partially completed picture, and still be able to indicate what it is.

**Visual Discrimination**—Ability to detect similarities and/or differences in materials which are presented visually, e.g., ability to discriminate h from n, o from c, b from d, etc.

**Visual Figure-Ground**—Ability to focus on the foreground of material presented visually, rather than background. Those who have difficulty with this may find it hard to keep their place while copying or reading, may find a crowded page of print or illustrations confusing, etc.

**Visual Memory**—Ability to retain information which is presented visually; may be short term memory, such as recalling information presented several seconds before; long term memory, such as recalling information presented more than a minute before; or sequential memory, such as recalling a series of information in proper order.

**Visual Motor**—Ability to translate information received visually into a motor response. Difficulties are often characterized by poor handwriting, etc.

**Visual Perception**—Ability to correctly interpret what is seen. For example, a person sees a triangle and identifies it as a triangle.

**Word Attack Skills**—Ability to analyze unfamiliar words visually and phonetically.

**Word Recognition**—Ability to read or pronounce a word; usually implies that the word is recognized immediately by sight and that the person does not need to apply word analysis skills. Does not imply understanding of the word.

**Written Language**—Encompasses all facets of written expression, e.g., handwriting, capitalization, punctuation, spelling, format, ability to express one’s thoughts in sentences and paragraphs, etc.
CHAPTER 7

Resources

Organizations and Information Sources

LEARNING DISABILITY ORGANIZATIONS AND CENTERS

Council for Learning Disabilities (CLD)
P.O. Box 40303
Overland Park, KS 66204
(913) 492-8755
(913) 492-2546 (Fax)
website: http://www.cldinternational.org/

CLD is a national professional organization dedicated solely to professionals working with individuals who have learning disabilities.

Council for Exceptional Children (CEC)
Division for Learning Disabilities (DLD)
1920 Association Drive
Reston, VA 22091
(703) 620-3660
(800) 328-0272
website: http://www.cec.sped.org
The Council for Exceptional Children (CEC) is the largest international professional organization dedicated to improving educational outcomes for individuals with exceptionalities, students with disabilities, and/or the gifted. CEC advocates for appropriate governmental policies, sets professional standards, provides continual professional development, advocates for newly and historically underserved individuals with exceptionalities, and helps professionals obtain conditions and resources necessary for effective professional practice.

**International Dyslexia Association (Orton)**
8600 LaSalle Road
Chester Building, Suite 382
Baltimore, MD 21286-2044
(410) 296-0232
(800) 222-3123
e-mail: info@interdys.org

The International Dyslexia Association (IDA) was formerly known as “The Orton Dyslexia Society.” IDA is an international, non-profit, scientific and educational organization dedicated to the study and treatment of dyslexia. It was first established nearly 50 years ago to continue the pioneering work of Dr. Samuel T. Orton, who was one of the first to identify dyslexia and its remediation. IDA offers an international network that brings professionals in the field of dyslexia and parents together for a common purpose. Contact IDA for referral services for testing and tutoring, and for free information on assistive technologies; medical and educational research; national and local conferences and seminars; legislation; public awareness; and effective teaching methods.

**Learning Disabilities Association of America**
*(LDA, formerly ACLD)*
4156 Library Road
Pittsburgh, PA 15234-1349
(888) 300-6710
(412) 341-1515
(412) 344-0224 (Fax)
website: [http://www.ldanatl.org](http://www.ldanatl.org)
e-mail: ldanatl@usaor.net

A non-profit volunteer advocacy organization, provides information and referral for parents, professionals, and consumers involved with or in search of support groups and networking opportunities through local LDA Youth and Adult Section Chapters. A publication list is available. The Association also prints LDA Newsbriefs, a bi-monthly newsletter for parents, professionals, and adults with LD.
Learning Disabilities Center (LDC)
The University of Georgia
331 Milledge Hall
Athens, GA 30602-5875
(706) 542-4589
(706) 542-4532 (Fax)
website: http://www.coe.uga.edu/ldcenter

National Adult Literacy and Learning Disabilities Center (NALLD Center)
Academy for Educational Development
1875 Connecticut Avenue, NW, Suite 800
Washington, DC 20009-1202
(202) 884-8185
(202) 884-8422 (Fax)
website: http://www.aed.org

The Center, established in October 1993 and discontinued in 2000, was a national resource for information exchange regarding learning disabilities and funded by the National Institute for Literacy.

National Center for Learning Disabilities (NCLD)
381 Park Avenue South, Suite 1401
New York, NY 10016
(888) 575-7373 (for general information)
(212) 545-7510 (for detailed information)
(212) 545-9665 (Fax)
website: http://www.ncld.org

NCLD provides information, services, and programs nationwide to benefit children and adults with learning disabilities, their families, educators, and other helping professionals. Resources and services include: national information and referral (including an extensive computerized database with state by state resource listings of schools, diagnostic clinics, etc.); educational programs, including national and regional summits; public outreach and communications; and legislative advocacy and public policy. They publish an informative magazine, Their World, and will send free information on various topics.

Recordings for the Blind and Dyslexic (RFB&D)
20 Roszel Road
Princeton, NJ 08540
(800) 221-4792
(609) 452-0606
(609) 987-8116 (Fax)
website: http://www.rfbd.org
e-mail: custserv@rfbd.org

RFB&D was established in 1948 to provide recorded textbooks to veterans blinded in WW II. Today it provides educational materials at every academic level in recorded and computerized formats to individuals who
are unable to use standard print. Books, texts, and reference materials are available to people with dyslexia, or with visual, perceptual, or physical disabilities.

**ATTENTION DEFICIT DISORDERS**

**Attention Deficit Disorder Association (ADDA)**

P.O. Box 972  
Mentor, OH 44601  
(800) 487-2282 (for general information)  
(440) 350-9595  
(440) 350-0223 (Fax)  
website: [http://www.add.org](http://www.add.org)  
e-mail: natladda@aol.com  

ADDA has a particular interest in the needs of adults with ADD, but their services do address children and family issues. They provide information and local resources as well as an annual conference about adults and ADD.

**Children & Adults with Attention Deficit Disorder (C.H.A.D.D.)**

499 NW 70th Ave., Suite 101  
Plantation, FL 33317  
(800) 233-4050 (for general information)  
(954) 587-3700  
(954) 587-4599 (Fax)  
website: [http://www.chadd.org](http://www.chadd.org)  
e-mail: national@chadd.org  

CH.A.D.D. “works to improve the lives of people with ADD.” It is a national organization with over 32,000 members and more than 500 chapters, providing support and information. CH.A.D.D. has four primary objectives: 1) to maintain a support network for parents who have children with ADD and adults with ADD; 2) to provide a forum for continuing education of parents, professionals, and adults with ADD about the disability; 3) to be a community resource for information about ADD; and 4) to make the best educational experiences available to children with ADD so that their specific difficulties will be recognized and appropriately managed within educational settings.

**OTHER EDUCATIONAL AND ADULT LITERACY ORGANIZATIONS**

Organizations specific to adult continuing education and literacy education are listed here. This includes referral services, professional organizations for providers and consumers.
The Association on Higher Education and Disability (AHEAD)
P.O. Box 21192
Columbus, OH 43221-0192
(614) 488-4972
(614) 488-1174 (Fax)
website: http://www.ahead.org
e-mail: ahead@postbox.acs.ohio-state.edu

AHEAD is an international, multicultural membership organization of post-secondary institutions and professionals committed to full participation in higher education for persons with disabilities. AHEAD’s members are typically involved in the development of policy and in the provision of support services to persons with disabilities in higher education. The Association offers training programs, workshops, publications, and conferences.

General Educational Development Testing Service (GEDTS)
Center for Adult Learning and Educational Credentials
American Council on Education
One Dupont Circle NW, Suite 250
Washington, DC 20036
(202) 939-9490
(202) 775-8578 (Fax)
website: http://www.acenet.edu

GEDTS administers the GED Tests and provides information on disability-related adaptations/ accommodations for the tests to prospective examinees and instructors.

Laubach Literacy Action (LLA)
P.O. Box 131
Syracuse, NY 13210
(315) 422-9121
(315) 422-6369 (Fax)
website: http://www.laubach.org

A national volunteer organization supporting literacy tutoring through training and support at national level and through local chapters.

Literacy Volunteers of America, Inc. (LVA)
635 James St.
Syracuse, NY 13203
(315) 472-0001
(315) 472-0002 (Fax)
website: http://www.literacyvolunteers.org

LVA is a national volunteer literacy organization which trains community members to serve as tutors for adults and youth. The web site links to organization events, publications, and an online catalog.
The National Center on Adult Literacy (NCAL) was established in 1990 by the Office of Educational Research and Improvement at the U.S. Department of Education, with co-funding from the U.S. Departments of Labor and Health and Human Services.

NCSALL is a collaborative effort between the Harvard University Graduate School of Education and World Education. The web site includes a description of research projects; an online version of the journal *Focus on Basics*, and links to practitioner leaders.

The National Institute for Literacy (NIFL) is a federal organization that shares information about literacy and supports the development of high-quality literacy services so all Americans can develop essential basic skills.

**INFORMATION CLEARINGHOUSES**

**ERIC Clearinghouse on Disabilities and Gifted Education (ERIC EC)**
(800) 328-0272 (V/TTY)
website: [http://ericc.org](http://ericc.org)
e-mail: ericcc@cec.sped.org

The ERIC Clearinghouse is part of the US Department of Education’s information network. ERIC EC responds to requests for information on special/gifted education, serves as a resource and referral center for the general
public, conducts general information searches, and publishes and disseminates free or low-cost information on special/gifted education research, programs, and practices.

**Higher Education and the Handicapped (HEATH)**

1 Dupont Circle NW, Suite 800
Washington, DC 20036-1193
800) 544-3284 (for general information)
(202) 939-9320 (to talk to a staff member, TTY)
(202) 833-4760 (Fax)
website: [http://www.acenet.edu](http://www.acenet.edu)
to download documents: [gopher://bobcat-ace.nche.edu](gopher://bobcat-ace.nche.edu)
e-mail: heath@ace.nche.edu

The HEATH Resource Center operates the national clearinghouse on post-secondary education for individuals with disabilities. The Center serves as an information exchange on educational support services; policies and procedures; adaptations; and opportunities at American campuses, vocational-technical schools, adult education programs, independent living centers, and other post-secondary training entities. HEATH has started a new electronic newsletter, published four times a year. It contains lots of useful information.

