

## A RESOURCE GUIDE ABOUT DYSLEXIA

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### for People in Hawai'i

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## WELCOME

If you or someone you know has a difficult time with reading, writing, or spelling, this person may well be dyslexic. Dyslexia, sometimes called a Specific Learning Disability (SLD), may pose a major life challenge. Without proper teaching, dyslexic learners face a life-long struggle with language. Dyslexic persons are often creative thinkers who excel at multidimensional, “big picture” thinking. Yet, the talents that often accompany dyslexia may be masked by the demands of learning to read, write, and spell.

There are services and resources available in Hawai'i to help meet these demands. Recent breakthroughs in scientific research help educators understand how dyslexic brains work. Proven methods of teaching are successful in opening up the world of the written word. Legal accommodations and technological innovations provide needed support.

A network of knowledgeable and committed people and organizations in Hawai'i can help dyslexic learners and their families meet their needs. This resource guide is written to introduce dyslexic learners, their parents, teachers, and other relevant professionals to our community's resources and to help them take action to meet the needs of the dyslexic persons in their lives. Please visit our website at [www.dyslexia-hawaii.org/](http://www.dyslexia-hawaii.org/) for the latest information on workshops, conferences, teacher training, parent support groups, and other events in Hawai'i.

## FACING YOUR FEARS

Readers of this manual may approach this subject with fear and trepidation. For the adult dyslexic learner, this document may be very hard to read. If you are having trouble reading this guide, please call HIDA at 538-7007 and ask for an audio version.

For the parents of a dyslexic child, concern for your child's future is probably a daily companion. Rick Lavoie, a long-time special education teacher and administrator, reports that parents are often more traumatized by the news that their child is dyslexic than they are by reports of other, far more serious, indeed life threatening, conditions.<sup>1</sup> Perhaps because dyslexia is a hidden disability, parents may feel confused that a problem they cannot see threatens their child. Perhaps because dyslexia is hereditary, concern for a child's well-being may be framed by difficult memories of the parents' own struggles with language.

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<sup>1</sup> Rick Lavoie made this comment at a HIDA symposium, “On the Waterbed: The Impact of Learning Disabilities,” Kapiolani Community College, September 13, 2003.

If you are a teacher, you may be puzzled and frustrated by the challenges of teaching students who, despite your best efforts, just don't "get it." If you are a principal or other educator, you may be worried about stretching scarce resources to meet the needs of multiple populations.

Don't be afraid. Instead, be determined. The world of dyslexia offers significant rewards as well as challenges. This resource guide provides useful information for everyone in Hawai'i who is dyslexic, or knows someone who is dyslexic. The knowledge you need in order to take effective action is here.

## ACKNOWLEDGEMENTS

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To the memory of

BARRETT MCCANDLESS

who worked tirelessly on behalf  
of dyslexic children in Hawai'i.

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## WHAT IS DYSLEXIA?

Dyslexia is a common learning difference, affecting 5-15% of the population to varying degrees. Dyslexia is sometimes called a Specific Learning Disability (SLD). However, many educators and researchers refer to dyslexia simply as a learning difference, not a disability; dyslexia only becomes a disability because traditional educational systems are usually set up with non-dyslexic learners in mind. Also, federal policy requires that educators identify dyslexic students as learning disabled (LD) in order to qualify for services.

The word “dyslexia” comes from two Greek terms: “dys” means difficult or poor, and “lexia” means verbal language. Dyslexia, then, is difficulty with language. Dyslexia is not a disease, nor does it have a cure. It is a way of learning, often a gifted and creative way, which does not respond well to the kind of teaching prevalent in conventional classrooms. Dyslexic learners are usually average to above average in intelligence, yet experience difficulty in reading, spelling, writing, sequencing, remembering, listening, organizing their thoughts, and/or expressing themselves clearly. Teachers often note an unexpected and significant gap between the students’ potential and their actual achievement, a gap that cannot be explained by visual or hearing impairments, emotional/behavioral disorders, or lack of conventional instruction. Parents and teachers unaware of dyslexia’s typical patterns will often say, “He’s so bright. If only he would try harder.” Yet people with dyslexia are neither lazy nor stupid. Given proper instruction, dyslexic learners can flourish.

The official definition of dyslexia, adopted by our parent organization, the International Dyslexia Association (IDA) and by the National Institutes of Health in 2002, states:

Dyslexia is a specific learning disability that is neurological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.<sup>2</sup>

This is the definition of dyslexia that guides current research and educational policy. It has several important components. *Specific learning disability* is the language used by the Hawai'i Department of Education (DOE) to identify,

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<sup>2</sup>See the IDA website at <http://www.interdys.org/> for more information.

assess, and remediate dyslexic students. *Neurological* means that dyslexia is a characteristic of the brain and central nervous system; it is “hard-wired” into our brains, yet current research suggests that the “wiring” of the brain can itself be changed through structured educational interventions. *Decoding* refers to the ability to put the pieces of a word together in order to read it, while *encoding* means breaking a word into its constitutive pieces in order to spell it. *Phonological component of language* refers to the patterns among sounds and elements of language. Non-dyslexic learners usually pick up the patterns after modest exposure to their elements. Dyslexic learners, in contrast, do not intuit the patterns in language on their own and must be directly taught how language works. These problems are unexpected in that the person struggling with language seems to be quite intelligent in other ways, yet is unable to benefit fully from conventional classroom instruction. (See Glossary at the end of this manual for more detailed explanations of terms.)

The relation of sounds to symbols is often, prior to effective instruction, incomprehensible to dyslexic learners. They just don’t “get” representation – the idea that a sound, like the short /ă/ sound in *apple*, is represented by a letter which has a name, pronounced /ā/, and a written form that looks like a circle with a little tail.<sup>3</sup> One dyslexic student, confounded by a written text, looked up in desperation and cried, “I can’t find the words! I can’t make the book talk.”<sup>4</sup> To this child, dark squiggles on a white page meant nothing. To the non-dyslexic parent or teacher, for whom the patterns of representation seem obvious, the child’s confusion is itself baffling, often leading to frustration and blaming rather than effective intervention. Further, dyslexic learners often have difficulty hearing the separate sounds that make up a word; instead, they hear a single blast of sound and cannot differentiate its elements. A dyslexic person could hear and repeat the word *cat* but have difficulty breaking it down into its three phonemes (sound units): /k/ /a/ /t/. A century ago, grammarians thought that the relation between the sound, the spoken name of the letter, and the written letter was universal and natural, but more recent studies indicate that, while speaking is “natural” in the sense that nearly everyone can do it without explicit instruction, relations among sounds and symbols are arbitrary and must be learned. Some people have more trouble learning them than others.

An individual with dyslexia may experience deficits in memory storage, sequencing, and retrieval of information. These problems can include: remem-

<sup>3</sup> The convention of placing slash marks on both sides of a letter or letter combination refers to the sound that letter or letter combination makes when said aloud. For vowels, which make more than one sound, a curved line above the letter (a breve) indicates a short sound (such as the /ō/ in *ox*) while a straight line (a macron) indicates a long sound (such as the /ō/ in *bone*).

<sup>4</sup> Rick Lavoie, “On the Waterbed: The Impact of Learning Disabilities,” Kapiolani Community College, September 13, 2003.

bering information long enough to repeat, manipulate, or store it; retaining new material long enough to integrate it into previous knowledge; and retrieving the sequence of tasks that includes several steps. Problems in storing, sequencing, and retrieving information often lead teachers and parents to scold the dyslexic child for “not paying attention.” Parents and teachers may not realize that the linear component of thinking, where one goes step-by-step through a list of items, is less amenable to a dyslexic way of thinking than are the multidimensional, integrative, higher-order skills that help dyslexics to “think outside the box.”

The secondary consequences of dyslexia, if it goes unremediated, can be as damaging as the primary aspects of the condition. Dyslexic readers struggle to decode (read) and encode (spell). Often they work so hard sounding out each word that, by the time they get to the end of the sentence or paragraph, they can't remember what they have read. They are focusing on each individual word, one word at a time, and they lose the meaning of the whole passage. If they do not know the rules and patterns of English, they often sound out the first syllable of a longer word, then guess at the rest. A few wrong guesses that go uncorrected obscure the meaning of the passage, and the laboring reader gives up.

Because reading becomes a traumatic, unrewarding chore, people with dyslexia often avoid it. If they don't read, they are not exposed to the range of vocabulary and background information that are routine for peers who are active readers. Deficits in vocabulary and general information grow at an exponential rate, creating a vicious cycle in which lack of reading leads to dearth of vocabulary and knowledge which makes reading even harder, leading to more avoidance of reading. So the dyslexic person falls further and further behind his or her age group. The National Research Council estimates that 25%-40% of U.S. school children “do not read well enough, quickly enough, or easily enough to ensure comprehension in their content courses in middle and secondary school.”<sup>5</sup> These children's educational careers and future occupational choices are imperiled.

The psychological consequences of academic failure may scar a person for life, hindering the development of other life skills and the emergence of other talents. The dyslexic learner's inability to meet the expectations of others produces frustration, anxiety, and shame. Researchers have found that when nondyslexic learners succeed at a task, they usually credit their own efforts for the success. When they fail, they urge themselves to try harder next time. In contrast, when dyslexic learners succeed at a task, they tend to attribute their success to “luck.” When they fail, they assume they are

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<sup>5</sup> C.E. Snow, S. Burns, and P. Griffin, eds., “Preventing reading difficulties in young children,” (Washington, DC: National Research Council, 1998), quoted in Lee Sherman and Betsy Ramsey, *The Reading Glitch* (Lanham, MD: Rowman and Littlefield, 2006), p.74.

stupid.<sup>6</sup> The accumulated burden of school failure can lead to depression, negativity toward oneself and toward life in general, and anger, often directed at those close to the dyslexic learner who are trying to help. Relationships within families are often painfully taxed by the stress of the dyslexic family members' problems and perhaps by jealousy and resentment if others perceive the dyslexic person as "getting all the attention."<sup>7</sup>

We can intervene in the downward spiral by teaching dyslexic learners reliable strategies for reading, writing, and spelling so they can "crack the code." In place of the negative feedback loop, we can create a cycle of success. The ability to read generally produces a greater willingness to read, which develops vocabulary and general knowledge, thus making reading easier and more pleasurable. Similarly, the ability to spell and write generally produces a greater willingness to try, thus broadening the person's familiarity and comfort with words and texts. Just as failure leads to more failure, interventions that prompt success can lead to more success.

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<sup>6</sup> Michael Ryan, "The Other Sixteen Hours: The Social and Emotional Problems of Dyslexia," The Orton Emeritus Series (Baltimore, MD: The International Dyslexia Association, 1994): 10.

<sup>7</sup> Michael Ryan, "Social and Emotional Problems Related to Dyslexia," *Just the Facts...* IDA Fact Sheet #49 (Baltimore, MD: The International Dyslexia Association, 2004). [http://www.interdys.org/webeditpros/Social\\_and\\_Emotion\\_Problems\\_Related\\_to\\_Dyslexia.pdf](http://www.interdys.org/webeditpros/Social_and_Emotion_Problems_Related_to_Dyslexia.pdf).

## WHAT ARE THE COMMON INDICATORS OF DYSLEXIA?

People with dyslexia are not all the same. There are different degrees of dyslexia, ranging from mild to moderate to severe. There is no clear division, no “gap in nature,” between good readers and poor readers; instead, there is “an unbroken continuum.”<sup>8</sup> Some elements of dyslexia will manifest in a given person while others will not. The manifestations of dyslexia may change over time as individuals grow and learn. The signs of dyslexia should be thought of as a spectrum or constellation of traits; no single one of them is a decisive indicator of dyslexia, but many of them together strongly suggest a learner with dyslexia.

The central characteristic is difficulty in processing oral and/or written language.

### **Difficulty with oral language:**

- Delayed language development
- Problems in pronouncing words, retrieving words in speech, and/or expressing ideas clearly
- Difficulty in learning to rhyme
- Difficulty in learning the alphabet or comprehending the relation between sounds and symbols
- Problems perceiving and sequencing sounds within words, including segmenting (breaking words into sounds) and blending (combining sounds to make a whole word)
- Poor listening skills (e.g., difficulty in following oral directions)

### **Difficulty with reading:**

- Difficulty with phonemic awareness activities (e.g., identifying or generating rhyming words; counting sounds or syllables in words; substituting one sound for another in a word)

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<sup>8</sup> Sally Shaywitz, *Overcoming Dyslexia* (NY: Alfred A. Knopf, 2003), pp. 27-28. Researchers conceptualize reading ability and disability in a dimensional model (a continuum) rather than a categorical model (two separate categories characterized by a natural break). A dimensional model suggests that the cut-off point between good and poor readers is arbitrary. Consequently, children who have not yet failed enough to meet particular criteria of disability may go unidentified.