**National Information Center for Children and Youth with Disabilities (NICHCY)**

P.O. Box 1492
Washington, DC 20013-1492
(800) 695-0285 (V/TTY)
(202) 884-8200
(202) 884-8441 (Fax)
website: [http://www.nichcy.org](http://www.nichcy.org)
e-mail: nichcy@aed.org

NICHCY is an information clearinghouse that provides free information on disabilities and related issues, focusing on children and youth (birth to age 35). Free services include personal responses, referrals, technical assistance and general information searches.

**WEB RESOURCES**

**LD on Line—An Interactive Guide to Learning Disabilities**

This well designed and organized website should be the “next stop” for any parent, teacher, professional or other individual looking for up-to-date, in-depth information about learning disabilities. It includes introductory and detailed writings on a wide range of topics, a national calendar of events, an extensive network of national and local resources; art work and writings by children, parents, and other individuals with learning disabilities; discussion groups with parents and national experts; a bookstore; and more.

website: [http://www.ldonline.org](http://www.ldonline.org)
e-mail: ldonline@weta.com
LD Resources
Meet the creative and energetic Richard and Anne Wanderman on this website, and explore its contents: a variety of resources for the learning disabilities community and a special focus on learning and technology. The site includes essays, lists of resources, software to download, and contact information for national and regional organizations, conferences, and schools.
website: http://www.ldresources.com
email: richard@ldresources.com

Special Education Resources on the Internet (SERI)
SERI is a large collection of Internet sites of interest to those involved in the fields related to Special Education.
website: http://seriweb.com

Cyberwink
No one—with or without learning differences—should go through life without meeting Don Winkler, dynamic and innovative Chairman & CEO of Finance One, a subsidiary of Bank One Corporation. Don Winkler, who is dyslexic, knows the benefits and gifts that come from seeing the world from a different perspective. Visit this website to meet Don, learn about his Breakthrough Leadership Process and find out more about learning differences.
website: http://www.cyberwink.com
email: don@cyberwink.com

Schwab Foundation for Learning
Schwab Foundation for Learning offers a wide range of services for parents and educators. Its mission is to provide information, support, and resources to improve the lives of students with learning differences. It features a toll-free number (800/230-0988), library information desk for customized literature searches and information packets, plus a new website featuring resource consultants, information exchanges and more. Visit the site at:
website: http://www.schwablearning.org

TOLL-FREE NUMBERS

<table>
<thead>
<tr>
<th>Service</th>
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<tbody>
<tr>
<td>Abledata—Product Database</td>
<td>(800) 227-0216</td>
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<tr>
<td>American Counseling Association</td>
<td>(800) 347-6647</td>
</tr>
<tr>
<td>Americans with Disabilities Act: Technical Information Hotline</td>
<td>(800) 466-4232</td>
</tr>
<tr>
<td>American Association for Vocational Instructional Materials</td>
<td>(800) 228-4689</td>
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<tr>
<td>Alliance for Technology Access (ATA)</td>
<td>(800) 455-7470</td>
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<td>Attention Deficit Disorder Association (ADDA)</td>
<td>(800) 487-2282</td>
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<tr>
<td>Center for Adult Literacy &amp; Learning</td>
<td>(800) 642-2670</td>
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<tr>
<td>Center on Education and Work (CEW)</td>
<td>(800) 446-0399</td>
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<td>Council for Exceptional Children (CEC)</td>
<td>(800) 328-0272</td>
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<tr>
<td>ERIC Clearinghouse on Adult, Career, and Vocational Education</td>
<td>(800) 848-4815</td>
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<td>Equal Employment Opportunity Commission</td>
<td>(800) 669-3362</td>
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<td>Federal Financial Aid Hot Line</td>
<td>(800) 433-3243</td>
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General Educational Development Hotline (800) 626-9433
HEATH Resource Center (800) 544-3284
Horizon Program (800) 822-6242
Job Accommodation Network (800) 526-7234
Job Accommodation Network (from Canada) (800) 526-2262
Learning Resources Network (800) 678-5376
Library of Congress National Library Service for the Blind & Physically Handicapped (800) 424-8567
National Information Center for Children & Youth with Disabilities (800) 695-0285
National Institute for Literacy Hot Line (800) 228-8813
National Rehabilitation Information Center (NARIC) (800) 346-2742
National Center for Research in Vocational Education (NCRVE) (800) 762-4093
National Library Services for the Blind and Physically Handicapped (800) 424-8567
Orton Dyslexia Society (800) 222-3123
Professional Assistance Center for Education (PACE) (800) 443-5522 x 2670
Recording for the Blind (800) 221-4792
Social Security Administration (800) 772-1213
Threshold Program (800) 999-1959 x 8181
U.S. Office of Educational Research and Improvement (OERI) (800) 424-1616
The articles included on the following pages have been selected to give you further information, but are not presented as a comprehensive guide on learning difficulties. Some of the articles were mentioned in the previous chapters. Others have been selected by members of the LD Task Force.

Following is a list of articles included in this section in this order:


**Focus on Phonemes: the research; What a Decade of Research tells us about Learning Disabilities in Children and Adults.**  
Dr. Reid Lyon, *NIFL Newsletter*, Spring 1996.

**Focus on Phonemes: the practice; Getting the Picture: One Adult Educator's Experience.**  

**Zooming in on dyslexia; can video games treat learning disorders; new research causes hope.**  


**A Look at Learning Disabilities in Children and Youth.**
Larry B. Silver, M.D. LD Association of Montgomery County, Inc., Maryland.

**How Many Adults Really Have Learning Disabilities?**

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**READING DIFFICULTIES VS. LEARNING DISABILITIES**

*CEC Today* Vol. 4 No. 5 - Nov/Dec 1997
a publication of the *Council for Exceptional Children*

Are too many students being identified as learning disabled? For many in the education community, the answer is yes. The high number of students identified as having learning disabilities—50% of all students with disabilities—is causing speculation that the methods used to determine the presence of a learning disability is invalid. The problem centers around the approximately 80% of students with learning disabilities who have reading problems. All but a very small percentage of these students have been misidentified, according to some education experts. Most reading difficulties stem from factors such as poor instruction, lack of reading readiness, and/or cultural differences, which can be overcome with early intervention and intensive reading instruction, they say.

These arguments are gaining strength among both special educators and reading specialists. Correctly defining what a learning disability is and accurately identifying those students who are learning disabled will not only lower the number of students classified as learning disabled (to less than 3%) but will also better enable special educators to serve them, according to education experts. As a result, special educators would be able to provide more effective instruction to their students. In addition, researchers could conduct studies on a more homogeneous group of students, which would yield effective instructional strategies that address processing and/or neurological deficits, according to special education and reading specialists. Those students whose reading difficulties stem from factors such as poor instruction would be served by reading specialists.

Research is adding weight to the argument. The data could indicate that most students who have reading problems haven’t been taught well, according to Reid Lyon, neuropsychologist at the National Institute’s Child Health and Human Development Department of NIH. Recent studies have shown that when students with severe reading problems are given early,
intensive instruction, nearly 95% can reach the national average in reading ability, he added.

“This is an important issue that needs to be addressed,” said Nancy D. Safer, CEC’s executive director. “While CEC agrees that not all students classified as learning disabled have a neurological or processing deficit, a significant number do. We must be sure that all students who do have a learning disability are identified and receive appropriate instruction and support, as well as provide interventions for nondisabled students who have difficulty learning to read.”

Currently, identifying students as learning disabled is a nebulous science. A learning disability is defined as a neurological or processing deficit that impedes student achievement in one or more subject areas. To help identify students who have learning disabilities, many states use a discrepancy formula. That is, the student shows a gap, often of two years or more, between their IQ score and achievement level in a particular area. This formula has resulted in some students being labeled as learning disabled who may need remedial help but not have a learning disability.

IDEA 1997 makes it imperative that we find ways to accurately identify students who have learning disabilities, as the law mandates that students whose low achievement results from poor instruction should not be classified as disabled.

**Distinguishing Between a Learning Disability and a Reading Disability**

Determining whether or not a child has a reading problem or a learning disability is easier said than done. Initially, it may be hard to tell these two different learning problems apart, according to Pat Gildroy, professor at the University of Kansas and member of CEC Chapter #665. To help distinguish between the two learning problems, education experts recommend providing early interventions—to students in grades K-2—before referral to special education. In this model, reading specialists would provide intense, daily instruction to poor readers. Their interventions should enable the majority of these students to achieve grade level in reading. Those students who continue to struggle with reading would be referred to special education and given further assessments to determine if their learning problems meet the definition of a learning disability.

**Chromosome 6 Linked to Reading Problems**

New research shows linkages between chromosome 6 and phonemic awareness and phonological decoding skills. However, Reid Lyon, neuropsychologist at NIH, warns that reading is a complex picture and that reading ability or the language skills underlying reading ability will be linked to many genes. He adds that the connection between reading problems and chromosomes may open the opportunity for early screening for reading problems through a blood test. This will allow educators to start working with students who may have difficulty learning to read immediately and develop very early interventions for them.
Effective Early Intervention Programs for Reading

For these recommended early intervention programs to be effective, they must be both intense and fast paced, recommends Jack Pikulski, president of the International Reading Association. Reading specialists work with students individually or in very small groups (no more than 5 or 6 students) for 1/2 hour sessions daily. During that time, almost all the instruction is focused on reading, writing, and print.

The programs have a clear and definite framework for instruction, Pikulski says. The instructor gives the student some easy reading, teaches new skills, and then asks the student to read material that is challenging. During this process, the instructor continually assesses the child’s reading progress, analyzing reading errors and any patterns the child exhibits in his or her reading, to determine the next step to take in instruction. In addition, the student is asked to do some writing, which helps children focus their attention on print.

Many educators also stress that good intervention programs emphasize phonological awareness, the understanding that words are made up of sounds, and an understanding of phonics.

Different Teaching Strategies for LD Teachers and Reading Specialists

The lines between a special education teacher and a reading teacher may seem murky, and, in fact, they are. Often, special educators and reading specialists may use the same instructional strategies to help a poor reader, whether learning disabled or not, improve his or her reading ability. However, it is generally agreed that the special educator would provide more diagnosis, as well as more intense and longer instruction for students with learning disabilities.

Special education experts also say that special educators are more likely to use a variety of different approaches with a student until they find the instructional strategy that works for the child, whereas the reading specialist may rely more heavily on a particular reading program for instruction. Furthermore, the special educator will often monitor progress more frequently than the reading specialist to guide instruction, says Doug Fuchs, professor at Vanderbilt University and member of CEC Chapter #185.

In addition, the special education teacher will consider the child’s processing deficits when planning instruction, according to Cheri Hoye, professor at the University of Georgia and past president of CEC’s Division on Learning Disabilities (DLD). For example, a student with auditory processing problems would receive more intensive instruction in phonics. Or, that child may work with a special program such as Fast Forword that stretches out the sounds in a word. Conversely, the instruction for a child who has difficulty with visual memory would focus more on learning sight words, Hoye says. A reading teacher may not be able to focus on those areas as intently or provide the same type of instructional strategies as the special educator. Eventually, special educators may have very specific strategies to
use with students with learning disabilities who are poor readers. Though researchers are working to provide more teaching techniques that specifically address neurological or processing deficits, we don’t have that information yet.

**Consensus Among DLD and IRA**

CEC’s Division on Learning Disabilities and the International Reading Association have been working together to address these concerns. Issues upon which both groups agree include:

- A need exists for early, extensive, and intensive instruction in reading, which will significantly reduce the number of students inappropriately labeled as learning disabled. This will permit greater focus on the needs of those who are appropriately identified as learning disabled.
- Though the overidentification of students as learning disabled is a concern, students who have neurological and/or processing problems should be identified as learning disabled and receive the support and instructional services they need.
- Better teacher training on a variety of reading methods is needed.

*FOCUS ON PHONEMES:*

**THE RESEARCH**

*What a Decade of Research tells us about Learning Disabilities in Children and Adults*

Dr. Reid Lyon directs and manages the research programs in learning disabilities, language disorders, and disorders of attention for the National Institute of Child Health and Human Development (NICHD) at the National Institutes of Health (NIH). Over the last ten years, programs he oversees have made great strides in gathering revealing and useful longitudinal data about the several types of learning disabilities—especially reading disabilities. The following is drawn largely from his statement last year to the Subcommittee on Disability Policy of the Senate Committee on Labor and Human Resources

**The Context**

Learning disabilities are unexpected. That is, the children and adults who have LD usually have strengths in general intelligence and have received the same educational opportunities as other students. Their difficulties in learning are not because of emotional or behavior problems, although behavior problems can certainly result from the frustration that comes from difficulties in learning to read, write, or calculate and reason arithmetically. Thus, LD does not occur because the child or adult lacks mental ability, motivation, or family and teachers who are very supportive of their efforts
to learn. LD occurs for some very specific reasons that our research has identified, and LD produces a devastating array of specific learning difficulties that affect the lives of many. There are probably few families in this country that have not been touched by a learning disability in some way.

For most individuals with LD, the primary learning difficulty is one that involves reading. In fact, at least 60 to 80 percent of children and adults diagnosed with LD have their most severe difficulties in learning to read. This is unfortunate, since the major task in the early school grades is to learn to read, and most activities in the early and later grades, as well as in adulthood, involve and rely upon the ability to read. Consider the long-term consequences of these unexpected difficulties in learning that go beyond school and beyond childhood. The eager third graders experiencing reading difficulties become, in turn, the frustrated ninth graders who drop out of school, the barely literate 25-year-olds who read at the fourth grade level, the members of the 30-something generation who are unemployed and defeated adults struggling to raise families and forced to rely on public assistance.

**The Research**

The goal of the NICHD learning disabilities research program is to halt this cycle of failure and do so at the earliest possible moment. Following the Congressional mandate set forth in the Health Research Extension Act of 1985 (PL 99-158), which directed the NIH to increase the effectiveness of research on LD, the NICHD was given the lead role in developing a network of multidisciplinary learning disability research programs. The major objectives of these programs were to develop new knowledge about the causes and outcomes of the different types of LD, their diagnosis, their epidemiology, their developmental course, and their response to different types of treatment and teaching interventions.

Each of the research centers and program projects within the NICHD Learning Disability Research Network was charged initially with the comprehensive study of reading disorders, or dyslexia. This prioritization was based on the fact that reading disorders are the most frequently occurring type of LD and have a debilitating impact on the ability to learn and function in school situations and later on in the workplace.

Since the NICHD initiated this systematic program of research, we have made a number of highly significant discoveries in the area of reading disabilities. We now know more about how many children are affected and what happens to them over the course of their development. We also know the basic or core deficit responsible for difficulties in learning to read, and we have some very good ideas about how to identify this deficit before youngsters enter school so that early intervention programs can be implemented.

Building on these findings, NICHD-supported research has begun to identify treatment programs that can help children and adults at all ages to learn to read in a more effective manner. In addition, a number of exciting new studies have begun to identify the underlying brain mechanisms and the specific neural systems that appear responsible for difficulties in the development of language and reading abilities.
The Findings
Among the major findings of NICHD’s decade of research are the following:

- Disabilities in reading reflect a common disorder in grades one through nine, affecting at least 10 million children, or one child in five.

- Reading disability is persistent. Scientists at Yale have found that of the children who are reading disabled in the third grade, 74% remain disabled in the tenth grade. Reading disability does not go away and cannot be characterized as a developmental lag, but represents an enduring deficit that remains with the child from the beginning of school, into high school, and most likely into adulthood. These are children who often become our next generation of low-literate and unemployed adults.

- NICHD research has uncovered a major cognitive deficit that prevents a child—or an adult—from learning to read. For many years, it was thought that reading disability or dyslexia reflected a visual problem where children tended to read letters and words backwards. Today, converging scientific evidence shows that it is not the visual, but the language system that is implicated in reading disability. Reading reflects language. A major core deficit responsible for the majority of cases of reading disability is at the most basic level of the language system—the level of the phoneme.

- The phoneme is the basic unit of language. Defined as the smallest unit of functional sound, the phoneme represents the common building block of all spoken and written words. Just as proteins must be broken down into their constituent amino acids before they can be digested, words must be broken down into phonemes before they can be processed by neural systems within the brain.

- LD children and adults with reading disability have difficulties with this most basic step in the reading pathway: breaking the written word into smaller phonologic units. This discovery of the phonologic basis for reading disability now allows us to understand why even bright individuals cannot learn to read.

- Difficulties in breaking words into their constituent phonemes results in a highly labored, slow, and inefficient approach to reading. Since the ability to read well depends upon rapid and automatic recognition and decoding of words, slow and inaccurate decoding is the most powerful predictor of difficulties in reading comprehension.

- Phonologic difficulty is independent of an individual’s intelligence. The finding of a core deficit in phonology crystallizes the essence of what reading disability is about and who it affects—children and adults with good intelligence who cannot use their often excellent verbal and spatial reasoning abilities and problem-solving skills to decode written language, primarily because of a block in the first step of the reading pathway.

- Several NICHD-supported scientists are now beginning to identify the brain regions responsible for phonology and deficits in phonology. A new non-invasive neuroimaging technology that allows us to directly visualize the activity in the brain while a person is attempting to read has provided
the first look at where phonological processing, the basis of reading, takes place in the central nervous system. Preliminary data show that, for reading disabled adults and children, those areas of the brain responsible for phonological processing behave differently than for individuals who read well.

- The identification of a phonological deficit as one of the core impediments in learning to read has led to discoveries that can help us identify early those kindergarten and first grade children who are likely to have difficulties learning to read. NICHD supported researchers have produced converging evidence that poor reading can be predicted in approximately 85 percent of the cases as early as mid-kindergarten using inexpensive screening measures. These findings are critical, given that children who are identified after the age of nine have a much greater difficulty ever learning to read efficiently.

- The most powerful interventions that have been identified for reading disabilities to date consist of a combination of explicit and direct instruction in phonemic awareness, direct instruction in sound-symbol relationships (phonics), and direct and integrated instruction in text reading and comprehension. This balanced approach appears to be necessary for adults as well as children with reading disabilities.

**The Challenge for Practitioners**

NICHD research findings have given us a much greater understanding of learning disabilities and, with it, new abilities in identification and treatment. But too few of our nation’s teachers are aware of these facts and the diagnostic and instructional methods that are based on them. A substantial gap exists between the information we now have about learning to read and the information that teachers are provided during their training. This gap must be closed, for the sake of both our children and the adults they have, and will, become.

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**FOCUS ON PHONEMES:**

**THE PRACTICE**

*Getting the Picture: One Adult Educator’s Experience*

Meg Schofield directs the Chula Vista Public Library’s Literacy Team Center in San Diego County, California. Her program was recently named top community-based literacy provider by the State Collaborative Literacy Council in California’s Exemplary Literacy Program award competition. She can be contacted at: Chula Vista Literacy Team Center, South Chula Vista Library, 389 Orange Avenue, Chula Vista, California 91911, 619/585-5764, 420-1328 fax.

Not long ago, my husband, a motorcycle racing enthusiast, took me to a well-known racetrack out in the desert, where I had an experience that helped me get closer to the adult students in my literacy program. I was more or less on my own because my husband was working in the pits. I knew only the most obvious things about motorcycle racing: the riders
would go as fast as they could (ideally, in the same direction), somebody would end up being first, and somebody would be last.

Around me, the fans in the stands frequently turned to each other, as if on cue, screaming in unison, “DID YOU SEE THAT !!!??” I would spin my head around, squinting, scanning the blur, thinking, “See what? WHAT?” Within twenty minutes, the thrill of the deafening engine revs reverberating through my body had worn off, and I settled down into a glazed-over state of disoriented confusion. Races started, stopped, stalled, started over, ended, or seemed to end, all for reasons that I could not discern. I failed to “Ooooooh” and “Ahhhhh” on cue with my fellow fans.

My state of confusion made me anxious, and I grew bored and listless. Despite the fact that everyone around me seemed to be deriving enormous pleasure from the event, I was thinking of all the things I would rather be doing. I retreated to the car and read my book. I made a mental note to be sure to come back to the track again the following month. Yeah, right.

I understand a little better now the experiences of the many adults I know for whom learning to read has been virtually a lifelong struggle. My problem at the racetrack was similar in one very germane respect to their problems with printed text. Like my students facing a typewritten page full of indecipherable words, I could see ‘the whole’ all right, but my picture was a frustrating mess. Unfortunately, the whole was not greater than the proverbial sum of its parts.

In fact, it was precisely the parts that I failed to grasp, because I did not know how to look. Although I was completely unaware of it, what seemed to be a maddening chaos of noise and exhaust was, in fact, governed by a definite system. The system provided the initiated with a host of helpful cues (colored flags, riders’ numbers and plates, bike modifications, etc., etc.) which, once understood, help bring focus, meaning, and thus satisfaction to the racetrack experience.