- Difficulty in sequencing letters or sounds in words or numbers
- Reversals (e.g., “b” for “d”) or rotations (e.g., “p” for “b”)
- Transpositions (e.g., reading “was” for “saw,” or “from” for “form”)
- Confusion over words that look similar (e.g., “horse” for “house”)
- Problems misreading or omitting small words
- Tendency to delete or change the latter syllables of words (e.g., “commit” for “commute,” or “intention” for “intensity”)
- Slow and laborious word-by-word reading
- Difficulty in remembering what was read or drawing inferences from the material

**Difficulty in spelling:**

- Weak spelling skills (e.g., may do well on weekly spelling tests, but forgets it all after the test and makes many spelling errors in daily work)
- Persistent misspelling of common non-phonetic words (e.g., “they,” “could,” “does”)
- Confusion over homonyms (words that have the same sound but different spellings and different meanings, such as “their,” “there,” and “they’re”)
- Tendency to reverse, transpose, or rotate letters

**Difficulty in writing:**

- Difficulty with written work (tends to have many good ideas, but cannot write them in a coherent manner)
- Errors in copying
- Level of oral vocabulary not evident in writing
- Poor handwriting (awkward, overly tight pencil grip; slow, labored production of letters; poor formation of letters or overly elaborate “drawing” of letters; difficulty spacing the letters and words, putting them too close or too far apart)
- Difficulty in learning cursive and preference for printing

**Difficulty with organization:**

- Weak organizational skills
- Difficulty remembering homework or assignments, often unsure if it has been turned in
- Overwhelmed by too much information

- Disorganized work space or personal space
- Poor time management skills (often does not realize how long a task will take to complete)
- Slow, laborious work process (e.g., can visualize the final product but can't get started)

#### **Difficulty with math:**

- Slow to learn to tell time, to sequence the days of the week, months, seasons, etc.
- Difficulty in memorizing (e.g., arithmetic facts or formulas)
- Difficulty with math vocabulary or retaining concepts
- Tendency to reverse numbers or confuse signs (e.g., “p” and “9” or “2” and “5”)
- Difficulty in discriminating between similar-sounding numbers, such as 13 and 30 or 15 and 50
- Difficulty copying problems or keeping numbers aligned in columns
- Difficulty relating to directional movement such as left-right or up-down
- Frequent calculation errors

#### **Social difficulties:**

Dyslexic learners may experience accompanying problems with social relations, often resulting from the frustration and impatience produced by the accumulated weight of academic difficulties. Social dimensions of dyslexia may include:

- Low tolerance of frustration
- Difficulty interpreting nonverbal cues
- Difficulty making and keeping friends
- Misunderstanding figurative language
- Poor social judgment
- Weak problem solving or coping skills
- Difficulty in accepting changes in routine
- Low self-esteem
- High risk for depression

**Other difficulties may include:**

- Confusion over directions (e.g., left-right, before-after, forward-backward)
- Difficulty with word retrieval or rapid naming (e.g., naming colors, objects, letters)
- Lack of dominant handedness
- Need to see and hear concepts repeatedly in order to learn them
- Inconsistent performance in school, work, or household tasks
- Downward trend in achievement test scores
- Difficulty in learning a foreign language

*Is that all?* Given these alarming indicators, it is tempting to conclude that dyslexia is only and always a disability, a burden for those afflicted. Indeed, the negative consequences of dyslexia often seem to outweigh any positives, especially because it is the “down side” of dyslexia that is most prominently highlighted in school. About half of U.S. children and teenagers with drug and alcohol problems also have significant reading problems.<sup>9</sup> A whopping 38% of 4th grade students in the U.S. fail to learn to read well in school.<sup>10</sup> Many, if not most, are dyslexic. Dyslexic teenagers are more likely than nondyslexics to drop out of school, withdraw from friends or families, or attempt suicide.<sup>11</sup> The National Council on Disability estimates that “approximately 30% of children in the juvenile justice system” have a learning disability.<sup>12</sup> Dyslexics are disproportionately represented in prison; a recent British study found that over half their prisoners have limited literacy skills, while 20% have a learning disability.<sup>13</sup>

Yet, it is crucial for the mental health of dyslexic learners, the resilience of their families, and the adaptability of society as a whole to recall the accom-

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<sup>9</sup> G. Reid Lyon, “Reading Disabilities: Why Do Some Children Have Difficulty Learning to Read? What Can Be Done About it?” *Perspectives* 29 (2) (Spring, 2003): 17.

<sup>10</sup> Lyon, “Reading Disabilities,” p. 19.

<sup>11</sup> Christine Gorman, “The New Science of Dyslexia,” *Time* 162 (4) (July 28, 2003): 55.

<sup>12</sup> National Council on Disability, *Addressing the needs of youth with disabilities in the juvenile justice system: The current status of evidence-based research* (Washington, DC.: 2003) Cited in Marshall Raskind, “Research Trends: Is There a Link between LD and Juvenile Delinquency?” <http://www.schwablearning.org/> (2005).

Dr. Raskind points out that research has not established a causal relation between LD and juvenile delinquency: some have hypothesized that failure in school leads to a host of other problems, including delinquency; others suggest that “personality characteristics” such as impulsivity or “problem-solving deficits” might incline dyslexic youth toward crime; still others wonder if kids with learning disabilities commit crimes at about the same rate as their non-learning disabled peers, but are more likely to get caught and punished.

<sup>13</sup> The Dyslexia Institute, “The Incidence of Hidden Disabilities in the Prison Population,” <http://www.dyslexia-inst.org.uk/news45.htm> (10 March 2005).



panying “up side” of dyslexia and to ask why our educational system makes dyslexic ways of thinking so difficult to sustain. Many researchers suggest that dyslexics have characteristic talents. Dr. Sally Shaywitz at Yale University’s Center for the Study of Learning and Attention calls dyslexia an “encapsulated weakness surrounded by many strengths.”<sup>14</sup> The “sea of strengths” includes superior abilities in problem solving, reasoning, comprehension and concept formation, general background knowledge, and advanced vocabulary.<sup>15</sup> Dyslexics tend to think in pictures more so than in words. Bill Dreyer, an inventor and a biologist at Caltech who is dyslexic, commented that, “I think in 3-D Technicolor pictures instead of words.”<sup>16</sup> He believes that thinking in pictures has enabled him to develop the ground-breaking theories and unique technologies at the heart of the human genome revolution.

Researchers Gordon Sherman and Carolyn Cowen find that dyslexic learners process information more globally and are thus better at three-dimensional thinking than sequential, linear approaches. They often excel at activities that require holding complex images in their minds, including art, engineering, and computers.<sup>17</sup> John Chambers, CEO of Cisco, links his success to his dyslexia: “I just approach problems differently,” he says. “It’s very easy for me to jump conceptually from A to Z. I picture a chess game on a multiple-layer dimensional cycle and almost play it out in my mind.”<sup>18</sup> Dyslexic learners are over-represented in medicine, architecture, design, and some branches of science and mathematics.<sup>19</sup> They frequently have talent for making things and putting objects together. There are so many dyslexic students at Massachusetts Institute of Technology (MIT) that it is sometimes called “Dyslexia U.” Silicon Valley, home to many innovative high tech companies, is called “Dyslexia Corridor.” Like Diane Swonk, chief economist at Bank One, dyslexics may stumble over simple arithmetic, yet excel at higher level math.<sup>20</sup> Dyslexics often shine at oral language expression, having excellent memories for spoken language, a keen sense of observation, and strong leadership skills. They often have an acute spatial imagination

<sup>14</sup> Shaywitz, *Overcoming Dyslexia*, p. 58.

<sup>15</sup> Sherman and Ramsey, *The Reading Glitch*, p. 222.

<sup>16</sup> Betsy Morris, Lisa Munoz, and Patricia Neering, “Overcoming Dyslexia,” *Fortune* [http://money.cnn.com/magazines/fortune/fortune\\_archive/2002/05/13/322876/index.htm](http://money.cnn.com/magazines/fortune/fortune_archive/2002/05/13/322876/index.htm) (May 13, 2002).

<sup>17</sup> Gordon Sherman and Carolyn D. Cowen, “Neuroanatomy of Dyslexia through the Lens of Cerebrodiversity,” *Perspectives* 29 (2) (Spring, 2003): 9-13.

<sup>18</sup> Morris, Munoz, and Neering, “Overcoming Dyslexia.”

<sup>19</sup> Thomas West, “The Gift of Dyslexia: Talents Among Dyslexics and Their Families,” *Hong Kong Journal of Paediatrics* 10 (2005): 153-158. See also Thomas West, *In the Mind’s Eye: Visual thinkers, gifted people with dyslexia and other learning difficulties, computer images, and the ironies of creativity* (Amherst, NY: Prometheus Books, 1997).

<sup>20</sup> Morris, Munoz, and Neering, “Overcoming Dyslexia.”

and enhanced abilities to process visual-spatial information globally rather than part-by-part.<sup>21</sup> Several successful CEOs attribute their success in the business world to their dyslexia, which fosters “a distinctly different way of processing information that gave them an edge in a volatile, fast-moving world.”<sup>22</sup>

These abilities are not traits that come about despite their dyslexia, but are rather part and parcel of dyslexic ways of knowing. Successful dyslexic learners pursue and cultivate their substantial gifts, often relying on the unfailing support of family members to compensate for inappropriate classroom education. An educational system that does not reach dyslexic learners causes unnecessary human misery and creates much bigger and more expensive problems down the road. A society that does not value dyslexic learners is losing a significant pool of talent.

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<sup>21</sup> Catya von Károlyi, Ellen Winner, Wendy Gray, and Gordon Sherman, “Dyslexia linked to talent: Global visual-spatial ability,” *Brain and Language* <http://www2.bc.edu/~winner/PDFs/Dys%20Linked%20to%20Talent.Brain&Lang.pdf> (2003).

<sup>22</sup> Morris, Munoz, and Neering, “Overcoming Dyslexia.”

## FREQUENTLY ASKED QUESTIONS

### Q: Is dyslexia a result of nature or nurture?

**A: Both together.** Research on dyslexia strongly suggests that it makes little sense to divide life into inherited, biological traits (“nature”) and environmental, learned traits (“nurture”). Instead, our brains are dynamic organs that continue to grow and change throughout our lives in response to our experiences. There is a symbiotic interaction between our bodies and our cultures, characterized by fluid pathways and complex feedback loops in brain-environment relations. Scientists used to think that our brains stopped changing early in life, but now know that brain development continues. Recent breakthroughs in scientific research using functional magnetic resonance imaging (fMRI) and other technologies indicate that dyslexia results from neuroanatomical and neurochemical characteristics of brains and that proper instruction can actually alter the brain’s pathways and reorganize its functioning. There is no place where biology ends and society begins.

### Q: Is dyslexia inherited?

**A: Yes, to some extent.** Dyslexia often runs in families. No single gene has been found to carry dyslexia, but researchers have identified what they call an inherited pattern of risk. Recent research indicates that there are probably several genetic markers for dyslexia, at least one of which occurs on chromosome 6. In 2005, researchers at Yale University identified a gene on chromosome 6 that is expressed (switched on) in the parts of the brain involved in reading. The Yale research team, led by Dr. Jeffrey Gruen, believes that the DCDC2 gene causes as many as 20% of dyslexic cases. While scientists in Finland and Germany have come to similar conclusions, researchers at Oxford University contest these findings, contending that other genes are likely to play a greater role.<sup>23</sup>

While research to this point strongly suggests that dyslexia has a genetic component, periodic reports in the popular media announcing the discovery of a “dyslexia gene” are problematic for several reasons. First, there is not yet a scientific consensus on the precise genetic composition of dyslexic brains. Second, dyslexia’s genetic component does not make it immutable or pre-determined. Because genetic traits can be modified through environmental relations, one scientist has observed that, “it is better to speak in terms of probabilities of outcomes and risks due to genes instead of absolutes like *genetic causes*.”<sup>24</sup> Third, while early identification of dyslexic

<sup>23</sup> See Joe Palca, “Scientists Identify Dyslexia Gene,” *National Public Radio* <http://www.npr.org/templates/story/story.php?storyId=4980261> (October 28, 2005). See also “Scientists Discover Dyslexia Gene,” BBC <http://news.bbc.co.uk/2/hi/health/4384414.stm> (October 28, 2005).

<sup>24</sup> Jeff Gilger, “Genes and Dyslexia,” *Perspectives* 29 (2) (Spring, 2003): 6

learners through genetic testing could be a step toward providing appropriate instruction before children experience school failure, the possibility of developing gene therapy to “cure” dyslexia raises enormous ethical and educational questions. Because dyslexia entails considerable talents as well as deficits, genetic interventions could lose more than they gain.

**Q: Can dyslexia be caused by poor parenting?**

**A: NO.** Dyslexia is a neurological condition. While parents can take positive steps to help a child with dyslexia, such as reading to the child, arranging for early assessment, and securing the right kind of teaching, parenting does not cause dyslexia.

**Q: How is a dyslexic brain different than a nondyslexic brain?**

**A: There are three typical differences.** First, there are identifiable anatomical differences: the brains of dyslexic people are usually symmetrical, while non-dyslexics usually have one hemisphere larger than the other. Second, there are cellular differences: dyslexic brains have smaller neurons in the thalamus, which may interrupt the precise interactions required to transmit information across networks in the brain. Third, there are connectional differences: dyslexic brains often manifest “ectopic wiring,” which means that bundles of nerve cells are found in a part of the brain where nerve cell bodies are normally absent.<sup>25</sup> These differences produce a neurological glitch, making reading, writing and spelling extremely difficult in the absence of proper instruction. Dyslexic readers compensate for disruptions in the specialized neural systems ordinarily activated for reading by utilizing other areas of the brain; they can learn to read, but in all likelihood will always read more slowly than non-dyslexic readers.<sup>26</sup> Again, it is important to remember that the brain is a dynamic organ; while one does not “outgrow” dyslexia, the workings of the brain can change over time with systematic interventions.

**Q: Is dyslexia new? My parents and grandparents never heard of it.**

**A: No.** The combination of average to high intelligence with great difficulty in learning to read, write, and spell has been identified for over 100 years. Doctors in the 19th century called this condition “word blindness.” The path-breaking work of Dr. Samuel Orton in the 1930s established the scientific basis for understanding dyslexia. However, until recently, the only way to study human brains directly was during autopsies, resulting in an unfortunate

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<sup>25</sup> Sherman and Cowen, pp. 9-10

<sup>26</sup> Sherman and Ramsey, *The Reading Glitch*, p. 11.

lack of data. We are hearing more about dyslexia today because recently invented technologies, including computer activated tomography (CAT) and functional magnetic resonance imaging (fMRI), allow noninvasive access to information about our brains.

**Q: How early in a person's life can s/he be accurately assessed?**

A: A professional assessment can be done as early as age 5. While experienced educators can often spot early indicators of dyslexic learning in younger children, the scientifically developed measurements are valid and reliable beginning around age 5. Ideally, children should be screened in mid-kindergarten or early first grade (after they have had a chance to become accustomed to the expectations of classrooms but before they have begun to fail). Screening by a trained educator takes only a few minutes, while more in-depth testing of children who falter in the initial screening takes about 15 minutes. The cost of early screening tools is minimal: the assessment tools offered by Dynamic Indicators of Basic Early Literacy Skills (DIBELS) are free on-line, while the Texas Primary Reading Inventory (TPRI) is about \$3.00 per child.<sup>27</sup> Both are based on the recommendations of the National Reading Panel report in 2000 and the National Research Council report in 1998. An investment in early identification of dyslexic learners, followed by the appropriate teaching, could avert much more costly problems later on while making an enormous difference in many children's lives.

**Q: Who is typically dyslexic? Are there more boys than girls?**

A: **Dyslexia is an equal opportunity condition.** It occurs in all races, ethnic groups, and classes of people. Dyslexia tends to run in families, suggesting that the propensity to be dyslexic is inherited. It occurs in both males and females, although the exact distribution is still in dispute. Many years ago, it was thought that more boys than girls are dyslexic, as many as 4 boys for every girl. Subsequent research suggested that the gender distribution was more equal: boys were four times more likely than girls to be identified, it was thought, because boys are more likely than girls to “act out” their frustration. Girls, on the other hand, tend to avoid calling attention to their difficulties and often substitute the social rewards of school for its academic offerings.<sup>28</sup> However, some recent studies are returning to the older theory, finding more boys than girls among dyslexic learners even after controlling

<sup>27</sup> Susan L. Hall and Louisa C. Moats, *Parenting the Struggling Reader: A Guide to Diagnosing and Finding Help for Your Child's Reading Difficulties* (NY: Broadway Books, 2002), p. 75. See <http://dibels.uoregon.edu/index.php> for information about DIBELS.

<sup>28</sup> S.E. Shaywitz, B.A. Shaywitz, J.M. Fletcher, and M.D. Escobar, “Prevalence of Reading Disability in Boys and Girls: Results of the Connecticut Longitudinal Study,” *Journal of the American Medical Association* 264 (1990): 998-1002.

for the greater propensity of schools to identify boys.<sup>29</sup> While research continues on this controversial point, it is clear that dyslexic learners are found among both boys and girls.

**Q: Does dyslexia occur in languages other than English?**

**A: Yes.** Current research suggests that the complexity of a language’s written form determines how dyslexia will manifest in reading and writing. Writing is a code, and different writing systems make different sorts of demands on the brain’s processing systems. English and French, for example, contain many different ways to write the same or similar sounds, or to pronounce the same letter or combination of letters, while the patterns of orthography (written language) are much more regular in Italian. Italian, then, is easier to read and write for all learners, while “cracking the code” in English and French poses greater challenges.<sup>30</sup> Latin is a relatively regular language, as well as being the basis for half of the English language; consequently, learning Latin helps build vocabulary in English and thus is a good choice of second language for dyslexic learners.<sup>31</sup>

While the majority of studies on dyslexia have been conducted on English-speaking subjects, international researchers have found dyslexia to be relatively common in Finland (10% of those studied), Russia (10%), and Nigeria (11%).<sup>32</sup> Researcher Nata Goulandris found dyslexic learners in German, Dutch, Greek, Polish, Russian, Swedish, French, Norwegian, Hebrew, Indian

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<sup>29</sup> K.A. Flannery, J. Liederman, L. Daly, and J. Schultz, “Male prevalence for reading disability is found in a large sample of black and white children free from ascertainment bias,” *Journal of the International Neuropsychological Society* 6 (4) (May 2000): 433-42. See also Jennifer L. St. Sauver, Slavica K. Katusic, William J. Barbaresi, Robert C. Colligan, and Steven J. Jacobsen, “Boy/Girl Differences in Risk for Reading Disability: Potential Clues?” *American Journal of Epidemiology* 154 (9): 787-794.

<sup>30</sup> There are over 1000 different letter combinations (graphemes) representing 44 phonemes (sound units) in English. In Italian, only 33 graphemes represent the language’s 25 phonemes. See a report from the American Association for the Advancement of Science, summarized in “Dyslexia Study In Science Highlights the Impact of English, French, and Italian Writing Systems,” *Science Daily* <http://www.sciencedaily.com/releases/2001/03/010316073551.htm> (March 16, 2001). Professor Eraldo Paulesu at the University of Milan Bicocca, the director of the study, points out that English and French have been heavily influenced by elements from other languages over the centuries, while Italian has remained relatively pure.

<sup>31</sup> Dyslexic learners may also find sign language to be a good choice for a second language in high school or college. For insight into the relation of dyslexia to foreign language acquisition, see “At-Risk Students and the Study of a Foreign Language in School,” *Just the Facts... IDA Fact Sheet #25* (Baltimore, MD: The International Dyslexia Association, 2002). See <http://www.interdys.org/FactSheets.htm> for IDA Fact Sheets.

<sup>32</sup> R. Salter and I. Smythe, eds., *The International Book of Dyslexia* (London: World Dyslexia Network Foundation) 1997, quoted in Lindsay Peer and Gavin Reid, eds., *Multilingualism, Literacy, and Dyslexia* (Oxford, UK: David Fulton Publishers, 2004), p. 13

languages, Japanese languages, Chinese, and Braille.<sup>33</sup> Recent studies by Japanese scientists identify orthographically specific processing patterns in the brains of dyslexic learners in their society; it is the reading and writing of phonetically irregular kanji (as opposed to hiragana or katagana) that provokes problems.<sup>34</sup> Chinese languages require readers to master about 5,000 different characters, each corresponding to a word. Chinese scientists have found that dyslexic learners have difficulty extrapolating from a symbol's shape to its sound and meaning.<sup>35</sup> Bilingual individuals may be dyslexic in one language but not in another.<sup>36</sup>

Researcher Sally Shaywitz reports that when her article “Dyslexia” appeared in *Scientific American* in 1996, stories of similar language difficulties poured in from all parts of the globe.<sup>37</sup> While the neural basis of various languages is complex and not yet fully understood, it is clear that dyslexia is a global phenomenon.

**Q: My child reverses “b” and “d.” Is she dyslexic?**

**A: Not necessarily.** Reversal of letters or numbers is only one of several dozen traits that, together, outline the areas of language difficulty characterizing dyslexia. Many young children initially reverse or transpose letters, but readily learn the proper form and relation of the figures as they advance. Reversing “b” and “d” is the most famous trait of dyslexic learners, but is not by itself grounds for establishing that dyslexia is present.

**Q: Is there a quick fix?**

**A: NO.** The *only* legitimate, successful approach to dyslexia is educational. Legitimate remediation programs are based on scientific research published in peer-reviewed journals and subject to replication. Beware of charlatans selling products promising deliverance: for example, tinted lenses, expensive “auditory retraining,” special dietary supplements, complex exercise programs, special bed sheets, shoe inserts, or “orientation counseling.”<sup>38</sup> Be suspicious of any approach that promises a “cure” or sounds too good to be true. Avoid programs that guarantee results within a specified time

<sup>33</sup> See Nata Goulandris, ed., *Dyslexia in Different Languages* (Hoboken, NJ: Wiley 2003).

<sup>34</sup> Keiko Katayama, “Dyslexia not unusual in Japan,” *The Daily Yomiuri* (Japan) <http://www.yomiuri.co.jp/newse/20050125wob2.htm> (January 25, 2005).

<sup>35</sup> Helen Pilcher, “Chinese dyslexics have problems of their own,” *news@nature.com* at <http://www.nature.com/news/2004/040830/full/040830-5.html> (September 1, 2004).

<sup>36</sup> Pilcher, “Chinese dyslexics have problems of their own.”

<sup>37</sup> Shaywitz, *Overcoming Dyslexia*, p. 31.

<sup>38</sup> Larry B. Silver, “Controversial Therapies,” *Perspectives* 27 (3) (Summer, 2001).

period. There is a great deal of money to be made from desperate parents looking for a quick fix, but there is no quick fix, only long-term investment in the child's learning.

Dr. Larry Silver, a notable authority on dyslexia, offers three measures to evaluate proposed treatments: 1. Is there scientific research to support the practice? 2. Is the treatment being commercially pushed *before* its validity has been established through proper research? 3. Is there clear scientific evidence indicating that the program does not work, but it is still being promoted commercially? The answer to the first question should be *yes*. The answers to the second and third questions should be *no*. "The buyer must beware," Silver warns. "Learn before you spend your money and put your child through the program."<sup>39</sup> Expensive programs based on false promises deplete families' resources while delaying the needed educational interventions that *will work*.

**Q: Is home schooling good for dyslexic kids?**

**A: It may be.** Home schooling offers several advantages: individualized instruction, flexible pace, varied activities including travel and field trips, hands-on learning, and inquiry guided by the student's own interests and enthusiasms. Children who are home schooled in a caring environment do not face the humiliation of academic failure that often scars dyslexic students in traditional classrooms. Yet home schooling is a challenging task for any parent of any child, and more so with children who require specialized teaching: parents must in essence become experts on the content, sequence and methodology of effective language instruction. Given the rising popularity of home schooling, there are many resources available to assist parents and students.<sup>40</sup>

**Q: Are there are kinds of learning disabilities besides dyslexia?**

**A: Yes.** Dysgraphia is a neurologically-based writing disability in which the individual has difficulty forming letters, writing on a line, spacing letters and words, holding a pencil, or putting thoughts on paper. Dyscalculia is a mathematical disability in which a person has unusual difficulty in grasping math concepts or solving arithmetic problems. Nonverbal learning disability (NLD) is a catch-all category for learning disorders that are not language-

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<sup>39</sup> Larry B. Silver, "Another Claim of a Treatment for Learning Disabilities: Should You Consider it?" Tennessee Center for the Study and Treatment of Dyslexia (Reprinted from Learning Disabilities of America, September 2003) <http://dyslexia.mtsu.edu> (posted on this site January 16, 2004).

<sup>40</sup> For further information and recommendations, see "Why Home School a Dyslexic Child?" *Just the Facts...* IDA Fact Sheet #56 (Baltimore, MD: International Dyslexia Association, 2003) [http://www.interdys.org/ewebeditpro5/upload/Why\\_Homeschool\\_a\\_Dyslexic\\_Child.pdf](http://www.interdys.org/ewebeditpro5/upload/Why_Homeschool_a_Dyslexic_Child.pdf).



based, including problems with spatial judgment and orientation, difficulties relating parts to wholes, and problems interpreting other people's facial expressions, gestures, postures, and conversational cues.<sup>41</sup> It is possible for a person to have more than one kind of learning disability. About 15-20% of the general population has some language-based learning disability, and dyslexia is by far the most common.

**Q: Are Attention Deficit Disorder (ADD) and Attention Deficit Hyperactivity Disorder (ADHD) learning disabilities?**

**A: No.** They are behavioral disorders characterized by inattentiveness, distractability, and/or hyperactivity and impulsiveness. They may co-occur with dyslexia, but one is not the cause of the other. Recent studies have found that as many as 50% of those diagnosed with a learning disability are also diagnosed with ADHD.<sup>42</sup>

**Q: What should I do to learn more about dyslexia?**

**A: Join the International Dyslexia Association (IDA) <http://www.interdys.org/> and the Hawai'i branch (HIDA) <http://www.dyslexia-hawaii.org/> to get current scientific information and access to local resources.** These not-for-profit organizations support scientific research, educate the public, provide referrals, and advocate for the needs of dyslexic learners.

Benefits and services include:

- References to tutors trained in multisensory structured language instruction (MSL) in your area
- References to professional evaluators trained to assess dyslexia
- Access to a national network of learning disabilities professionals
- A subscription to IDA's quarterly newsletter, *Perspectives*, and its scholarly journal *Annals of Dyslexia*
- Local publications
- Notice of local events
- Access to a community of knowledgeable, involved, and caring persons
- Discounts on our publications, conferences, and teacher training workshops.
- One membership fee allows you to join the IDA and automatically become a member of HIDA at the same time.

<sup>41</sup> Hall and Moats, *Parenting a Struggling Reader*, p. 85.

<sup>42</sup> "Are Attention Deficit Disorder (ADD) and Attention Deficit Hyperactivity Disorder (ADHD) Learning Disabilities?" "Frequently Asked Questions," International Dyslexia Association <http://www.interdys.org> (no date).

## DYSLEXIA THROUGH THE LIFE CYCLE

Dyslexia is not something a person can outgrow. It is “hard wired” into the brain. Yet the brain is a work-in-progress, a dynamic organ that responds to structured intervention over time.<sup>43</sup> When someone says, “I used to be dyslexic but I got over it,” he or she is probably saying one of two things: either the person received the appropriate education and learned how language works, so that s/he in essence by-passed the difficulty; or, even without proper training, the individual over time developed coping skills to allow him or her to function effectively.

While it is never too late to teach a dyslexic person to read, write, and spell, early assessment and intervention can correct problems before they interfere with further learning. Our educational system stresses the two-dimensional aspects of learning in the early years; in primary school, students are expected to learn the sequence of letters in the alphabet, and the assembly of letters to make sounds, sounds to make words, words to make sentences, and so forth. Those are precisely the skills that dyslexics lack and probably will not develop without explicit instruction. The three-dimensional aspects of learning, in contrast, where conceptual thinking and creative problem-solving take place, are the aspects at which dyslexics often excel. Yet these higher-level abilities come later in school, and by then the dyslexic child is so far behind, and so convinced that s/he is stupid, that significant damage has been done.

With increased public awareness of dyslexia in recent years, due in part to high-profile articles on dyslexia in prominent news magazines such as *Time* and *Newsweek*, and to the avalanche of new scientific information resulting from fMRI technology, more and more adult dyslexics are sharing their stories with the public. Stories of resilience and success from adults with dyslexia are enormously important to children and young people facing similar struggles.

Native Hawaiian artist Sam Kaha'i Ka'ai, a master wood carver and teacher, struggled with dyslexia in school. He recalls himself as “a child who was supposed to have less than most, who looked out at the world and saw different things.”<sup>44</sup> He went to McKinley High School where his “dyslexic eyes, and the questioning spirit that is the bane of mundane teachers, led him to A's in art...and even two art scholarships” which he was evidently unable to accept because of poor grades in his academic subjects.<sup>45</sup> Finishing high school in 1957 with a certificate of completion instead of a diploma, Ka'ai

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<sup>43</sup> G. Emerson Dickman, “The Nature of Learning Disabilities Through the Lens of Reading Research,” *Perspectives* 29 (2) (Spring, 2003): 4.