Likewise, an emerging consensus of research findings on reading difficulties points to the need to get down to the ‘parts’ level, waaaaay down, before the system that governs the language will ever be accessible to disabled readers. Without access to the system, those poor readers are not likely to derive satisfaction on their own from pages of print. I know just how it feels to “scan the blur.”

During the past several years the National Institute of Child Health and Human Development has invested over $80 million in large-scale research projects and longitudinal studies of children to ascertain the causes of learning disabilities. Prominent researchers like Dr. Reid Lyon of NICHD and Dr. Joseph Torgesen of Florida State University have recently pointed their collective finger at the culprit responsible for the majority of reading problems linked to learning disabilities. As adult literacy practitioners, we had better sit up and take note. We must look the culprit squarely in the eye, because its implications for our students and our profession are profound.

The truth about the primary problem underlying so many individuals’ difficulties with reading and spelling lies with the most basic of language building blocks: phonemes (language sounds). The research examining children, both good and poor readers, clearly shows that a construct known as
phonological synthesis, i.e., the ability to blend separately presented phonological segments into whole words, is required for reading. A similar, related construct known as phonological analysis, i.e., the ability to identify discrete sounds within words presented as a whole, is critical for spelling.

According to the January 1995 publication, Research in Learning Disabilities at the NICHD, “disabled readers do not readily acquire the alphabetic code when learning to read, due to deficiencies in phonological processing.” It also states: “Deficits in phonological awareness reflect the core deficit in dyslexia.”

Phonological awareness is the cornerstone upon which most of us construct our knowledge of language concepts. The majority of us internalize these concepts with seemingly little effort. In a “normal” reader, the process of making and registering sound/letter generalizations goes on thousands and thousands of times throughout the period of learning to read.

But what of those students for whom this process is not so easily acquired, for whom years of primary education, (often, yes, often including phonics programs!) have failed to alleviate their struggle with reading and spelling? The ability to distinguish, identify, label, process, store, and retrieve language sounds apparently is critical to the process of learning to read and spell. Torgesen writes that “without awareness of the phonological segments in words, our alphabetic system of writing is not very comprehensible.” I am reminded of my personal experience ‘scanning the blur.’

Unfortunately, most traditional phonics programs do not teach phonological analysis, nor do they present in a logical, systematic fashion the concepts in the English language needed for accurate phonological synthesis. Many adult literacy students have been exposed to some level of phonics instruction, but (and this is a BIG but) those with a language-based learning disability (i.e., those who have underdeveloped phonemic awareness), were not able to absorb, internalize, or apply that instruction. They learned instead to rely almost exclusively on two well-rehearsed strategies: memorizing whole words (some are remarkably good at it), and guessing.

Should the research on learning disabilities in children inform our practices working with adult literacy students? You bet. The NICHD research summary reports that “reading disability reflects a persistent deficit rather than a developmental lag in linguistic and reading skills.”

In other words, it is not something that one simply “grows out of.” Our adult learners are living proof of this. The summary also states that “reading disabled or dyslexic children comprise 20% of students. Three-quarters of third grade students who are reading disabled will remain disabled in the ninth grade.” It might have gone on to say “. . . and for the rest of their lives,” since there are few reported cases of miraculous reading recoveries between the ninth grade and adulthood. The types of interventions that would have helped students with a language-based learning disability in elementary school can still help them now, with some modifications of course. The question is, what kinds of interventions and programs have proven helpful?

Many observers of poor readers have noted that they appear to try “sounding out” unfamiliar words, only to get bogged down in the process. It
is easy to jump to the conclusion that phonics strategies are inconsistent and inefficient, and therefore a waste of time for such learners. However, quite the opposite is true. The whole idea of phonics needs to be expanded to include phonological awareness and the much broader concept of phonology.

According to Torgesen, “the interventions that produced the most powerful effects on subsequent growth in reading skills were those that combined training in phonological awareness with explicit training in application of these skills to reading, which always involved some instruction in grapheme-phoneme correspondences.” And Lyon argues that “disabled readers must be presented highly structured, explicit and intensive instruction in phonics rules and the application of the rules to print.”

In other words, we must provide language learning disabled students with activities that teach them DIRECTLY and systematically how to look at words, how to determine the sequence of sounds in words, how to predict the sound behavior of groups of letters in the chunks we call syllables.

Without careful screening measures designed to test students’ phonological knowledge, and their ability to apply that knowledge to reading and spelling, adult literacy programs may be missing the mark entirely in terms of identifying students’ underlying reading instructional needs. Most of us offer programs to meet the external needs, the life skills and “competencies” we know adults require. Of course they need to be able to fill in application forms, write checks, read the directions at the self-serve gas pump and on the Tylenol bottle. A lot of students arrive at our doors in need of 3 quick fixes. For many, time for school or tutoring is very limited. We must respect that, and acknowledge that as adults they do need to “make it” in the adult worlds of work, family, and community.

But the vast majority of adult literacy students really want to know one thing, and that is to be able to read and write just about anything, like the rest of us. They want the tool that’s in all of our toolboxes. (As my husband points out, if the team’s motorcycle overheats in the first race of the day, any number of “urgent care” stop-gap measures might get it through race weekend. No doubt the underlying problem, the cracked cylinder head or blown head gasket, is a lot more difficult and time-consuming to repair, but it must ultimately be dealt with.)

The same type of explicit phonology program supported by the NICHD and other research may indeed be required for students who score into the junior high school range on tests of word identification or passage comprehension, as well as for those who are virtual nonreaders. This is because the severity of learning disabilities varies greatly from individual to individual, and some students have managed to memorize an amazing number of words. Don’t be fooled; many such students read way below their actual potential, and continue to find reading and spelling a great struggle. (They may, for example, recognize the word “photograph,” but be unable to spell it, or to read correctly “photographic” or “pho . . .”) I know so many students like this who are practically euphoric when they discover that there is a system governing the English language, and that the system can, at last, belong to them too! Of course, we as adult educators need to allow our students to
work through systematic language programs at paces determined by their own mastery of the material.

At the Chula Vista Public Library’s Literacy Team Center in the County of San Diego, California, every adult learner is screened for phonological awareness, decoding, and spelling skills, as well as for a history of reading problems in school. If deficits are identified in these areas, students are likely to be placed in a highly structured, systematic, multisensory phonology program. Programs that logically structure and control the vocabulary introduced to students are offered alongside “whole language” or context-based writing and life skill lessons. A great many of our students take advantage of both approaches, depending on their needs, their skill levels, and their available time.

I am personally annoyed by the head-butting “phonics vs. whole language” boxing match that has consumed so much energy among educators in this country. If we are going to help the thousands of adults with reading problems, we need more than just one corner to retreat to. We need a greater understanding and awareness of the types of problems that underlie reading difficulties, and of the different instructional programs designed to address them.

We don’t need to throw out many of our wonderful context-based approaches that ease some of the day-to-day strains on our students and that build their confidence. We do need to broaden our scope and offer programs that help students focus on the critical building blocks of our language, so that the maddening blur can at last become a clear, sharp picture for them, a picture they can enjoy independently, a picture that makes sense.

About Screening for Learning Disabilities

(from the National ALLD Center’s “Screening for Adults with Learning Disabilities”)

- Screening sets the stage for the practitioner to help learners with suspected learning disabilities to understand their strengths and weaknesses and the reasons behind their struggles and difficulties.
- The informal nature of the information gathering process in screening enables the practitioner to include the learner in determining appropriate instruction.
- Informal screening opens the door for discussion between the practitioner and the learner regarding which strategies and/or interventions, if any, have been tried in the past.
- Screening can help establish the foundation for discussion between the practitioner and the learner about realistic long-range goals translated into short-term objectives.
- Screening helps the practitioner identify special materials and strategies to be used in setting up an individualized learning situation for the student.
ZOOMING IN ON DYSLEXIA
Can video Games Treat Learning Disorders;
new research causes hope.

J. Madeleine Nash

Research indicates that specific computer games can train some children with language disorders to better differentiate among phonemes, the short consonant sounds of speech. The researchers have claimed that the games may also be used to treat children with the reading disability, dyslexia.

At age 5, Keillan Lecky dreaded kindergarten. So many of the words her playmates gleefully shouted or conspiratorially whispered seemed to hover just out of reach, as elusive as a vanishing rainbow. Her difficulty understanding them was starting to affect her schoolwork. Then, last summer, Keillan, along with 21 other language-impaired children, was enrolled in an experimental program at Rutgers University in Newark, New Jersey, in which the kids improved their auditory skills by playing computer games. The change in Keillan and the others was so remarkable, says Paula Tallal, co-director of the Center for Molecular and Behavioral Neuroscience at Rutgers, that even the scientists were stunned. After just four weeks of therapy, Tallal and her colleagues report in a recent issue of the journal Science, youngsters who were performing well below age level had jumped as much as two years.

For parents and teachers who have watched children like Keillan struggle so long with so little gain, the announcement was encouraging news. If larger studies bear out the results, then at least some cases of language impairment—those that stem from an inability to decode spoken words—may find effective treatment.

That in itself would be an important breakthrough. This form of language impairment afflicts up to 8% of otherwise normal children, most of whom go on to develop intractable problems with reading and writing. But Tallal and her colleagues take their findings one step further, and in doing so have caused intense scientific controversy. They believe the same language-processing ‘glitch’ may be the root of the more common problem of dyslexia, a reading disability that affects perhaps 15% of the population. If so, games like those that Keillan played could help at least some dyslexics whose impairment makes it hard for them to fully share in all the vital knowledge and pleasure that come with the printed word.

Can such a debilitating learning disorder really be remedied by playing games? Other experts, while praising Tallal’s work as provocative and challenging, remain skeptical. Tallal, they point out, has not yet demonstrated that her therapy is effective for the broader population of dyslexics. But as Yale University’s Dr. Sally Shaywitz, a behavioral pediatrician, acknowledges, “We don’t need to speculate. We can carry out studies that answer this question.”

The children enrolled in the Rutgers study had one thing in common: although they are of at least average intelligence, tests showed that they frequently had difficulty distinguishing among phonemes (the basic building blocks of language), especially those that begin with hard consonants like b,
“There is nothing wrong with their ears,” says Tallal. “They can hear these sounds, but the auditory centers of the brain can’t process them.”

The problem, Tallal believes, is all in the timing. Vowel-rich sounds resonate for 100 milliseconds, sometimes longer, and are thus easier to make out than hard consonants, which fly by in normal conversation at speeds of 40 milliseconds or less. Language-impaired children, Tallal has demonstrated, can more reliably identify fast consonants when the sounds are slowed to half their normal speed.