<sup>44</sup> Sally-Jo Bowman, “Reluctant Kahuna,” *Honolulu Magazine* (November 2000): 102.

<sup>45</sup> Bowman, 104.

went on to become a leading figure in Hawaiian artistic and philosophical circles, as well as the first non-academic Fulbright scholar. Among his achievements, he is known for carving the male and female stern images for the *Hōkūle'a's* first voyage to Tahiti in 1976.

Gareth Cook, reporter for the *Boston Globe*, gathered the courage to write about his strategies for concealing dyslexia after decades of secrecy and shame. He encountered barriers that might have been disastrous to his profession as a newspaper writer and reporter, such as his inability to take notes during an interview: "If I try to write notes by hand while someone is talking," Cook relates, "I am hit with a jarring, confused feeling. If you have ever tried to talk on a bad phone line, where your own words echo back at you, then you know this sensation."<sup>46</sup> Cook discovered, however, that he can readily type notes during verbal conversations, an adjustment that allows him to succeed in his career.

Ka'ai and Cook are in good company. Much-admired local comedians Andy Bumatai and Augie T. are dyslexic. Reflecting on what he might do differently if he had the opportunity to repeat high school, Augie T. said, "I would have studied harder and listened. I am the luckiest guy in the world. I travel, I sit in big meetings (and) I speak in front of large groups, but my insecurities about not having gone to college, my struggle with dyslexia, and my goofing off in high school, keeps me from being confident at times."<sup>47</sup> His advice to the graduates of his alma mater, Farrington High School, showcases his resilient spirit: "Speak the dream! What this means is, when you start talking about your dreams and goals out loud, you keep yourself accountable to your family, friends and the world. Start telling people your dreams and goals."<sup>48</sup>

Andy Bumatai remembers childhood torments and school difficulties that will sound familiar to many dyslexic learners. "I didn't know I was dyslexic when I was growing up," he recalls. "I just knew certain things were hard for me. For instance, I remember whenever we'd play 'hide and seek' the other kids would laugh because I'd always mess up before I counted to 100. I stopped playing when the kids stopped hiding and started just standing near me to hear me count and then laugh and call me stupid." Noticing the gap between his abilities and his performance, his teachers called him lazy and wrote that common condemnation, "if only he would apply himself," on his failing report cards. On his own at age 16, he dropped out of high school to support himself. Yet despite the hardships, Mr. Bumatai believes

<sup>46</sup> Gareth Cook, "Life with Dyslexia," *The Boston Globe* (September 28, 2003).

<sup>47</sup> John Berger, "Augie T. Goes Back to School," *The Honolulu Star Bulletin* 11 (223) <http://starbulletin.com/2006/08/11/features/story04.html> (August 11, 2006).

<sup>48</sup> Berger, "Augie T. Goes Back to School."

that “dyslexia helps me think differently. I’m stronger now because of it even though back then I remember feeling very alone.”<sup>49</sup>

Other successful entertainers who are dyslexic include Jay Leno, Keanu Reeves, Whoopi Goldberg, Tom Cruise, Henry Winkler, Henry Belafonte, and Cher. World political leaders who are or were dyslexic include Winston Churchill, former Prime Minister of England; Lee Kuan Yew, former president of Singapore; Nelson Rockefeller, former Governor of New York and Vice President of the United States; and Woodrow Wilson, former President of the United States. Scientists Albert Einstein and Thomas Edison; athletes Bruce Jenner and Greg Louganis; businessmen Walt Disney, Charles Schwab (financier) and Richard Branson (founder of Virgin Enterprises); musicians/singers Bob Weir (guitarist for the Grateful Dead) and Brad Little (played the part of the Phantom in *Phantom of the Opera*); artists Pablo Picasso and Leonardo da Vinci; political activist Erin Brockovich Ellis; writers Agatha Christie, Y.B. Yeats, and Gustave Flaubert — all these dyslexic individuals developed their remarkable talents while struggling with dyslexia’s restrictions. Nelson Rockefeller’s advice expresses the same ready spirit as Augie T.’s: “Accept the fact that you have a problem. Refuse to feel sorry for yourself. You have a challenge; never quit!”<sup>50</sup>

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<sup>49</sup> E-mail communication with author, May 13, 2007.

<sup>50</sup> Nelson Rockefeller, in “Famous Dyslexics: What they Remember about School,” *Bright Solutions for Dyslexia*, LCC <http://www.dys-add.com/backiss.html#famous> (no date).

## INTERVIEW WITH PARENT OF DYSLEXIC CHILDREN

HIDA spoke with Anne Vitro, the parent of three boys and two girls ranging in age from 10 to 23. Anne is a piano and voice teacher and has home schooled all five of her children. Anne's three oldest children are now in college and had no learning challenges, but she came to realize that her younger two sons, ages 10 and 14, were having trouble learning. Her experience in recognizing the challenges her children were facing, getting help for them, and dealing with the feelings that accompany the process, are common to many parents of children with learning differences.

**HIDA: What made you wonder if your children were having trouble learning?**

**Anne:** When my son Joseph, now 14, was somewhere between seven and nine, I noticed that he was struggling with his reading, often reversing words like “bed” for “deb.” I didn't notice earlier because he seemed to be making some progress and then seemed to just plateau. It was frustrating for me to watch him struggle word by word—I know it was painful for him. It also took me by surprise because my older children had sailed through reading. I wondered whether I was doing something wrong.

**HIDA: What did you do about it?**

**Anne:** I knew something wasn't working in the way I was teaching my son and was lucky enough to know Leila Lee, one of HIDA's tutors, who had a system for teaching reading to struggling readers.<sup>51</sup> I began to notice a gradual change. But I also know from working with my son that when reading comes hard to someone, it's only natural that they don't like it. Until they can learn how to work with their learning difference it is so stressful ... both for the child and the parent.

With my youngest son, Robert, I realized that there were learning challenges when he was five or six. Basically, he couldn't sit still. I took him to our family practitioner, who referred me to a child psychologist. In addition to his ADHD, I knew also that there was some dyslexia because of my experience with Robert's brother. I had to set very clear rules and very clear consequences with my child, which makes the parenting job much harder. I also enlisted the tutor to help twice a week with Robert's reading.

**HIDA: What does it feel like to be the parent of a son or daughter with dyslexia or any learning challenge?**

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<sup>51</sup> This is the Orton-Gillingham (OG) approach to language. Orton-Gillingham is a multisensory, structured language system (MSL), based on the research of neurologist Samuel Orton and educator Anna Gillingham. OG is the parent of many other MSL programs. See the section of this resource manual entitled “What do you need?” for further information.

**Anne:** You go through different emotions. First, I wondered what I might have done wrong. Even my older children wondered about whether I was to blame. Once you find out what's going on, you need to re-think how to deal with your children. My son with dyslexia tends to rely on me to set guidelines; I want him to become more internally motivated and I always have to challenge him in that regard. My younger son, with ADHD, requires me to think ahead of time and give him advance notice about things.

It can be exhausting. Sometimes I just wish I could be a normal parent and not always have to be ahead of the game. It's good to involve other people and activities and to give yourself a breather.

**HIDA: What have you learned that you wish you had known earlier?**

**Anne:** I wish I had had my older son tutored earlier than I did, even as young as four years old. It would have helped to diagnose the problem earlier. It's a careful balance: you don't want to jump the gun; in fact, parents who jump all over their kids who are not excelling bother me. I think that all learning is a bit of a struggle, but there should be some peace and satisfaction in the process. It's good to stretch, but not for a student to be miserable.

I want my children to earn a good living, but most of all, to be content with what they are doing. My brother had a learning difference and he could never measure up to the expectations of my father, who was an attorney. So I don't want to pressure my sons with expectations that are unrealistic, but I want to support them to reach whatever goals they set for themselves.

**HIDA: What could you tell other parents of children with dyslexia or any learning difference?**

**Anne:** Even though I have home schooled my children, I feel that every parent is a home schooler to some extent. You need to stay involved. When I was growing up and going to public school, if I was struggling with math and asked my mom for help, she'd say: "Ask your teacher; that's what they are paid for." But teachers can't worry that much about the kids who struggle or the kids who excel. You, as the parent, need to know what's going on with your child.

Also, don't forget to focus on your child's strengths. We spend so much time working on their weaknesses, that sometimes we forget this. I also find it's good to speak to others going through the same thing and to learn from speakers that HIDA brings in for their workshops and conferences.

## WHERE SHOULD YOU START?

### Assessment

The first step is to obtain comprehensive evaluation from a trained professional, either through the state Department of Education (DOE) or private professional services. The purpose of assessment is to acquire an accurate picture of the learner's strengths and weaknesses. Assessment is not primarily about test scores and it does not provide a template for subsequent instruction. Rather, it provides a scientifically-based snapshot of the individual's way of learning that trained educators can use to fashion effective intervention.

There is no single test for dyslexia, but an array of assessment tools can provide answers. While the quick assessments HIDA recommends for all children in early elementary school take only a few minutes, a thorough professional evaluation utilizing an average battery of tests takes approximately three to five hours. For a very young child, this can be broken into more than one session. HIDA maintains a list of private testing centers and diagnosticians in the state who provide assessments for dyslexia. These professionals are trained to conduct a psycho-educational assessment as opposed to a mental health evaluation. Psycho-educational testing measures cognitive ability, academic achievement, language proficiency, and selected nonacademic processes related to learning.<sup>52</sup> Tests may be conducted by a single individual or an interdisciplinary team. A qualified tester must understand how individuals learn to read, why some people have trouble learning to read, and how to measure appropriate reading interventions. The evaluator should go beyond general conclusions, such as observing that the individual has a learning disability, and provide a specific diagnosis of the kind of disability or difference so that proper remediation can be arranged. A thorough physical exam should also be conducted by the individual's doctor to rule out visual, hearing, or emotional impairments.

Many parents fear or resent having their child "labeled" as learning disabled. The Roper Poll commissioned by the Coordinated Campaign for Learning Disabilities (CCLD) in 2000 found that 48% of parents felt that having their child labeled "learning disabled" was more harmful than struggling privately with the inability to read and write.<sup>53</sup> While the parents' intentions may be good, avoiding the label while keeping the child in an unsuitable educational situation does much more harm than good. In fact, it can be a great source of relief for the child, the parents, and the teachers finally to have a name and an explanation for the problems they have noticed. Assessment can be empowering for the dyslexic learner because it dispels more insidious sus-

<sup>52</sup> Hall and Moats, *Parenting a Struggling Reader*, pp. 116-117.

<sup>53</sup> Hall and Moats, *Parenting a Struggling Reader*, p. 106.

picians and reassures everyone that something can be done. A child who is assessed as dyslexic has many resources to utilize and options to pursue, while a child who is failing in school and is not given those resources faces far more damaging labels, such as “lazy” or “stupid.”

Some things dyslexic learners and their parents should know about assessment include:

- Testing may be obtained from public schools, clinics, or private professionals. Public schools are not diagnostic facilities and the purpose of testing in public schools, which is mandated by federal law, is to establish eligibility for services rather than to identify or remediate the full range of learning challenges a child may face.
- Parents should consult with the Student Service Coordinator if the individual is in public school. Parents must initiate evaluation of their children by making a written “Request for Evaluation” to the public school the child attends or could attend (if home schooled or attending private school). The school will convene a team including the parents to review existing data on the child and determine if additional assessments should be made. This team has a timeline for completion of its work, which must include a variety of assessment tools and approaches to obtain relevant functional, developmental, behavioral, and academic information regarding the suspected disability. Be sure to remember that the Hawai'i DOE refers to dyslexia as a *specific language disability*, and parents should use that language in seeking assessment or services.
- Seek private assessment if necessary. It is appropriate to request references from others who have been assessed by the evaluator.
- Comprehensive evaluation may be expensive, but it is essential. Results will help clarify any problems and will also establish eligibility for services in special education programs at K-12 and college levels.
- Be very careful to select a qualified professional. A qualified evaluator or team will have professional knowledge of and experience in reading development, language processes, dyslexia research, psychology, education, and educational regulations. The evaluator must be able to observe the individual carefully and identify relevant patterns in the data. An established history of providing assessments is very valuable. Often parent networks are good sources of information about evaluators in your area. HIDA can provide a list of qualified individuals and testing centers in Hawai'i.
- Tests will vary depending on the age of the person as well as the evaluator's observations about the individual's strengths and weaknesses. Young children may be tested for phonological processing



(ability to hear similarities and differences among sound units), oral language abilities, and the ability to make sound/symbol associations.

- Testing will be most efficient when evaluators are guided by clear referral questions and relevant background information. Concrete data are helpful, including the following: samples of spelling tests, written work, and reading materials; observations of words frequently mispronounced or warning signs regularly observed; medical records and developmental milestones such as the age at which the child began to talk; results of all previous testing, including standardized tests from school; concerns expressed by teachers or other professionals; information about the type of instruction already received.<sup>54</sup>
- Even without a diagnosis of dyslexia, when problems are identified, remediation can begin immediately.<sup>55</sup>
- The expert evaluator should consider other causes of learning problems including ADD and ADHD, affective disorders such as anxiety or depression, central auditory processing dysfunction (a generalized weakness in processing information), or pervasive developmental disorders (impairments in social relations and communication, including autism, Rett's disorder, and Asperger's syndrome).

## Tests

While the specific tests chosen for each individual will vary according to their potential to address referral issues, a thorough assessment will include evaluation of the following:

- Expressive oral language (the ability to communicate with others verbally)
- Receptive oral language (the ability to comprehend what others say)
- Expressive written language (the ability to communicate with others in writing)
- Receptive written language (the ability to understand written text)
- General intellectual functioning
- Cognitive processing (including the ability to detect, understand, organize, and remember information, comprehend patterns, and make appropriate decisions based on information received)

<sup>54</sup> Hall and Moats, *Parenting a Struggling Reader*, p. 127.

<sup>55</sup> "Testing for Dyslexia," *Just the Facts...* IDA Fact Sheet #76 (Baltimore, MD: The International Dyslexia Association, 2000): 1.

- Specific oral language skills related to reading and writing, including phonological processing (ability to hear similarities and differences among sounds)
- Developmental, medical, behavioral, academic, and family history (including avoidance of or frustration with language in pre-K years)
- Educational tests to determine the individual’s level of function in basic skill areas of reading, writing, spelling, and math. These tests include:
  - o Decoding (reading) single words, both real words and nonsense words (made up words that follow English language patterns of pronunciation and spelling, such as “steb” or “bront”)
  - o Oral and silent reading of texts to evaluate rate, fluency, and accuracy
  - o Reading comprehension
  - o Dictated spelling test
  - o Handwriting
  - o Written expression, both sentence writing as well as story or essay writing.
- For K-12 students, classroom observation and review of the language arts curriculum to assess remediation programs that have already been tried.<sup>56</sup>

### Using the evaluation

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It is crucial to make full use of the results of the evaluation:

- Always ask for a written report including clinical observations, test scores and explanations, and analysis of the patterns of errors.
- Always ask the tester to explain and discuss the test results orally in a language that the dyslexic learner and/or family can understand.
- Use the test to understand the individual’s strengths and weaknesses. Think about whether the results of the assessment reflect what

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<sup>56</sup> For brief descriptions of several dozen tests commonly used to assess dyslexia, and extensive bibliography of material on testing, see “Testing for Dyslexia; Addendum: Commonly Used Measures for the Identification of Dyslexia,” *Just the Facts...* IDA Fact Sheet #76A (Baltimore, MD: International Dyslexia Association, 2004). For assistance in evaluating the results of tests, see Lorna N. Kaufman and Rebecca H. Felton, “Understanding Test Results: Standard Scores, Percentiles and Other Sources of Confusion,” (Baltimore, MD: Orton Emeritus Series, 2004). See also Jane Fell Greene and Louisa Cook Moats, “Testing: Critical Components in the Clinical Identification of Dyslexia,” 3rd ed. (Baltimore, MD: Orton Emeritus Series, 2001).

the individual knows about himself/herself, and what his/her family knows about him/her.

- Always ask for the tester's recommendations regarding tutoring, teaching strategies, accommodations, modifications, or additional testing.
- Be aware that understanding the results of testing is crucial for taking the next step, including selecting a tutor or creating an Individual Education Plan (IEP).

## WHAT SHOULD YOU DO AFTER YOU ARE ASSESSED?

### Adults

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Upon getting and comprehending the assessment, the dyslexic learner who is not currently a student will have to decide what to do with the new information. Some dyslexic adults can negotiate the demands of their jobs and families without ever truly learning to read, write, or spell. Others find that the need to change jobs, seek promotion, expand careers, or read to their children or grandchildren makes it imperative that they develop their language abilities.

For the dyslexic adults who decide not to seek further assistance, the knowledge gained from accurate assessment can still be very useful. These individuals now have a name for their life-long struggle with language. They now know they are not stupid, nor are they incapable of learning. They know they are in good company, since 5-15% of the population is dyslexic. They know that dyslexia runs in families, so they can be on the lookout for similar difficulties in other family members.

Adults who decide to seek assistance should consider engaging the services of a private tutor. General classes in literacy are unlikely to provide the specific form of instruction needed by dyslexic learners. On-the-job training, GED preparation, and other kinds of adult education will be much more useful once the person has “cracked the code” of language through multi-sensory structured language instruction. It is never too late: researchers at the medical centers of Wake Forest and Georgetown Universities have found that “phonics-based instruction can actually change brain activity in adults with dyslexia, resulting in significant improvements in reading.”<sup>57</sup> The HIDA office can provide names and contact information for qualified tutors in your area.

### Students

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If the individual who has been assessed is currently in public school, next steps include:

- Holding an eligibility meeting with parents and teachers
- Determining eligibility for school services
- Completing an Individual Education Plan (IEP), 504 plan, or school-based intervention plan.<sup>58</sup>

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<sup>57</sup> “Adults With Dyslexia Can Improve With Phonics-based Instruction, Research Shows” *Science Daily* <http://www.sciencedaily.com/releases/2004/10/041027144140.htm> (October 29, 2004).

<sup>58</sup> The Learning Disabilities Association (LDA) offers workshops on understanding evaluations and developing an IEP. See [http://www.ldahawaii.org/education\\_&\\_training.htm](http://www.ldahawaii.org/education_&_training.htm) for information.

At the meeting to determine the child's eligibility for school services, parents are key participants. Parents need to understand the specialized language and procedures used by the Department of Education (DOE) in assessing your student and determining eligibility for services. Parents or other adults will probably need to advocate for the child's needs, while older students will also need to advocate for themselves. The first crucial step is securing an **IEP**.<sup>59</sup>

In many cases, the development of an individual educational plan (IEP) will take place at the same meeting where the results of the evaluation are explained. An IEP is developed to ensure that appropriate services for the child will be provided in the least restrictive environment. Students with dyslexia have a legal right to an appropriate education. An IEP meeting is not about asking for favors; it is about securing the education to which the student is entitled.

An effective and appropriate IEP combines these three sources of information:

- evaluation results
- parental input
- consultation from the child's diagnostic team.

The IEP should address all of the child's unique needs regarding learning. The IEP should contain information regarding the student's Present Levels of Educational Performance (**PLEP**). The PLEP section of the IEP will contain the following information:

- present level of academic achievement, such as,
  - o student performance in the general standards-based curriculum
  - o performance on state, school, or classroom assessments
  - o areas of strength and needs.
- Also included is functional performance, such as:
  - o social/emotional behavior
  - o physical or mobility issues
  - o communication
  - o independent living concerns.

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<sup>59</sup> The following summary of the IEP process is taken from The Individuals with Disabilities Education Improvement Act (IDEA 2004) Implementation Training [http://165.248.6.166/doeweb2/sped\\_idea2004/IDEA\\_7.05.htm](http://165.248.6.166/doeweb2/sped_idea2004/IDEA_7.05.htm) (Spring/Summer 2005).

The **Goals** and **Objectives** section of the IEP will provide the following:

- measurable annual goals, including academic and functional goals
- statements about how the monitoring of progress in reaching goals and objectives will be determined
- identification of persons responsible for implementations.

The IEP may prescribe specialized instruction and provision for related services such as counseling or other therapies that are necessary in order for the child to benefit from education under the service section. Only after the program is developed should there be discussion of placement or location for implementation of the program. Placement must be in the least restrictive environment and could be in:

- A modified program in the regular classroom, regular class placement with supplemental tutoring, remedial instruction, resource room, and/or counseling
- A special class or school.

All supplementary aids and services, program modifications, and supports for school personnel must be appropriate based on the PLEP, agreed to by the team and written into the IEP. The IEP team *must* consist of

- an administrator or designee,
- the parent(s),
- the student, if appropriate
- at least one special education teacher
- one general education teacher, and
- an individual who is qualified to interpret the instructional implications of all assessments (this individual could be an existing team member).

Related service providers or individuals who have knowledge or special expertise regarding the student may be invited to the meeting or provide written information.

At this point in the process, parents and students must decide if they are satisfied with the program the public school can provide, and if they can afford to look into private alternatives.

Parents often become very skilled at negotiating with their school and become effective advocates for their child's needs. Yet it is time-consuming and frustrating to struggle with a school system that is not as responsive or flexible as the parent and the child would like.

## INTERVIEW WITH STUDENTS

To hear the views of young people growing up dyslexic in Hawai'i, HIDA interviewed Oren and Ari Ashkenazi. Oren, 19 years old, is a sophomore in college. He attended kindergarten at a public school in Honolulu, switched to a small private school in Kailua for first grade, before transferring to Assets School in second grade. His younger brother, Ari, 15 years old, is a sophomore in high school and has been at Assets since kindergarten.<sup>60</sup>

### **HIDA: When did you find out that you are dyslexic?**

**Oren:** As I recall, it was 2nd grade. That would have been...14 years ago. I would have been 6. That's when my parents took me to the then-head master at Assets School, and she tested me and told my parents I was dyslexic, and they told me. I had no idea what it meant at the time.

**Ari:** I'm not sure. I believe it was when I was quite young. We went to a woman, I believe her name was Barrett. We did a series of tests; I did some writing exercises. After a while, she diagnosed me with dyslexia. My parents put me in Assets School, one of the only schools on the island or in the U.S. that's especially for dyslexic children.

### **HIDA: Did it mean anything to you at the time?**

**Oren:** I really didn't think anything at the time. To be honest, it took me a couple of years to really grasp exactly what that meant. At that time, all it meant to me was that I had to change schools, which I wasn't keen on.

**Ari:** No. I know it's a learning difference. Some people call it a disability. I don't think so. It hasn't really changed anything. Of course I don't have any experience of *not* being dyslexic. That's how I was born. It just doesn't seem any different than being normal.

### **HIDA: Do you recall anyone explaining dyslexia to you at the time?**

**Oren:** Someone may have told me that it meant I learn differently, or I may have just filled that in later. My memories of that particular event are a little sketchy.

**Ari:** My parents told me I was going to Assets because it was for dyslexic kids. That's about all I understood: I'm dyslexic and I need to be there because it's the best place. My older brother had jumped around to several different schools before they found Assets, so I had the benefit of early testing.

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<sup>60</sup> In the interests of full disclosure, these young men are the sons of the author of this resource guide.

**HIDA: Do you remember struggling to learn to read and write?**

**Oren:** My coherent memories are mostly of my first grade year at Seagull School. Nothing particular. I do remember having a lot of trouble with spelling and handwriting and that sort of thing. I was having a hard time writing four letter words when the rest of the class was mostly writing sentences.

**Ari:** No, not really a struggle. I just didn't like it. I mean, I wasn't really bad at it. I just didn't enjoy reading. My handwriting was bad, but I got the basics down pretty quickly.

And now I love to read. My handwriting is still not that good. So mostly I type.

**HIDA: When did things begin to change?**

**Oren:** Not right away. I didn't really learn to read until 2 years later, in 4th grade. It wasn't really a gradual process. I went from not reading at all to reading a lot.

My teacher realized that trying to get us to read huge books we had no interest in reading was kind of silly. She handed me a small, thin fiction book written for little kids about some cats that could fly. I thought this was the greatest thing ever when I was in 4th grade. I learned to read so I could read that story. That was how it went from there.

**Ari:** I'm not really sure what changed. I just started reading more often. Around 7th or 8th grade, I started reading for pleasure. At school there is often a lot of down time. If I had a book, I had something to do during the down time. Now I read both out of school and in school a lot.

**HIDA: Do you remember being read to by your parents?**

**Oren:** Yes. I read books occasionally on my own for pleasure, but mostly my mom read to me. I got to the point that I wasn't into the idea of her reading to me anymore, which we used to do a lot, but I still liked the stories. She used to read these really advanced *Star Wars* books, so one day I just read one, by myself. Once I'd read that, the rest didn't seem so hard.

**Ari:** Yes, my mom did read to me when I was younger; before I went to bed she would often read me stories because I didn't particularly want to read. That exposed me to different stories and types of books. I'm sure it had an effect on me wanting to read more.

**HIDA: What about the writing and spelling part? When did that start to change?**

**Oren:** Well, it's never really changed in that I've never been a good speller, and I don't think I ever will be. I've never had good handwriting, although that changes depending on how often I'm called on to write. I'm not really sure when I started typing. The first time I did any large amount of typing



was probably during our sabbatical, when I wrote a lot when we were traveling around the U.S. and in Israel. I just wrote all the time on the computer.

I learned to type over at least a couple of years. It took me awhile. I've more or less gotten the hang of it by this point. I do remember a few computer programs to teach typing.

**Ari:** I was always decent at spelling, but I got a lot better around 8th grade. I did have Ms. Brouwers. She was a really good teacher.

**HIDA: How do you think people should think about dyslexia. Is it a learning disability?**

**Oren:** No. I see all these books, articles, newspapers, and speeches that people give about it, and they all refer to dyslexia as a learning disability. Even the most forward-thinking people call it that. I'm not usually someone who gets all worked up about what you call something. I don't get all angry about people being politically incorrect. But that's just *regular* old incorrect. It's *not* a disability. Calling it such is deliberately misleading. It would be like saying that someone with long legs and shorter arms has a disability. No, he doesn't. He's just better at running than he is at boxing. OK, he's not disabled. A disability would be if one of his arms didn't work right. That's not what dyslexia is.

**Ari:** No, it's not a disability. I can't spell very well. My handwriting is terrible, but I'm very good at math. I don't really consider that a bad thing. What I'm bad at, I can use a computer for. My spelling is not that great but it's good enough to use spell check.

I consider myself pretty lucky. I'm an excellent math student.

**HIDA: How do you think about dyslexia?**

**Oren:** If I understand it correctly, in most people it manifests as people who have trouble with language. That's why English is so difficult for dyslexics; it has so many things you just have to memorize.

Dyslexics don't tend to be as good at linear thinking. By the same token, you get to have more creative stuff. You get better at three dimensional thinking, non-linear thinking, that manifests in different ways in different people. I know a lot of dyslexics who are very good at math. I am horrible at math, and I will never be good at it, and I'm dyslexic, so it can manifest both ways.

I'd like to think I'm fairly creative, which would be thanks to being dyslexic. I certainly wouldn't want to change it. That would be silly. People who...I don't think very many people are seriously considering removing the genes that cause dyslexia, although I have seen a couple of people talk about it. Even the ones who say that's a bad idea continue to refer to dyslexia as a disability. Which it isn't. It's just not. It can hold you back if you're in a bad

situation where no one knows how you do things. All it means is that you learn language differently, in my experience. I just don't see how that's a disability. I really don't.

**Ari:** I would consider it more a mixed blessing. I'm good at some things, and not so good at other things. That's true for everyone; for dyslexics, it's more of a singled-out thing. Some people, even some teachers I've met, call it a disability, but they're wrong.