At the same time, neuroscientist Michael Merzenich, at the University of California, San Francisco, has shown that intensive training exercises can dramatically improve the ability of monkeys to identify minute differences in rapid-fire bursts of sound and that these improvements are accompanied by striking changes in the firing patterns of neurons in the monkeys’ brains.

In 1994, with a $2.3 million grant from the Charles A. Dana Foundation, Tallal and Merzenich pooled their talents to design new therapies for language-impaired children. The researchers, led by William Jenkins of UCSF and Steve Miller of Rutgers, created computer programs that made the hard consonants easier to hear by elongating them, spacing them farther apart and making them louder. Then the researchers devised a series of computer and classroom games that enticed children to listen to the strange, synthetic sounds and gradually differentiate among them.

After a month of training, three hours a day, five days a week, the kids had made striking progress. The researchers believe the exercises—“aerobics for the brain,” Tallal calls them—strengthened the connections between the neurons responsible for distinguishing fast-moving sounds. “It’s possible,” says Merzenich, “that we may actually be able to eliminate language impairment in a great majority of children.”

This optimism seems extraordinary in view of the mounting evidence that both dyslexia and oral-language impairment are inherited disorders. In fact, it seems quite probable that a single gene on chromosome 6 may underlie at least some cases of dyslexia and perhaps other language-based learning problems as well. But a genetic susceptibility to dyslexia does not mean that the condition is inevitable or, after it occurs, that it is irreparable.

Merzenich believes something as simple as an inherited susceptibility to middle-ear infections in the first six months of life could explain at least some of the language problems young children experience. Other researchers think the problem is more fundamental. Autopsy work by Harvard neurologist Dr. Albert Galaburda shows that the brains of dyslexic people are dappled with tiny lesions and out-of-place cells, which suggests that the core problem may lie in the machinery that controls prenatal development.

Certainly difficulties in processing fast sounds show up very early. Developmental psychologist April Benasich, one of Tallal’s colleagues at Rutgers, has conditioned six-month-old babies to turn their heads whenever they detect a change in a sequence of tones. As long as the tones are spaced well apart, all the babies do well. (Their reward is a toy that lights up or moves.) But when the interval between tones grows shorter, big differences
emerge. Some babies cannot detect the changes unless the sounds are presented 300 milliseconds apart. Others do well when they are separated by a mere 40 milliseconds. The babies who do poorly at this test also have difficulty distinguishing between speech sounds like ba and da.

This difference in perception might just be critical, says University of Washington neuroscientist Patricia Kuhl. For it is during the first year of life that children form what Kuhl terms “mental magnets,” which sweep up similar-sounding speech sounds and file them away in phonic bins. If language-impaired children never perceive ba and da as different, then they may form mental magnets that file these sounds into the same broad category, seriously undermining their ability to group sounds into words and sentences later on. Indeed, believes Benasich, the ability to make fine acoustic distinctions is one of the pilings on which language is built. “If the pilings are rickety,” she says, “then language is not going to develop as well.”

If this analysis is correct, then the possibilities for intervening early in a child’s life multiply. “Wouldn’t it be wonderful,” asks Merzenich, in a burst of enthusiasm, ‘if we could treat dyslexia before a child started trying to read?’ Or better still, before a child started trying to talk. Tallal and Merzenich go so far as to suggest that some forms of language impairment could turn out to be more correctable than poor hearing or poor eyesight. They point out that the earphones that transmit the exaggerated speech sounds to children’s ears in the lab are only temporary aids. “When you take off eyeglasses, you can’t see,” observes Kuhl. “But when you take off these funny-looking earphones, then you might just proceed to understanding normal speech.”

Perhaps. But, until Tallal and Merzenich know for certain, they may be giving more hope than is justified. Ever since the Science articles appeared in early January, thousands of desperate parents have flooded the Rutgers and University of California switchboards with calls, asking when the new therapy will be offered by local schools. To handle the overload, the researchers have set up an 800 number.

All the two neuroscientists can offer at the moment, however, is promising results from a very small research project. Whether the same approach will prove valuable, or even marginally useful, for the estimated 10 million dyslexic children in the U.S. remains an open question, and parents would be unwise to harbor unrealistic hopes. About one thing, however, there is no doubt. Tallal and Merzenich have made a difference in the lives of at least a few children. Keillan, the girl who hated kindergarten, is now 6 years old. She adores first grade. She runs to school smiling. And, with just a little difficulty, she is learning to read.
THE TRAINING EXERCISES OF FAST FORWORD

Language Is the Most Important Tool We Have For Learning

With all the emphasis in school on reading and writing, we sometimes forget that language is not an end in itself—it is the tool we use to learn about literature, mathematics, science, geography, history, economics, and every other discipline. And it is also the tool we use to share our knowledge and insights with others, so that they too may learn.

While many children naturally acquire all the skills necessary for language during the first few years of life, research has shown that a significant number of them fail to develop some key skills on their own. For example: difficulty making reliable distinctions among speech sounds can lead to poor language comprehension.

If a child has difficulty understanding and using language, reading and writing will suffer. But the child’s problems may affect all learning, as well as the ability to interact effectively with others. If your child does not seem to be reaching his or her potential, the cause could be a language problem.

The Stages of Fast ForWord

On average, children who complete the Fast ForWord program achieve a gain of 1½ to 2 years in important language skills. During the four to eight week program, families’ experiences vary widely. This overview is designed to provide an outline of the most commonly reported stages. Because every child is unique, your experience may be different.

**Stage 1—Cautiously Optimistic**  In the beginning, you and your child may be excited about starting a new program. The intensity of the schedule can sometimes be daunting; getting used to a new routine is the first challenge.

**Stage 2—Progress Varies**  Children progress at different rates, and it is important to remember that Fast ForWord adapts to each child’s skill level. Those with different types of needs will spend more time developing the skills they require.

**Stage 3—New Behaviors, New Skills**  During this period, the exercises become more difficult as Fast ForWord adapts and readjusts the optimum playing level for building your child’s skills. Children may complain about the difficulty, and this is natural: they have to work hard in the areas where they need the most help.

**Stage 4—Looking at Overall Gains**  Your child is likely to begin showing improvement in one or more language areas. Look at your child’s overall gains. These gains may include better everyday communication skills, higher self-esteem, or progress in schoolwork.

A Professional Perspective

“Before Fast ForWord, these children struggled with reading. After completing the program, they were able to sound out words and distinguish between the sounds of letters.”

Sabra Gelfond
Speech Language Pathologist, Bethesda, MD
“She was a child with a hearing impairment… She did really, really well. We had everything turned up to the highest volume so that she could hear everything… Lo and behold, at her annual review she is working at grade level, across the board. A year before, they said she would probably have to go to special day classes if she was not making it.”

Diane Snelling
Speech Language Pathologist, San Francisco, CA

An Intensive Approach

Fast ForWord is different from other training programs. The program is intensive: 100 minutes per day, five days a week, for four to eight weeks. You don’t learn to play the piano by practicing for 15 minutes now and then, and you don’t strengthen language skills with intermittent exercises.

Internet Monitoring  Most importantly, every mouse click of every learning session is sent to Scientific Learning Corporation via the Internet on a daily basis. Tracking this information allows the Fast ForWord Professional to monitor each child’s progress and see exactly what each child has accomplished. In most cases, final results are measured using the same standardized tests used in schools and clinics across the country.

Intensive? Yes. But well worth the effort when you see what Fast ForWord helps children achieve— when you see them reading with pleasure, interacting with their friends, and reaching new heights in self-esteem.

How Does the Brain “Hear”?

The brain identifies sounds by recognizing the most distinguishing characteristics of sound—things like volume, pitch, duration of the sound and intervals between sounds. From those elements, the brain constructs a unique acoustic image of each sound, much the way a color television can reproduce a whole spectrum of colors on a screen using just three colors of dots.

Speech sounds contain many short-duration sounds that occur in rapid succession. If the part of the brain that recognizes intervals or duration isn’t functioning well, then some of the pieces of the language puzzle are missing. The very short “b” sound in “ba” becomes masked by the long “ahh” sound that follows it, and the acoustic image remains incomplete. The Fast ForWord — exercises use acoustically modified speech sounds that adapt to each child’s level of understanding, allowing her to practice intensively and begin to recognize those sounds in their natural form. By using this technology in an intensive training program, children can develop a wide range of critical language skills.

A Behavior or a Language Problem?

A major challenge faced by parents of children with language problems is that teachers may see those problems as behavior problems. Without professional evaluation, it’s easy to think that a child who withdraws, acts out, or asks seemingly odd questions has a behavior problem. But if a child doesn’t understand what people are saying—if he can’t tell the difference between similar sounds and words, for instance—then he’ll tune out. Often this child’s actions will be seen as behavior related, not language related.
The Fast ForWord Family of Programs

While most learning tools train around language problems and focus on symptoms, Fast ForWord uses patented technology to attack the underlying difficulties a child may have understanding and using language.

Fast ForWord has been subjected to extensive scientific testing with over 1,000 children. These tests have demonstrated that children with language problems, on average, make language gains of 1½ to 2 years in the 4 to 8 week program. Fast ForWord Two continues to build on these newly acquired skills and provides a bridge to greater reading proficiency.

For more information, call 888-665-9707. Visit our Web site at www.scientificlearning.com

SUMMARY REPORT OF THE 1994 WASHINGTON SUMMIT ON LEARNING DISABILITIES

Summit Objectives: To provide an overview of all of the current research, policies and practices, and to provide an objective picture of what is known and validated.

Four Program Co-Chairs for the Summit had special experience and expertise and reflected major constituencies concerned with learning disabilities: Research (Reid Lyon, Ph.D., National Institutes of Child Health and Human Development); Public Policy (Tom Hehir, Ed.D, Director, Office of Special Education Programs, Department of Education); Practice (Andrew Hartman, Ph.D., National Institute for Literacy), and Consumer Interest (Ann Kornblet, Learning Disabilities Association of America).

Overview

Summary Page 3: Although approximately 15% of the population are affected by learning disabilities, they frequently go undetected due to lack of awareness by teachers, physicians and parents. Among the array of learning disabilities, deficits in basic reading skills are the most prevalent and often the most debilitating to children and adults.