**HIDA: Do you have any advice for kids who are dyslexic and might be struggling?**

**Oren:** Well, that would depend a lot on their situation. Definitely dyslexics can have a lot of problems in public schools, because a lot of the teachers have no idea how dyslexia works or how to deal with it.

My advice would be... Don't try to force it. In a lot of situations, that just won't get you anywhere. Like, I was taught to read very well by people who knew how to teach dyslexics. But you could be in a situation where you don't have that, and maybe your parents don't have the resources to send you somewhere else, since, sadly to say, places that know how to teach dyslexic students are very expensive these days. My advice is, don't worry that you're having problems reading. Find the thing that dyslexia makes you good at and go with that. That's what your strength is. That's what you should try to do.

The college level is actually much friendlier to dyslexics than high school is. In college they are less focused around a set line of thinking and way of doing things. Colleges tend to be more liberal and more willing to experiment, which is what you need with dyslexia. The primary nature of college is to teach things, whereas the primary nature of high school is to keep you busy so you're not out causing vandalism or what have you.

**Ari:** Don't believe people if they tell you it's a disability. It's not. Your brain works differently and it can be difficult if you're in a bad environment for dyslexics. But just work on it.

There's not a "treatment" because it's not bad. Basically, the way you get over the things you're not so good at is, you work at them. You find other ways to do that same thing. Don't believe people if they call it a disability.

**HIDA: Anything else you think about with regard to dyslexia that you would like to share?**

**Oren:** I would like to tell people that, disappointed as this may make them, I do not read backwards. I have never read backwards or upside down or anything like that. I don't know anyone else who has. I'm not sure where this idea came from. I guess there are some people out there who do.

I'd also like to point out that being dyslexic does not necessarily mean you are ADD or ADHD. It also doesn't necessarily mean you aren't. A lot of people tend to think those things always go hand in hand, and they don't.

**Ari:** The main thing is getting the right environment for someone who is dyslexic. You need an environment that specializes in mostly one-on-one attention for the dyslexic kid to work in an area the kid is not proficient at. If you're already good at something you don't need much help at it. But if you have a problem with writing, or math, or spelling, and you can get one-on-one time with a tutor or a small class, it would really help the person. I know it helped me.

## WHAT DO YOU NEED?

### **How do people with dyslexia learn best?**

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Dyslexic learners thrive when they are directly and explicitly taught using a multi-sensory, language-based approach that is structured, sequential, and cumulative, while also flexible and emotionally sound. This diagnostic and prescriptive approach provides incremental instruction with plenty of repetition and review. Multi-sensory, structured language instruction (MSL) is based on the research of Samuel Orton in the 1930s. Out of his work with Anna Gill-ingham came the Orton-Gillingham (OG) method, which is the “parent” for a variety of other MSL programs including Project Read, Slingerland, Wilson, Spalding, and Alphabetic Phonics. One-on-one or small group instruction is best, although MSL can be adapted to larger classroom settings.

Many educators, when they first hear about MSL, comment, “Isn’t that just good teaching?” The answer is yes, most students would probably benefit from the careful attention to learning that MSL requires; hands-on, step-by-step instruction engaging multiple senses is effective with almost everyone. With dyslexic students, it is absolutely crucial.

### **What is multisensory structured language instruction?**

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MSL instructors go through the English language step by step, methodically breaking it down and putting it back together. We teach our students to identify the 44 sound units (phonemes) that make up the English language. We explain the rules and the exceptions, building a logical edifice to capture the flows of Latin, Greek, French, Anglo Saxon, and Middle English that mix into contemporary English. We teach to our students’ intelligence, supplementing their inability to intuit the patterns among sounds and symbols by directly explaining those patterns. We take the same methodical approach to writing sentences and paragraphs: break the task down into its component parts, organize the parts in logical sequence, and reconstruct them step-by-step. Repeat; review; take another step. We go as fast as we can, as slow as we must.

An effective MSL program must include the following elements:

- **Multisensory methods:** Multisensory methods simultaneously use many sensory channels throughout the entire lesson. This is sometimes referred to as VAKT: visual, auditory, kinesthetic, and tactile. We bring every sense to bear on the often painful, sometimes exhilarating process of cracking the code. Students see the written symbol, hear the spoken sound, write or trace the letters on a rough surface, feel their mouths and throats make the sound, hear themselves repeat the sound. They may write with large motions in the

air (sky writing) or trace difficult letters in sand, or use their fingers to count off sounds or syllables (finger spelling). We rewire resistant neural pathways to be more receptive to written signs.

- **Direct instruction:** Instructors cannot assume that any elements of the reading, writing, and spelling process are obvious or “go without saying.” Dyslexic learners need to be directly taught each step with continuous student-teacher interaction.
- **Systematic, cumulative, and structured approach:** Learning must proceed from the simple to the complex, the known to the unknown, in a methodical, step-by-step fashion, leaving nothing to chance. Because dyslexic learners make up with their general intelligence what they lack in their understanding of language, effective instruction spells out the complex rules and patterns of the English language in detail. Students often find it enormously liberating to learn these rules, because for the first time English makes sense to them.
- **Consistent review and practice.** Dyslexic learners often need extensive repetition of lessons to fully process the information.
- **Individualized or small group instruction.** Dyslexics flounder in large classes where their confusion goes unattended.
- **Immediate corrective feedback.** Dyslexic learners need to be told immediately when their work is correct and when it is incorrect. Correct answers need immediate reinforcement, and incorrect answers need to be interrupted and replaced with correct ones. The process of repetition and review depends on immediate and accurate feedback so that the student never practices the wrong material.

These methods can have dramatic effects. “Teaching matters!” exclaim Sherman and Cowen. The “dynamic gene-brain-environment interaction” can be partially redrawn.<sup>61</sup> Drawing upon fMRI data, Guinevere Eden from the Georgetown University Medical Center observes that, “the experience of reading itself changes the brain.”<sup>62</sup> MSL instruction teaches the child’s brain to change by strengthening “the brain’s aptitude for linking letters to the sounds they represent.”<sup>63</sup> If we begin early enough, we may rewire the brain so thoroughly that the neurological glitch disappears.

### Selecting a tutor

Private teaching is expensive, and both the student and the teacher invest a great deal of time and energy in the process. It is important to find a quali-

<sup>61</sup> Sherman and Cowen, p. 9.

<sup>62</sup> Guinevere Eden, “The Role of Brain Imaging in Dyslexia Research,” *Perspectives* 29 (2) (Spring, 2003): 14.

<sup>63</sup> Gorman, p. 54.

fied tutor who is a good match for the student. An initial meeting between the individual seeking services, the parent (if appropriate), and the tutor is important to establish expectations. Fees for tutoring vary, and some tutors charge for mileage, supplies, written reports, or attendance at meetings with school officials or other professionals. A written contract spelling out the rights and responsibilities of the parent(s), student and tutor is useful.

To evaluate the tutor's qualifications and experience, the following questions are appropriate:

- How long has the individual been tutoring?
- Can he or she provide references from professionals, former students, or their parents?
- Is the person involved in other activities in the field, such as conducting research, serving on boards, or making presentations, that would attest to his/her good standing in the eyes of other professionals?
- Is the person certified by an accredited program? What instructional strategies does s/he use tutoring?<sup>64</sup>

A workable tutoring schedule must fit into the life habits of the student. Two sessions per week spaced at least 1-2 days apart, lasting 45-60 minutes, is the minimum for effective progress. For younger children, three sessions of 45 minutes each is usually good. The tutoring should take place when the student is refreshed and alert. If tutoring takes place after school, the child should have a break and a snack first. Summers and holidays provide opportunities to make faster progress, without the pressure of daily homework, but it is also important for the child or teenager to have breaks from tutoring. Parents are often tempted to force their children to give up other activities in order to receive tutoring, but it is very important for the child to stay involved in activities that provide satisfaction, fun, and a sense of achievement. Balance is key.

### **Expectations from tutoring**

There should be open communication between the tutor and the dyslexic learner about how the tutoring works and what it can accomplish. If the learner is a child, parents and regular schoolteachers should be included in ongoing communication. Periodic conferences and reports are important to monitoring progress. The parents' role as mediator, supporter, and advocate are crucial to success.

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<sup>64</sup> "How to Find and Select an Academic Therapist," *Just the Facts...IDA Fact Sheet # 78* (Baltimore, MD: International Dyslexia Association, 2001). [http://www.interdys.org/fact%20sheets/](http://www.interdys.org/fact%20sheets/Acad%20Ther%20FS%20N.doc)

The length of needed tutoring varies with each learner. In general, it takes approximately two years for a child to catch up to grade level, depending on the severity of the gap. Tutoring may be discontinued if the child is able to function at or above grade level in reading, writing, and spelling. However, since dyslexic learners are often exceptionally bright, “grade level” may be well below their capacities, leading parents or children to seek more extensive tutoring. Adult learners may have their own goals, such as passing the GED, getting a better job, or seeking a college education, which will affect the length of tutoring needed.

In the end, the person receiving the service is the best judge of its success. While initially a child may resist the labor involved in tutorials, the satisfaction of “cracking the code” often overcomes reluctance. Adult learners are often even more highly motivated than children, but they may be hampered by the damage done by years of academic failure. A felicitous match of tutor to learner will help ensure successful instruction.

### **Selecting a school or program**

Today there are regular public schools and some charter schools offering MSL instruction. In addition parents and students can consider several alternatives to public school. There are private schools designed for teaching dyslexic students as well as private schools that utilize multi-sensory structured language (MSL) instruction for all students. (See the section on local resources for names and contact information.) Parents must also keep in mind that private schools not receiving federal funding cannot discriminate against students with dyslexia; however, they may not have the resources or flexibility to assist the dyslexic learner and are not required by law to accommodate students with learning disabilities in the same ways as public schools.

In weighing alternatives, the family should inquire about the following:

- Is the program designed with the needs of dyslexic students in mind? Such a program will have routines and structures geared to the specific needs and abilities of dyslexic learners.
- What is the usual class size? Dyslexic students learn better in small groups or with one-on-one instruction. Particularly if the child has experienced school failure before, s/he should not be required to perform in front of other children.
- What specialized methodologies are used in teaching? Structured, multi-sensory, sequential, flexible teaching of language and hands-on approaches are crucial for dyslexic learners' success. Programs that offer only so-called “visual phonics” or use tape-recorded phonics materials will not be effective with dyslexic students. Nor will programs that teach reading through experience stories (that is, have the student

decide what words s/he would like to learn), whole language (stressing meaningful literature but neglecting the structure of language), memorization of large numbers of words, or reliance on computer programs purporting to develop reading and spelling skills.<sup>65</sup>

- What is the teaching style in the rest of the curriculum? The classes in science, social studies, math, art, music, and language should also be geared to the learning style of students with dyslexia. Learning through a project-based curriculum involving making and doing, discussing and acting, is much more effective for dyslexic learners than more passive instruction.
- Is there a remedial curriculum? Does it also address the gifts and abilities of students? Since dyslexic students are often very bright, a curriculum that only addresses their deficiencies will become boring and will fail to develop the child's full potential. Curricula that address concepts and facilitate thinking about ideas serve a dyslexic child well, while stress on memorization does not. Each child's academic program should be individually designed and monitored to nurture strengths as well as remediate weaknesses.
- How are the teachers trained? What is their experience with dyslexic students? Schools that invest resources in ongoing professional development for their staff are more likely to provide appropriately trained teachers. Teachers should have explicit instruction in MSL methods.
- What modifications and accommodations are offered? Note takers, oral testing, and access to calculators, computers, and spell checkers as needed are crucial for the dyslexic student's success.
- What is the philosophy and mission of the school?
- How is the student's progress assessed? Both parents and students should be provided with regular progress reports and test results in both public and private educational settings.
- How effective is the school in working with students to address issues of personal development and helping students transition to the next step in their lives? Children who have experienced academic failure in dyslexia-unfriendly classrooms often need to build self-confidence. Students and families who are fearful of returning to hostile environments need assistance in planning the next steps in education and life choices. Students with special needs must learn to advocate for themselves.

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<sup>65</sup> Diana Hanbury King and Jean M. Foss, "Schools and Programs for Individuals with Dyslexia, Part I: Independent Schools," Orton Emeritus Series (Baltimore, MD: The International Dyslexia Association, 1996), p. 8.



- Is the program population homogeneous in their learning needs? It can be catastrophic for a dyslexic student to be grouped into general disabled populations including physically, mentally, emotionally, and behaviorally disabled students. Dyslexic students should be placed with students who share similar educational needs.<sup>66</sup>
- How are computers used? Word processing and touch typing (not two fingered) is a great boon to dyslexic learners; it avoids hand-writing problems, reinforces spelling lessons, and allows individuals' writing speed to keep up with their quick thinking. Proficiency in word processing is central to success in college. However, computers cannot teach children to read, write, and spell. Most programs that claim to use computers to teach language arts have actually only created expensive, computerized workbooks.<sup>67</sup>
- Can prospective students and their families visit the facility? Tour the school or program, observe a classroom or session, talk with the teachers or tutors, and speak with parents and professionals who have experience with the program. Ask the students currently in the program if they feel they are making progress. While students may complain about academic work, they generally know if they are learning. If students report that they spend their time playing games or just talking, they are probably not having their academic needs met.

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<sup>66</sup> King and Foss, p. 13.

<sup>67</sup> King and Foss, p. 14.

## ACADEMIC SKILLS

Current research on reading suggests that there are five levels of skill that must be developed and utilized to read successfully. These five “big ideas” of reading are:

- phonemic awareness – the ability to distinguish and identify the separate sounds in a spoken word
- phonics – the relation between letters and sounds; also known as the alphabetic principle or code
- fluency – smooth, coordinated, and accurate reading
- vocabulary – knowing the meaning of words
- comprehension – understanding the meaning of what is read.<sup>68</sup>

These five skills are reciprocal: cause and effect runs in many directions, as each skill both builds upon and influences the others. Phonemic awareness allows the reader to “unglue” the sounds from one another and hear each one. Phonemic awareness is sometimes called an “ear skill” – not because it originates in the ear itself, but because it allows the brain to discern the elements heard in spoken words. Phonics enables the reader to relate the sound structure to the print structure. The nascent reader links the detected sounds to the letters that represent them. G. Reid Lyon calls these the “essential, non-negotiable” foundation for reading.<sup>69</sup>

Combining phonemic awareness and phonics allows the person to develop fluency by reading a word repeatedly, reinforcing the brain’s neural circuits. Reading words over and over, handling them successfully, builds up a storehouse of useable words in the reader’s mind. Cultivating each of these leads to comprehension, the ability to summarize and analyze written text, drawing inferences and predicting subsequent directions of thought.

Identifying discrete sounds, linking sounds to symbols, sounding out words, becoming familiar with the words, and learning to use the words – these are the basic steps in learning to read. Without this interactive process, readers rely on memorization. By fifth grade, when children come across as many as 10,000 new words during the school year, memorization is not possible.<sup>70</sup> The child must learn to crack the code.

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<sup>68</sup> Sherman and Ramsey, *Parenting a Struggling Reader*, pp. 137-141.

<sup>69</sup> Lyon, quoted in Sherman and Ramsey, *Parenting a Struggling Reader*, p. 137.

<sup>70</sup> Shaywitz (2003), pp. 102-103.

## WORKPLACE SKILLS

Just as students with dyslexia must develop workable strategies to cope with academic life, adults with dyslexia need strategies to cope with the demands of their workplaces. Because dyslexia often leads to a sense of shame and fear of being judged, people may try to hide it. One man pretended to be playing “air piano” when he was actually finger spelling (counting out sounds or syllables of words on his fingers). Another made pictures in his head to correspond with hard-to-remember words – he pictured a parrot landing on a car which then explodes in a blast of smoke shaped like a figure eight to represent the word “polycarbonate.”<sup>71</sup> A woman who worked as a hair dresser carried a card in her purse containing the words she most commonly was required to spell in making appointments, writing orders, and issuing receipts. Another man drove all over town each month to pay his bills in cash in order to avoid writing checks or addressing envelopes.

Adults with dyslexia must decide if they will disclose their learning difference to their employers. Employers are not allowed to ask about disabilities in a job interview, so the decision resides with the applicant. This important decision comes relatively late in the game; it is important not to let concern about the pros and cons of disclosure interfere with solid preparation for finding and getting a job.

### Thinking about your interests and abilities

Before you begin your job search, take the time to reflect on yourself:

- What do you like to do? What is your favorite part of your day? Think about the sorts of activities that motivate you and pique your interest.
- What tasks are associated with these interests? Do you like interacting with people? Fixing things? Working outdoors? Working with computers? Organizing activities? Solving problems? Working with children? Working with the elderly? Writing? Conducting research? Designing things? Working independently?
- What specific skills do you have for performing these tasks? Are you good at oral communication? Research? Planning? Managing? Finance? Repair work? Sales? Do you have specific skills such as cooking, sewing, gardening, child-raising, music, art, typing, or carpentry? Can you speak, read, or write a second language? Can you drive?
- What kind of person are you? Outgoing or shy? Talkative or reticent? Warm or aloof? Patient or demanding? Highly focused or easily distractible? Do you enjoy high-paced, fast action settings or quieter en-

<sup>71</sup> Katie Simon, “Overcoming Dyslexia and Turning a Corner in Life,” *National Public Radio* <http://www.npr.org/templates/story/story.php?storyId=6425164&sc=emaf> (November 3, 2006).

vironments? Think about matching your personality to the demands of various jobs.

- What are your work values? Look for a match between the value you place on work and the work ethic that potential employers expect and co-workers share.

### **Preparing for interviews**

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In preparation for your job search or interviews, the following steps are crucial:

- Make a résumé, including your name, contact information, career objective, education, work experience, skills, activities, awards, and references.<sup>72</sup> First impressions count: have a friend or family member proof read it to correct errors. Be specific about the opportunities you are looking for and the skills you bring. Be sure to ask people if you may use them as references before listing them on your résumé.
- Write a cover letter. In one page or less, introduce yourself to your prospective employer. Arrange for someone to proof read your letter before submitting it.<sup>73</sup>
- Role-play an interview with a supportive friend. Practice maintaining eye contact, speaking directly and clearly, standing and sitting erect, listening attentively, and providing full and relevant answers. Practice asking questions and talking about your skills and your interest in the particular job at hand. Avoid vague or general answers and instead talk specifically about the job for which you are applying. Practicing will decrease your anxiety and build self-confidence.
- Take application forms home, if possible, so you will have time to answer all questions carefully and get help in correcting errors. Secure a blank copy of the form before you begin so you can prepare a neat, clean final copy. Be sure to answer all the questions and sign and date the form.
- Find out as much as you can about your potential employer. Try to speak with others who have worked in the same firm or industry.

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<sup>72</sup> For help in writing a résumé (geared toward college students but helpful for most people) see Purdue University On-Line Writing Lab, "The Résumé: Making it Work for You," [http://owl.english.purdue.edu/handouts/pw/p\\_thresum.html](http://owl.english.purdue.edu/handouts/pw/p_thresum.html) (no date).

<sup>73</sup> For more specific guidelines about successful résumés and cover letters, including a sample cover letter, see National Center for Learning Disabilities, "LD on the Job," "The Application Process," <http://www.nclcd.org/index.php?option=content&task=view&id=437> (no date).

## **Succeeding in an interview**

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Once you have an interview, keep the following points in mind:

- Be prompt. Allow for unexpected traffic delays.
- Dress appropriately. While dress norms in Hawai'i are informal, clean and tidy attire is essential to a good first impression.
- Bring copies of your résumé, cover letter, application, and any other relevant materials with you to the interview. Do not assume that the person conducting the interview will have your file.
- Be honest about your prior work-related experiences. Often a problem can be turned into an opportunity. For example, an individual's awareness that he needs extra time to complete written work could lead him to develop a workable system for checking errors such as a computerized spell checker. You can be frank about your situation while emphasizing your strengths.
- Be informed and realistic about your salary expectations. It is often appropriate to write "open" or "negotiable" when asked about anticipated salary.

## **Disclosing or not disclosing?**

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At this point, the time has come to decide whether and when you will disclose your learning disability to your potential employer. You are in a much better place to make this decision if you have learned your own specific profile as a learner and worker. You need to know your specific strengths and weaknesses so you can identify the support and accommodations you will need to succeed. You also need to come to terms with the impact of dyslexia on your life, and become comfortable with your self-understanding. If you are overwhelmed by traumatic memories of school failure, or if you are ashamed to have anyone know you are "different," it will be difficult to weigh calmly the pros and cons of disclosing your learning difference in the workplace.

You need to figure out what is best for you. While every situation has unique aspects, some of the risks and benefits of disclosing dyslexia include the following:

- *Gains of disclosure:*
  - o You can take advantage of legal protections. The Americans with Disabilities Act protects you against discrimination in employment, while Section 5 of the Rehabilitation Act protects your civil liberties in higher education and training. To get the protection of these laws, one must disclose one's disability.

- o The accommodations guaranteed by law may make you a more competent worker and thus a stronger candidate for advancement. Relevant accommodations include changing work schedules, acquiring or modifying equipment, providing auxiliary aids and services, structuring job tasks, modifying examinations, or providing additional or alternative training.<sup>74</sup> Does extended time on written assignments make a big difference in your performance? Does typing rather than handwriting a set of notes result in significant improvement in quality? Do you follow directions a lot better when they are written down than when they are delivered verbally?
- o If your learning disability does affect your performance, you will be able to explain the situation frankly and clearly. You will be able to seek your employer's support to improve your work.
- **Risks of disclosure:**
  - o Unfortunately, people outside of formal education (and sometimes inside it as well) are often ignorant about dyslexia. Some people still confuse learning disabilities with retardation, while others are impatient or suspicious of differences. What can you tell about the personal traits of your boss and co-workers? Do their capacities for understanding, flexibility, and professionalism seem strong? Does there seem to be a "culture of acceptance" in the workplace?<sup>75</sup> The main problem often is not dyslexia but other people's reaction to it.
- **When to disclose:**

Experienced advocates have different points of view on the optimum timing of disclosures. The National Center for Learning Disabilities suggests that it is appropriate to disclose your learning disability after the job has been offered to you. However, Suzanne Kitchen of the Job Accommodation Network in the Department of Labor cautions against disclosing at the beginning of your new job. "The Equal Employment Opportunity Commission has ruled that an individual can disclose a disability at any time, from the first day of application to the day of termination," Kitchen says. "But I don't advise disclosing at the beginning. You don't have to, and it's illegal to ask."<sup>76</sup> On one hand, talking about your learning difference early in the process would give you

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<sup>74</sup> "Adults with Learning Disabilities and the Workplace," *Just the Facts...* IDA Fact Sheet # 907 (Baltimore, MD: The International Dyslexia Association, 2000).

<sup>75</sup> Eilene Zimmerman, "On the Job, Learning Disabilities can often Hide in Plain Sight," *New York Times* <http://www.nytimes.com/2006/12/17/jobs/17disabled.html?ex=1324011600&en=5734165651a0b943&ei=5088&partner=rssnyt&emc=rss> (December 17, 2006).

<sup>76</sup> Dan Woog, "Learning Disabilities at Work: How to Get What You Need," *Monster* <http://diversity.monster.com/wwd/articles/learningdisabilities/> (2006).

insight into your employer's attitude; further, getting this potentially anxiety-producing topic out of the way may help you present yourself more effectively. On the other hand, approaching the topic early might put undue emphasis on it, crowding out other relevant factors. Your own assessment of yourself, the job, and the employer is crucial to deciding whether and when to disclose your learning difference.

- **How to disclose:**

- Be sure to have this conversation in person, not over the phone or on email. Be prepared to discuss
  - o The specific features of your dyslexia
  - o How dyslexia affects your performance
  - o The accommodations or modifications you need to be successful
  - o Examples of successes you have enjoyed in the past when you have used these accommodations.

Be straightforward, brief, and positive. The National Center for Learning Disabilities provides the following sample statement: "I have a learning disability that affects my understanding of multi-step instructions when they are given verbally. You can help me by either writing the instructions down, or permitting me to either write them down or tape record them. In my last job, my supervisor always sent me email messages with instructions, and it worked out fine. In fact, I received an outstanding evaluation on my last performance review."<sup>77</sup> You should be prepared to answer questions and politely correct misapprehensions. After you have come to an agreement on needed modifications, it is appropriate to ask for a memo documenting the arrangement. A written record of mutual understanding about accommodations you need to be productive on the job facilitates clear expectations. It is crucial that you never appear to use your learning disability as an excuse for poor performance.

In weighing the potential gains against the acceptable losses of disclosure, researcher Paul Gerber reports that many young people find satisfaction in a "two stage" process.<sup>78</sup> They first get established in a new work or social situation, getting to know others and be known by them as "just a person." At a later date, when trustworthy relationships have been established, they have become more comfortable and are willing to share this aspect of themselves without so much fear of meeting discrimination or ridicule. Discussing the pros and cons of disclosure with a vocational counselor may help you make the decision that is right for you.

<sup>77</sup> National Center for Learning Disabilities, "LD on the Job," "How to Disclose," <http://www.nclcd.org/>.

<sup>78</sup> P. Gerber and L.A. Price, "To be or not to be LD: Self-disclosure and adults with learning disabilities," *Thalamus* (2005): 18-29. See also Gerber, "Self-disclosure of Learning Disabilities in the Beyond-School Years," <http://www.schwablearning.org/articles.asp?r=1059> (2005).

## FAMILY RELATIONS

Learning disabilities are a family affair. Frequently the first person to notice that “something isn’t right” with a child’s learning is the mother, whose concern may be disparaged by partner, family, friends, or teachers who think she is “making excuses” for her child’s difficulties. Given that dyslexia tends to run in families, a father’s resistance to taking the mother’s observations seriously may well stem from his own painful memories of failure in school. In fact, adults frequently discover their own dyslexia as they struggle to help their children. Bill Samuels, Jr., the president of Maker’s Mark, recalls sitting in a school office, listening to a description of his son’s problems, when he realized, “Oh, s\*\*\*. That’s me.”<sup>79</sup>

A range of emotional responses, including worry for the child’s future, disappointment that the child has a disability (followed by guilt at being disappointed in one’s child for a situation that is not the child’s fault), anger at the parent with “bad genes,” and self-blame (“Did I do something wrong?”) put enormous pressure on family relations. Families in Hawai’i are already pressed by the demands of holding multiple jobs, raising children, caring for aging parents, and managing lengthy commutes. Dyslexia’s added medical and educational implications, financial strain, and time demands may push families to the brink.

Since children with dyslexia become adults with dyslexia, the learning disabilities of a partner or parent can also put pressure on relationships. Adults who are not dyslexic are often impatient with a partner who cannot write a grocery list, look up a number in the phone book, tell time, or fill out a tax form. As with the dyslexic child, the dyslexic adult is often ashamed and defensive about his/her problems, making communication difficult. Subsequent success in life does not eliminate this pain: CEO John Chambers kept his secret until he found he could help others by talking about his experience: “This is very painful to talk about, even today,” says Chambers. “The only reason I am talking about it is 100% for the kids and their parents.”<sup>80</sup> Dyslexia can become the “dirty little secret” that families keep to hide their shame.

The key to family success with dyslexia is openness and knowledge. Just as teachers and tutors can adjust their strategies to meet the needs of dyslexic learners, so can parents, grandparents, and siblings adjust their family patterns to incorporate successful outcomes for all family members. It is not enough simply to know that a child or adult is “LD.” Families need accurate, detailed information that they can share with others. They also need to garner the resources to face difficult, painful issues together.

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<sup>79</sup> Morris, Munoz, and Neering, “Overcoming Dyslexia.”

<sup>80</sup> Morris, Munoz, and Neering, “Overcoming Dyslexia.”