Statistics: 50% of all students in special education in the public schools have learning disabilities —2.25 million children; Source: U.S. Dept. of Education 1992

75%—80% of special education students identified as LD have their basic deficits in language and reading; Source: National Institutes of Health

35% of students identified with learning disabilities drop out of high school. This is twice the rate of their non-disabled peers. (This does not include the students who are not identified and drop out); Source: National Longitudinal Transition Study (Wagner 1991)

60% of adults with severe literacy problems have undetected or untreated learning disabilities; Source: National Adult Literacy and Learning Disabilities Center 1994
50% of juvenile delinquents tested were found to have undetected learning disabilities; Source: National Center for State Courts and the Educational Testing Service 1977

Up to 60% of adolescents in treatment for substance abuse have learning disabilities: Source: Hazelton Foundation, Minnesota 1992

62% of learning disabled students were unemployed one year after graduation; Source: National Longitudinal Transition Study (Wagner 1991)

50% of females with learning disabilities will be mothers (many of them single) within 3-5 years of leaving high school; Source: National Longitudinal Transition Study (Wagner 1991)

31% of adolescents with learning disabilities will be arrested 3-5 years out of high school; Source: National Longitudinal Transition Study (Wagner 1991)

Learning disabilities and substance abuse are the most common impediments to keeping welfare clients from becoming and remaining employed, according to the 1992 report from the Office of the Inspector General. Source: Office of the Inspector General on “Functional Impairments of AFDC Clients.”

Summary Page 8: Research indicates that 75–80% of students identified as LD have their primary deficits in basic language and reading skills, very specifically manifested in deficits in phonological awareness.

Summary Page 9: The one area of significant research progress for those with learning disabilities has been in the domain of reading. There is now a great deal of knowledge about the cognitive and linguistic characteristics of reading disability and how these students need to be taught.

SECONDARY PROBLEMS CAUSED BY LEARNING DISABILITIES
What Learning Disabilities Are Not


Because of the difficulty in understanding the complex nature of LD and its many subtypes, there is a great deal of misinformation that must be dispelled. Therefore, it is important to state clearly that learning disability is not synonymous with mental retardation. In fact, there is good evidence that reading disabilities occur in individuals of average and above-average intelligence, as well as in those who are intellectually gifted (Fink, 1995, 1997; Siegel, 1989). Although some of the diagnoses of giftedness and language-based learning disability have been questioned because the data were anecdotal and analyzed posthumously, Fink (1997) conducted an interesting study in evaluated a group of gifted adults with dyslexia, some of whom are Nobel Laureates and/or...
members of the National Academy of Sciences. The groundbreaking work of Gerber and Reiff (1991) also confirmed the disassociation of dyslexia and intelligence.

**The Nature of Reading Disabilities**

A third way in which the existence of LD in adults has been validated is based on newly acquired knowledge regarding the nature of dyslexia. In the 1990s, the National Institute of Child Health and Human Development (NICHD) of the National Institutes of Health has invested approximately $80 million in eight research centers and program projects to investigate the prevalence and causes of dyslexia and the identification and treatment of dyslexia. What have they learned? Prevalence Based on the NICHD research, dyslexia appears to be even more widespread than previously thought. Approximately 15%-20% of school-age individuals are affected by this disorder (Lyon, 1991, 1995; Shaywitz, Escobar, Shaywitz, Fletcher, & Makuch, 1992; Shaywitz et al., 1990).

**The Nature of Dyslexia**

First, dyslexia occurs on a continuum from mild to severe impairment (Fletcher et al., 1994; Shaywitz et al., 1992). (For our purposes, adults with severe reading disabilities are those reading at the fourth-grade level or below.) Second, it is a language-based, auditory processing difficulty that persists even in people who have learned to read and comprehend with accuracy. Third, even for those individuals with dyslexia who have learned to read and comprehend, rapid and accurate decoding of unfamiliar, multisyllabic, and/or foreign language words remain inaccurate and rate of decoding often remains slow. Although they remain slow readers, with appropriate instruction some will become good comprehenders, especially with reading material in their area of expertise.

**The Core Limitation Hypothesis**

The core limitation in dyslexia has been identified as difficulty in hearing distinct sounds within words and segmenting words into syllables and sounds or phonemes (Fletcher et al., 1994; Lyon, 1994, 1995). Such skills are considered critical because they are prerequisite skills for accurately spelling words, especially multisyllabic words. Reading comprehension, the ultimate goal of reading instruction, is also dependent on accurate, automatic (i.e., rapid) decoding of single words.

**Genetics and Brain Differences in Individuals with Reading Disabilities**

The major investigations in genetics and brain differences have been done by the Colorado Reading Project (DeFries et al., 1997). The findings indicated that reading disability or dyslexia is an inherited trait; and, more specifically, the ability to segment words into their discrete sounds (phoneme awareness), rapid phonological decoding, and word recognition are the subskills that are limiting (Olson, Forsberg, & Wise, 1994). One of the locations of this genetic marker has been found to be on chromosome 6.
in the vicinity of the gene related to autoimmune disorders (the human leukocyte antigen marker) (Cardon et al., 1994, 1995, 1997), which perhaps explains why there is a higher prevalence of autoimmune disorders such as allergies, diabetes, and thyroid diseases in people who have dyslexia (DeFries et al., 1997). In addition, Galaburda (1997) and colleagues found specific signs of brain pathology (e.g., cell loss, abnormalities in the area between the two hemispheres called the corpus callosum) and atypical neural organization altering the usual pattern of asymmetry (i.e., left hemisphere equal to right hemisphere rather than left being greater than right) in one specific area of the brain called the temporal lobe. In addition, Shaywitz (1998) found differences in activity levels when using functional magnetic resonance imaging to compare the brains of individuals who have dyslexia with the brains of individuals who do not have dyslexia during various reading tasks.

When the tasks that the individuals without dyslexia performed increased in difficulty from simple to complex, the activity levels in their brains also increased in the area of the brain called the angular gyrus. (This area of the brain is considered important for cross-medial associations such as vision and language.) In contrast, there was underactivation in this area of the brain in the individuals with dyslexia when they performed the same tasks. Shaywitz's findings confirmed earlier research on acquired reading disorders in which there was damage to the same area of the brain and provided evidence to support the presence of a functional disruption in neural systems within developmental reading disorders. Finally, differences in activity level (sometimes more and sometimes less than normal activation, depending on the area of the brain) have been seen in regional blood flow and positron emission tomography studies (Wood, Flowers, Buchsbaum, & Tallal, 1991).

A LOOK AT LEARNING DISABILITIES IN CHILDREN AND YOUTH

by Larry B. Silver, M.D.
Reprinted with permission from the Learning Disabilities Association of Montgomery County, Inc., Maryland Ph: 301/933-1076
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Types of Learning Disabilities

By the late 1960s, the present model of learning disabilities was established. This model distinguishes four stages of information processing used in learning: input, integration, memory, and output. Input is the process of recording in the brain information that comes from the senses. Integration is the process of interpreting this information. Memory is its storage for later retrieval. Output of information is achieved through language or motor (muscular) activity. Learning disabilities can be classified by their effects at one or more of these stages. Each child has individual strengths and weaknesses at each stage.
Input
The first major type of problem at the input stage is a visual perception disability. Some students have difficulty in recognizing the position and shape of what they see. Letters may be reversed or rotated; for example, the letters d, b, p, q, and g might be confused. The child might also have difficulty distinguishing a significant form from its background. People with this disability often have reading problems. They may jump over words, read the same line twice, or skip lines. Other students have poor depth perception or poor distance judgement. They might bump into things, fall over chairs, or knock over drinks.

The other major input disability is in auditory perception. Students may have difficulty understanding because they do not distinguish subtle differences in sounds. They confuse words and phrases that sound alike—for example, “blue” with “blow” or “ball” with “bell.” Some children find it hard to pick out an auditory figure from its background; they may not respond to the sound of a parent’s or teacher’s voice, and it may seem that they are not listening or paying attention. Others process sound slowly and therefore cannot keep up with the flow of conversation, inside or outside the classroom. Suppose a parent says, “It’s getting late. Go upstairs, wash your face, and get into your pajamas. Then come back down for a snack.” A child with this disability might hear only the first part and stay upstairs.

Integration
Integration disabilities take several forms, corresponding to the three stages of sequencing, abstraction, and organization.

Memory
Disabilities also develop at the third stage of information processing, memory. Short-term memory retains information briefly while we attend to it or concentrate upon it. For example, most of us can retain the 10 digits of a long distance telephone number long enough to dial, but we forget it if we are interrupted. When information is repeated often enough, it enters long-term memory, where it is stored and can be retrieved later. Most memory disabilities affect short-term memory only; students with these disabilities need many more repetitions than usual to retain information.

Output
At the fourth stage, output, there are both language and motor disabilities. Language disabilities almost always involve what is called “demand language” rather than spontaneous language. Spontaneous language occurs when we initiate speaking—select the subject, organize our thoughts, and find the correct words before opening our mouths. Demand language occurs when someone else creates the circumstances in which communication is required. A question is asked, and we must simultaneously organize our thoughts, find the right words, and answer. A child with a language disability may speak normally when initiating conversation but respond hesitantly in demand situations—pause, ask for the question to be repeated, give a confused answer, or fail to find the right words.
NALLD was funded by NIFL (National Institute for Literacy) in order to develop screening and instructional materials on LD for the adult literacy field.

**HOW MANY ADULTS REALLY HAVE LEARNING DISABILITIES?**

Susan A. Vogel, Ph.D., Professor of Special Education, Northern Illinois University, DeKalb, IL

reprinted with permission from The International Dyslexia Association 49th Annual Conference Commemorative Booklet November, 1998.

There is a growing body of reliable data that indicate that learning disabilities (LD) in adults are a widespread problem. Until recently, we have only had estimates of the incidence of adults with LD in specific segments of the population including various formal and informal educational and workplace training settings. Some estimates have been alarmingly high. For example, the United States Employment and Training Administration (1991) estimated that between 15-23% of Job Training Partnership Act (JTPA) title IIA recipients may have a learning disability. Based on the Department of Labor observations, the percent of adults with LD increases to between 50-80% among those (adults) reading below the 7th grade level (U.S. Department of Labor, 1991).

**National Databases**

Additional perspectives on the prevalence of LD in adults are provided by the U.S. Department of Education, National Center for Education Statistics (NCES), and the American Council on Education (ACE). The NCES and ACE regularly report national statistics regarding the incidence of self-reported learning disabilities (SRLD) in a national, representative sample. The NCES reports on full-time freshmen with SRLD as well as graduate/professional school students (U.S. Department of Education, 1994), while the ACE reports only on first-time, first-year college freshmen (Henderson, 1995). The ACE data are part of a larger study of college freshmen conducted every three years by the Cooperative Institutional Research Program (CIRP) at the University of California-Los Angeles.

While the percent of students with self-reported (SR) disabilities other than LD has remained almost constant since 1978, the percent of students with SRLD increased from 1.6% in 1985 to 3% in 1994. When the prevalence was examined according to type of degree-granting institution, both Henderson and the U.S. Dept. of Education reported a much higher rate of students with SRLD in 2-year colleges than those attending public or private universities/colleges.

**The National LD Data Bank**

A third national, collegiate database (Vogel, Leonard, Scales, Hayeslip, Hermansen, & Donnells, 1998) was designed to determine the incidence of students with documented learning disabilities enrolled in various types...
of postsecondary institutions (PSIs) drawn randomly from the total list of approximately 3,000 PSIs divided by Carnegie classification (e.g., size, type, independent/public, degrees granted, grant money). The sample included undergraduate, graduate, and professional schools from the most highly selective to open admissions institutions. What is of interest to us here is that this study reported the incidence of students with documented LD on these different types of campuses. Unlike the ACE and the National Center for Education Statistics of the U.S. Department of Education databases, the incidence of LD on the various types of campuses was not based on self-report since all participating institutions required documentation of a disability in order to provide accommodations and/or services (Vogel et al., 1998). Though they reported that, on the average, 2.6% of the student body had documented LD, the percent of students with LD varied from one-half percent in the most highly selective institutions to 10% in open admissions colleges. Using this national database and that of the ACE, it is clear that prevalence rates vary significantly by institution type, size of the student body, and degrees offered. However, it is very important to keep in mind that these national databases represent only one segment of the total population of adults with LD, i.e., those who enroll in a post-secondary institution. What do we know about the incidence of LD in the general population of adults?

The National Adult Literacy Survey

The first national database on adults in the general population was in response to the Adult Education Amendments of 1988 that required that the U.S. Department of Education assess the literacy proficiency and practices of adults in the nation. The National Center for Education Statistics was then charged with the task of identifying concretely the basic educational skills needed for literate functioning and in conjunction with the Education Testing Service developed the National Adult Literacy Survey (NALS). The survey was administered to a national representative sample of 26,000 individuals 16 years or older. It included direct assessment of literacy skills and activities, language background, educational and work experiences, health problems, and disabilities, if any. In regard to health problems and disabilities, participants were asked whether they had a physical, mental, or other health condition that kept them from participating fully in work, school, housework, or other activities. Twelve percent said “yes” to the above question and were then asked a series of follow-up questions to determine the specific disability. In response, three percent of the participants said they had a learning disability.

Based on the previous estimates of LD in adults reviewed above, the percent of adults in the nation with SRLD who responded to the NALS on first glance seems very low especially in light of the previous estimates described above and the annual national child count statistics in which the percentage of school-age individuals with LD ages 6-17 who receive services is about 5% (U.S. Department of Education, 1995). Given that the adults in this database were ages 16 and older, and many of them were not in school
when IDEA mandated “search and screen” for children with disabilities, many of these adults were probably unaware that their reading difficulties are due to a learning disability.

Two other estimates of the prevalence of SRLD were determined when the SRLD group who responded to the NALS was divided by literacy proficiency and by educational attainment. The prevalence rate among those with the poorest literacy skills and those who completed less than eight years of school increased 4-5 fold to between 10% and 15% respectively, which is certainly more similar to the 15-20% prevalence estimates of dyslexia based on clinical and research—identification (Reder, 1995; Lyon, 1995; Vogel & Reder, 1998).

The Washington and Kansas State Studies

The most recent attempts to answer this question focused on yet a different segment of the population, namely, adults who were receiving Temporary Assistance for Needy Families (TANF) previously called Aid to Families with Dependent Children (AFDC) and those who participated in the Job Opportunities Basic Skills programs (JOBS) (Giovengo, Moore, Young, 1998; The State of Kansas Learning Disability Initiative, 1998). The projects were designed along similar lines in order to provide crossvalidation of their findings. Not surprisingly, the prevalence rate for adults with LD among TANF recipients was approximately 30% in both states. Thus, by adding poverty and under-employment or unemployment along with low literacy functioning and educational attainment, the prevalence of LD doubles, i.e., from 15% to 30%.

In summary, we have seen that there is no one prevalence rate, but rather a variety of rates based on which segment of the adult population is scrutinized, which age range, and in which setting they are located. Some of the pioneering work of adult literacy educators and LD specialists provided us with estimates of the incidence of LD among participants in a variety of literacy settings. The National LD Data Bank allowed us to compare the prevalence of students with LD in different types of colleges and universities, both undergraduates and graduate students (e.g., 2-year colleges, colleges/universities). The NALS database allowed us to determine the prevalence of SRLD in adults in the nation and also when grouped by literacy proficiency and educational attainment. And the Kansas and Washington State initiatives allowed us to look at the prevalence rate of LD among recipients of TANF. What we have learned is that there is no one answer regarding the prevalence rate, but rather a range depending on the parameters described above. Thus, by comparing the different data bases, we are in a better position to answer the question posed in this brief overview and to understand the reasons for the differences in reported prevalence rates. Now that we know the scope of the problem, the “big” question is what are the recommended next steps for practitioners, diagnosticians, adult educators, literacy providers, LD specialists, and adults with LD themselves in order to achieve higher levels of education, literacy, self-esteem, self-sufficiency, and life satisfaction.
About the Author: Susan A. Vogel, Ph.D., is professor of special education in the Educational Psychology, Counseling, and Special Education Department at Northern Illinois University and is currently President of the International Academy for Research in Learning Disabilities. She has served on several national boards including the National Institute for Literacy in Washington DC, and The International Dyslexia Association, and is on the editorial board of many journals including IDA's Annals of Dyslexia. Her research interests include faculty attitude and practices toward students with LD in higher education, college LD support services, and postschool outcomes.

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APPENDIX A

Learning Disabilities/Difficulties/Abilities Survey

Sample survey and compilation of results
LEARNING DISABILITIES/DIFFICULTIES/ABILITIES SURVEY
California Literacy Campaign - July 1999

Please share this survey with your staff. More than one person per program is welcome to copy and complete the survey, but please note the name of your program at the end of the survey for purposes of compiling the data.

1. Please rate how serious this issue is for you and your staff, using a number from low 1 to high 10. ___

2. Would a Resource Guide on this broad topic be helpful to you? Yes  No

3. What topics would you like to see addressed in a guide? Please rate on a scale of 1 to 10 with 1 meaning that it is not important and 10 meaning very important.

- Definition of terms.
  (What constitutes a learning disability? What are ADD, ADHD, spec. language impairment, dyslexia, auditory perception?)

- Intake Procedures and Assessment Methods and Materials.

- Staff Development and Training

- Training for Tutors and Learners

- Clarification of the Legal Issues—who must we serve.

- Instructional methods

- Materials and Resources

- New Research Findings

- Networking and Dissemination

4. How do you perceive the issue of learning difficulties or disabilities in your program? (Check all that apply.)

- We see all of our learners as learning “abled” who learn in their own unique ways, but are not disabled.
- While most learners are able to improve their reading and writing skills, some clearly have learning disabilities which make it difficult for them to make progress without specialized materials or techniques.
- Many of our learners do not learn the way reading was taught in school. They have differences in how they learn but are not learning disabled.
- Many of the learners who come into our program are learning disabled and need specialized instruction in phonemic awareness first before we can teach them life skills like reading a newspaper.

5. What is your definition of a learning disability? Is it different than a learning difference?

6. During your intake process, how many learners do you estimate self-identify as being dyslexic, being in special ed in school, or having a learning disability? %

7. What, if any, learning disabilities or difficulties do you screen for? When? What instrument(s) do you use?

8. How do you address the issue in training... for staff, tutors, and/or learners?

9. Do you use any specialized methods or materials to address language-based learning disabilities? If so, what? Is there an extra cost the program to do this, and if so, and what is it?

10. If you identify a learner's areas of learning difficulties, do you also identify strengths, and if so, how?

11. What other resources or materials have you found useful? Please list names and sources.

12. What role can the LD Task Force play in helping you better address this issue in your program?

13. What role can the State Library play in helping you address this issue?

14. From your perspective, what is the most critical issue related to learning disabilities in your job duties?
COMPILATION OF 63 RESPONSES TO LEARNING DISABILITIES/DIFFICULTIES/ABILITIES SURVEY

1. Please rate how serious this issue is for you and your staff, using a number from low 1 to high 10.

63 responses—total points = 432

432 ÷ 63 = 6.86

Comment: “I don’t believe everyone has a learning disability. It’s a catch-all phrase that’s overused”

2. Would a Resource Guide on this broad topic be helpful to you?  

61 Yes  2 No

3. What topics would you like to see addressed in a guide? Please rate on a scale of 1 to 10 with 1 meaning that it is not important and 10 meaning very important.

**Average**

- **Definition of terms**
  
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  **Average:** 7.96

- **Intake Assessment**
  
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  **Average:** 8.38

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  **Average:** 8.98

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  **Average:** 8.61

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  **Average:** 7.77

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  **Average:** 7.67

4. How do you perceive the issue of learning difficulties or disabilities in your program?  

9 checked all 4

24 We see all of our learners as learning “abled” who learn in their own unique ways, but are not disabled.

51 While most learners are able to improve their reading and writing skills, some clearly have learning disabilities which make it difficult for them to make progress without specialized materials or techniques.

38 Many of our learners do not learn the way reading was taught in school. They have differences in how they learn but are not learning disabled.

17 Many of the learners who come into our program are learning disabled and need specialized instruction in phonemic awareness first before we can teach them life skills like reading a newspaper.
6. During your intake process, how many learners do you estimate self-identify as being dyslexic, being in special ed in school, or having a learning disability? %
The Role of Phonological Awareness in Learning to Read

*Bridges to Practice: Guidebook 4*

Research has documented that phonological awareness is one of the most important factors in learning to read (Lyon and Alexander, 1996). But what is phonological awareness? Phonological awareness is most commonly defined as one’s sensitivity to, or explicit awareness of, the phonological structure of words in one’s language (the sound system of a language).

Deficits in phonological awareness are characterized by weaknesses in the ability to “hear” the individual sounds in words. An adult with weak phonological awareness might not be able to identify the final sound in a word like “clap,” or to generate other words that start with the same first sound. In short, phonological awareness involves the ability to notice, think about, or manipulate, the individual sounds within words (Torgesen et al., in press).

The smallest unit of meaningful, or functional, sound in a language is called a phoneme. For example, the word bat has three phonemes, /b/, /a/, /t/. By changing the first phoneme, we can produce the word hat, /h/, /a/, /t/. Changing the second phoneme creates the word but, and changing the last phoneme creates the word ban. In essence, phonemes are the building blocks of all spoken and written language; words in a language are composed of strings of phonemes. We can create all the words in the English language through various combinations of just 44 phonemes.
THE STAGES OF TEACHING
PHONEMIC AWARENESS

There are several stages of teaching phonemic awareness. Many of the curricular materials based on the Orton-Gillingham approach to teaching reading employ these stages:

1. Recognizing and Supplying Rhymes

   Does cat rhyme with gut?
   Does dog rhyme with mad?
   Say a word that rhymes with strong. (long, gong, song, wrong)

2. Phoneme Identity

   What word begins with the same sound as cat? Dog or kite?
   As flat? Fig or bat? What word ends with the same sound as man? Tin or mat?

3. Phoneme Isolation

   What’s the first sound in fan? /f/
   the last sound in which? /ch/
   the middle sound in his? /i/

4. Phoneme Segmentation and Counting

   Say the speech sounds (phonemes) you hear in fan. /f/ /a/ /n/
   How many speech sounds (phonemes) are there in fan? (3)

5. Phoneme Blending

   Blend these sounds together to make a word: /sh/ /u/ /t/ (shut)

6. Phoneme Deletion

   Say: fan without the /f/ (an)
   slit without the /l/ (sit)
   string without the /st/ (ring)
   pitch without the /p/ (itch)
Here is a sample assessment tool created by Nadine Rosenthal. She is the author of *Teach Someone to Read: A Step-by-Step Guide for Literacy Tutoring,* and *Speaking of Reading.*

**Scoring:**

1. Tell your student that you will go home and analyze the assessment and that you will discuss the results the next time you get together.

2. Turn to Evaluation Form #1 and look at the column labeled “pronunciation” where you wrote your student’s mis-pronounced words. On the chart to the right-hand side of that column, circle the part of the original word that your student got wrong. For example, if the original word was “hem” and your student said “him,” circle the “i” on the chart. If the original word was “bath” and your student said “bat,” circle the “th” on the chart. Or if the word was “hotel” and your student said “hostel,” circle the “ho” in the chart. You are looking for the element of the original word that your student got wrong. You are less concerned with what element was substituted for the original one.
3. Add up the circles in each column and record the sum in the “Totals” section at the bottom of each page of the Evaluation Forms. Carry any sub-totals over to the next page.

4. Take these totals from the Evaluation Forms and transfer them to the corresponding headings in Column 4 of the Summary Sheet under the heading “Errors Made.” If the number of errors actually made is higher than the numbers of errors allowed, then remedial work is needed in that particular area of phonics.

5. Now look back through the three evaluation forms for any large groupings of errors that were made in any of the specific categories listed in Column 5 of the Summary Sheet, titled “Specific Areas Where Most Errors Were Made.” Circle any specific phonics areas in Column 5 which stand out as needing the most remedial work.

6. In Column 6 of the Summary Sheet, titled “Areas Needing Host Remedial Work,” check the three areas where you will begin remedial phonics instruction with your student.

7. You now have a phonics diagnosis for your student. You will use this diagnosis to remediate your student’s specific phonics needs.
# Rosenthal Diagnostic Phonics Assessment (RDPA)

## Evaluation Form #1

**Student:**  
**Tutor:**  
**Date:**

### Notes Word Pronunciation

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<td>job</td>
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**ERROR SUB-TOTALS:** (carry over to page 2)  
**ERROR TOTALS:**
### LEARNING TO READ, READING TO LEARN
Rosenthal Diagnostic Phonics Assessment (RDPA)

**Evaluation Form #2**

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**ERROR SUB-TOTALS:** (carried from page 1)

**ERROR TOTALS:**
# Rosenthal Diagnostic Phonics Assessment (RDPA)

## Evaluation Form #3

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### Notes

- Word Pronunciation
  - Vowel
  - Consonant
  - Vowel
  - Consonant
  - Vowel
  - Consonant
  - Vowel
  - Consonant
  - Vowel

### List #4

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### Errors

- Allowed: 4

### List #4a

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<td>de / vo</td>
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<tr>
<td>vanishes</td>
<td>van / ish</td>
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</tr>
<tr>
<td>direction</td>
<td>di / rec</td>
</tr>
<tr>
<td>passages</td>
<td>pas / sa</td>
</tr>
<tr>
<td>punished</td>
<td>pun / ish</td>
</tr>
<tr>
<td>approaches</td>
<td>ap / proach</td>
</tr>
<tr>
<td>demanding</td>
<td>de / mand</td>
</tr>
<tr>
<td>finishing</td>
<td>fin / ish</td>
</tr>
<tr>
<td>probably</td>
<td>prob / ab</td>
</tr>
<tr>
<td>connection</td>
<td>con / nec</td>
</tr>
</tbody>
</table>

### ERROR TOTALS:

- Vowel: 7
- Consonant: 14
- Vowel: 7
- Consonant: 14
- Vowel: 7
- Consonant: 14
- Vowel: 7
- Consonant: 14
- Vowel: 7
- Consonant: 14
### LEARNING TO READ, READING TO LEARN

Rosenthal Diagnostic Phonics Assessment (RDPA)

Summary Sheet

<table>
<thead>
<tr>
<th>Student:</th>
<th>Tutor:</th>
<th>Date:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Phonics Area Tested</th>
<th># Times Tested</th>
<th># Errors Allowed</th>
<th># Errors Made</th>
<th>Specific Areas Where Most Errors Were Made (Circle)</th>
<th>Areas Needing Most Remedial Work (Check)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Consonants</td>
<td>21</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beginning Blends</td>
<td>25</td>
<td>8</td>
<td></td>
<td>Blends with: l, r, s</td>
<td></td>
</tr>
<tr>
<td>Beginning Digraphs</td>
<td>9</td>
<td>3</td>
<td></td>
<td>sh, ch, th</td>
<td></td>
</tr>
<tr>
<td>Three-letter Blends</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short Vowels</td>
<td>30</td>
<td>9</td>
<td></td>
<td>a, e, i, o, u</td>
<td></td>
</tr>
<tr>
<td>Vowel Combinations</td>
<td>18</td>
<td>5</td>
<td></td>
<td>ai, ay, ee, ea, oa, oo, ou</td>
<td></td>
</tr>
<tr>
<td>Vowel with r, l, w</td>
<td>6</td>
<td>2</td>
<td></td>
<td>r, l, w</td>
<td></td>
</tr>
<tr>
<td>End Consonants</td>
<td>33</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>End Blends</td>
<td>15</td>
<td>4</td>
<td></td>
<td>Blends with: l, n, m, p, s</td>
<td></td>
</tr>
<tr>
<td>End Digraphs</td>
<td>9</td>
<td>3</td>
<td></td>
<td>sh, ch, th</td>
<td></td>
</tr>
<tr>
<td>Vowel with Silent “e”</td>
<td>9</td>
<td>3</td>
<td></td>
<td>a, i, o, u</td>
<td></td>
</tr>
<tr>
<td>Syllables</td>
<td>30</td>
<td>9</td>
<td></td>
<td>˘V/C/V, ˘V/CV, ˘V/C/V</td>
<td></td>
</tr>
<tr>
<td>Endings</td>
<td>15</td>
<td>4</td>
<td></td>
<td>es, ed, ing, tion, ly</td>
<td></td>
</tr>
</tbody>
</table>

*Further comments:*
APPENDIX D

Access Ingenuity
Resource Guide

Learning Disability—
Assistive Technology Solutions Map
## RESOURCE GUIDE

### LEARNING DISABILITY – ASSISTIVE TECHNOLOGY SOLUTION MAP

Solutions for Learning Disabilities are outlined below – under the two headings, High Tech and Low Tech. Low Tech solutions are generally low in cost and some may already be accessible to you. High Tech solutions offer increased access for people with Learning Disabilities.

<table>
<thead>
<tr>
<th>Learning Disabilities</th>
<th>Low Tech</th>
<th>Solutions</th>
<th>High Tech</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Writing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dictionary</td>
<td></td>
<td>Word Processing/</td>
<td></td>
</tr>
<tr>
<td>Alternative Keyboard</td>
<td></td>
<td>Prediction Software (i.e.</td>
<td></td>
</tr>
<tr>
<td>Spell Checker</td>
<td></td>
<td>textHELP!, WYNN)</td>
<td></td>
</tr>
<tr>
<td>Auditory Spell Checker</td>
<td></td>
<td>Voice Recognition</td>
<td></td>
</tr>
<tr>
<td>Tape recorders for notes</td>
<td></td>
<td>Software (i.e. Dragon Dictate)</td>
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<tr>
<td></td>
<td></td>
<td>Laptop computer</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Semantic organizers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(textHELP!)</td>
<td></td>
</tr>
<tr>
<td><strong>Reading</strong></td>
<td></td>
<td>Scanning Software (WYNN)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-Books</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Screen readers (WYNN, textHELP!)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Audio Cassettes</td>
<td></td>
</tr>
<tr>
<td><strong>Math</strong></td>
<td></td>
<td>Math software</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Talking calculator</td>
<td></td>
</tr>
<tr>
<td><strong>Organizational Skills</strong></td>
<td></td>
<td>Idea organization software (Inspiration)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Advanced electronic organizer (Palm, etc.)</td>
<td></td>
</tr>
<tr>
<td><strong>Listening</strong></td>
<td></td>
<td>Variable speech tape-recorder</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Laptop computer for note taking</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Amplification</td>
<td></td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td></td>
<td>Trackball mouse</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LD Specific Keyboards</td>
<td></td>
</tr>
</tbody>
</table>
These ideas and solutions are not the only ones, and should you have any specific requests we would be happy to discuss them with you.

**Glossary**

**Windows Magnifier** – Windows Accessibility option, allows the pc image to be adjusted in size

**Screen Reader** – Software that transforms screen text to speech output

**Scanning Software** – Software that translates scanned text into speech

**Windows Narrator** – Very basic Screen Reader (see above)

**Trackball Mouse** – Mouse designed to be easier for people with poor hand movement

**LD Specific Keyboards** – Keyboards designed with an alternative layout, easier keys and can automatically ignore repeated keystrokes

**Sticky Keys** – If you want to use SHIFT, CTRL, ALT or Windows logo key by pressing one at a time

**Filler Keys** – If you want Windows to ignore brief repeated keystrokes, or slow repeat rate

**Toggle Keys** – If you want to hear tones when pressing Caps Lock, Num Lock and Scroll Lock

**Voice Recognition Software** – Software allowing control of the computer through speech