Some issues likely to manifest in families with dyslexia include:

- ***Imbalance in the relations between children with dyslexia and children without it.*** The dyslexic child is likely to resent being scrutinized for deficiencies, while the non-dyslexic child may resent getting less attention.
- ***Parents who have no time for each other.*** Children + jobs + dyslexia is a formula that can put the relations among adults on the back burner. The less involved partner may begin to look for reasons to stay away from home, doubling the burden on the other adult and making open communication even more difficult.
- ***Financial stress.*** The appropriate school or tutor for your child or adult may be expensive. Other family needs and opportunities may be sacrificed. Mom and Dad may consider getting a second or third job to pay for the added expenses, which of course takes even more time away from face-to-face family time.

To hold families together while they cope with the needs of dyslexic family members, information and communication are critical. Strategies that often work include:

- ***Expand your knowledge.*** Once parents have a “big picture” of both the strengths and the weaknesses dyslexia entails, it becomes easier to take things in stride by cultivating a broader view. Attend seminars, workshops, and conferences in your area; talk to other parents who have been in your shoes; take advantage of local resources (see the list at the end of this booklet). Once the world of dyslexia becomes more familiar, dyslexia will cease to seem like a disaster and instead become just another way that people can be.
- ***Work together.*** Take every opportunity to meet teachers, doctors, and tutors as a chance to work as a team toward the common good of the family. Attend parent-teacher conferences, IEP meetings, and school events together. Involve other children as appropriate, while still allowing each child his or her special place.
- ***Emphasize the positive.*** Make sure family members can articulate and appreciate everyone’s strengths, not just their weaknesses. Create an upbeat home environment where children and adults combine their abilities to solve their problems.
- ***Model resilience.*** Children learn much more from their parents’ behavior than from their words. Telling the child not to worry when the parents are manifestly distraught does not reduce the child’s anxiety. The ability to manage difficulties with patience and perseverance is a great gift to every child.

- *Find mentors.* At both school and the workplace, individuals with dyslexia benefit from one-on-one guidance from caring and knowledgeable advisors. Many universities have mentoring projects for students with disabilities.
- *Find allies.* The world of dyslexia can be overwhelming. Sometimes family members will find it difficult to digest new information, adjust their expectations, or resist the temptation to find someone to blame. You need to identify family and friends who can understand and accept your situation, and who are willing to absorb new knowledge and identify positive steps to take. Just as isolation can be debilitating, so can a community of caring, supportive people enable families to gather the resources to meet their needs.<sup>81</sup>

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<sup>81</sup> Much of this information was culled from Betty Osman, "How do learning disabilities affect family dynamics?" pp. 1-2; Kristen Stanberry, "Marriage Under Pressure," pp. 3-5; Brian Inglesby, "Top Tips for Dads Getting Involved," pp. 6-7; Ann Christen and Kristen Stanberry, "Talking with Family about Your Child's Learning Disability," pp. 8-10 all in *E-ssential Guide: A Parent's Guide to Family Issues* <http://www.schwablearning.org/articles.asp?r=749&f=search> (2001).

## ADVOCATING FOR YOURSELF (INCLUDING KNOWING YOUR RIGHTS)

Effective teaching includes providing the dyslexic learner with an accurate picture of himself or herself as a learner. People with dyslexia need to know what works for them, what doesn't, and why. Because the person's deficiencies are often obvious and painful, her/his strengths need to be articulated, too. Children and teenagers as well as adults need to be able to advocate for themselves in school and in workplaces. Self-advocacy requires understanding your strengths and needs, articulating personal goals, knowing your legal rights and responsibilities, and communicating these to others.

Steps toward effective self-advocacy include:

- ***Understand your way of learning.*** Know the strategies that help you succeed and the accommodations that bypass your limitations. Be informed about dyslexia and able to explain it in language that is easy to understand. This requires getting past initial fears and denial and becoming thoroughly familiar with specialists' and teachers' assessments of your learning. You also need to be attuned to your own experience and able to reflect on both your successes and limitations.
- ***Practice communicating.*** Learn how to make clear requests and back them up with explanations. Role-playing different situations and putting together the needed information in advance will build confidence. Your manner of communication can create allies or it can leave others confused or defensive.
- ***Identify supporters.*** You need to know whom you can trust. People with whom you can comfortably share experiences and seek advice are a crucial life-long resource.
- ***Meet with teachers and counselors, if you are still in school.*** You can get useful feedback and create a plan for improvement. Your participation in creating your IEP or 504 plans will let you provide your own perspective and hear the reasoning behind the recommendations of others. You can also practice your self-advocacy skills for future workplace situations.
- ***Know your rights.***
  - o Individuals with Disabilities Education Act (IDEA) is an education law guaranteeing special education and related services to eligible children.
  - o Section 504 of the Rehabilitation Act is a civil rights law prohibiting discrimination on the basis of a disability in programs that receive federal funding.

- o Americans with Disabilities Act (ADA) is a civil rights law prohibiting discrimination on the basis of disability in employment, public services, and accommodations.

If you are eligible under any of these laws, you have certain rights and responsibilities. If you have an IEP and receive special education services, you are protected under IDEA until you graduate from high school with a diploma. Section 504 and ADA may protect you in college by providing for “reasonable accommodations.” In the world of work, you are most likely protected under ADA.

- *Plan for the future.* In high school, your IEP will include an Individual Transition Plan (ITP). Make sure that you take part in the preparation of the ITP and use it to gain specific assistance. In college, counselors from the campus learning disabilities center can help you think through your next steps. Vocational counselors can help you anticipate your needs and move smoothly from one stage of your life to another.
- *Educate others.* Many people will be uninformed or, worse, misinformed about dyslexia. Peers may be curious, teachers may be unprepared, and employers may be hesitant. While these encounters are sometimes uncomfortable, each conversation will hone your self-advocacy skills and perhaps improve the situation for the next person who is in your shoes.
- *Keep thinking.* As your life circumstances change, your challenges and satisfactions will also evolve. Reflect on both positive and negative experiences, looking for concrete methods of improvement. Self-evaluation is often your greatest source of insight.<sup>82</sup>

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<sup>82</sup> This list is adapted from Dr. Jodie Dawson, “Self-Advocacy: A Valuable Skill for Your Teenager,” <http://www.schwablearning.org/articles.aspx?r=522&f=search> (2003).

## ADVOCATING FOR YOUR CHILD

While self-advocacy is a crucial skill for dyslexic learners, so is the continuing support of family, friends, and teachers. In particular, younger children need an adult advocate to support them in negotiating with their school. Usually parents or grandparents are in the best position to advocate for their children. Initially, it may be an uncomfortable role for parents to play, requiring them to question the authority of teachers and schools; yet consistent, effective advocacy is essential for getting needed resources in a timely manner.

Effective advocacy for your child requires the following skills:

- ***Be supportive.*** Your child needs to feel your emotional support and know that s/he has your help in solving problems. Younger children may not be able to ask for help or articulate their experiences clearly; by listening carefully, watching closely, and helping the child put his/her experiences into words, you can help the child through distressful times. You can translate your intimate knowledge of your child for teachers.
- ***Be attentive.*** You are in a position to understand your child better than anyone else. You can provide educators with crucial information about the history of your child's instruction and the entirety of his/her life circumstances. Listen to your child's words, observe how s/he reads and writes, and share your observations.
- ***Be assertive.*** If your child is struggling with reading, writing, and/or spelling, you must be willing to ask questions in areas that educators consider "theirs." Advocates must learn to enter the territory ordinarily reserved to the school and ask hard questions about how language is taught, how progress is observed, and why your child is having difficulties. While educators must balance your child's needs with those of every other child as well as available resources, you are the only person who is concentrating exclusively on your child's best interests. It is your child and your family, not the teacher or the principal, who will live with the consequences of ineffective or delayed instruction.
- ***Be respectful.*** Teachers and schools are, generally speaking, trying to teach well; if they do not succeed, it is not their intentions but rather their knowledge of dyslexia and their available resources that are lacking. A pleasant but firm and unapologetic approach is usually most effective.
- ***Be persistent.*** The process of obtaining and executing an appropriate IEP is complex and often daunting. You may need to monitor your child's work and intervene if progress is not forthcoming. Communicate your urgency and determination. Your child needs an advocate who will not give up.

- **Be informed.** An effective advocate must be able to ask knowledgeable questions, find answers, challenge inappropriate methods, and distinguish accurate from inaccurate responses. You need to identify the specific problem or problems your child faces. Your school is one source of relevant information; this resource guide is another; others can be found from local professionals, parents, and organizations listed at the end of this document. You need to know how your school determines when a child needs help, what sorts of special services are available, and how to secure those services. Knowing your legal rights is also important so that your child will get appropriate and effective instruction, rather than a boilerplate, “one size fits all” approach that is usually inadequate for struggling readers.<sup>83</sup>
- **Be organized.** Document everything, so you can have a paper trail of all conversations, phone calls, and meetings; periodically request copies of your child’s records and keep them in a notebook, or organized chronologically; secure independent second opinions from outside experts when needed; network with other parents and develop your own political power within the school system.

Advocating on behalf of your child may be a daunting task. You can sustain your spirit and determination by remembering three important facts:

- **Time matters.** The single most consistent message from scientific research on reading is that early intervention is the key to success. The earlier a problem is detected and addressed, the more successful the child will be in overcoming it. In study after study, early assessment and intervention are critical to success.<sup>84</sup> While it is never too late to teach someone to read, write, and spell, early intervention can save a great deal of time, money, and work later on. Yet parents often delay: a 1999 poll of 1,700 people, commissioned by the Coordinated Campaign for Learning Disabilities, found that nearly half of parents who suspected their child might face a serious reading challenge waited a year or more before acknowledging the problem.<sup>85</sup> It takes *four times as long* to improve the skills of struggling readers in 4th grade as it does in mid-kindergarten to 1st grade.<sup>86</sup> The “wait and see if s/he grows out of it” approach is wasting the best window of opportunity

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<sup>83</sup> Hall and Moats, *Parenting a Struggling Reader*, p. 12.

<sup>84</sup> Hall and Moats, *Parenting a Struggling Reader*, p. 7.

<sup>85</sup> Hall and Moats, *Parenting a Struggling Reader*, p. 8. For discussion of the 1999 Roper Starch Poll commissioned by the Coordinated Campaign for Learning Disabilities, see “Measuring Progress in Public and Parental Understanding of Learning Disabilities,” report and discussion prepared for the Emily Hall Trelaine Foundation at <http://www.tremainefoundation.org/ld/roper-poll.pdf> (March 2000).

<sup>86</sup> Hall and Moats, *Parenting a Struggling Reader*, p. 46.

for teaching your child the sounds, letters, words, and language comprehension skills needed for reading and writing success.

- ***Appropriate teaching matters.*** Your school may be taking an ineffective approach to teaching your child, wasting the child's time and contributing to the child's doubts that he/she will ever be able to learn. Despite some gains over the last decade in accurate knowledge about learning disabilities among the general public, many educators have not been trained in research-based teaching strategies and are likely to overlook a struggling reader or writer until the signs of failure are sufficiently alarming as to garner notice.
- ***You are not alone.*** The Hawai'i branch of the International Dyslexia Association (HIDA), the Learning Disabilities Association of Hawai'i (LDAH), and other resources listed in this publication are available to help. LDAH may provide help with advocacy through its Parent Training and Information Center.<sup>87</sup>

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<sup>87</sup> See LDAH website at <http://www.ldahawaii.org/Aware.htm> for information on their advocacy program and other services.

## SOCIAL RELATIONSHIPS AND LIFE SKILLS

While some children and young people with dyslexia are adept at cultivating friends and relating to people, a higher-than-average number of “LD kids” have trouble making and keeping friends. Across ages and social settings, teenagers with learning disabilities consistently reported higher levels of loneliness than other young people.<sup>88</sup> One family therapist noted, “Children with learning disabilities often end friendships because they have been unable to work out conflicts.”<sup>89</sup> Dr. Betty Osman of the National Center for Learning Disabilities views relationships as the “fourth R” that should be cultivated in education. She suggests helping children develop social competence by naming and practicing social skills, including:

- Starting, maintaining, and ending a conversation
- Negotiating diplomatically
- Asserting oneself without being aggressive
- Learning to give and receive compliments
- Responding appropriately to joking and teasing
- Responding appropriately to bullying, including getting help from adults
- Accepting constructive criticism gracefully
- Naming and interpreting facial expressions, body language, vocal pitch, use of personal space, and other non-verbal communications.<sup>90</sup>

By modeling positive social relationships and being patient as children try out friendships, parents can provide a positive environment for developing social competence. Dr. Malka Margalit, who has studied loneliness among learning disabled children for over 20 years, found that LD children who have developed an age-appropriate repertoire of social skills, and who are confident about the coherence and predictability of their life world, are no more troubled by loneliness or social distress than their non-LD peers. Contrary to many adults’ prejudices, Dr. Margalit found that computer use predicts lower levels of loneliness for kids with learning disabilities. She comments, “Sometimes we are biased against technology, worried that children may neglect their face-to-face friendships in favor of virtual connections. I would like to encourage parents to think differently about e-friends and Web peers, since

<sup>88</sup> Linda Broatch and Malka Margalit, “How to Help a Child with Learning Disabilities Who Is Lonely,” *E-ssential Guide: A Parent’s Guide to Social Relationships*: pp. 8-10 <http://www.schwablearning.org/> (2005).

<sup>89</sup> Janet Giler, “Helping Kids with Learning Disabilities Understand the Language of Friendship,” *E-ssential Guide: A Parent’s Guide to Social Relationships*, p. 11 <http://www.schwablearning.org/> (2002).

<sup>90</sup> Betty Osman, “Nurturing Social Competence in a Child with LD,” *E-ssential Guide: A Parent’s Guide to Social Relationships*, pp. 2-3. <http://www.schwablearning.org/> (2001).



they may expand children's social networks, enable them to try out their social skills, as well as give them a different sense of their social status."<sup>91</sup>

Research conducted by the Frostig Center in Pasadena, California, identifies 6 "success attributes" for the long-term thriving of individuals with dyslexia:

*Self-awareness = individuals are knowledgeable and thoughtful about their learning difficulties, while not defining themselves solely in terms of those difficulties.*

*Proactivity = individuals embrace problem solving, take appropriate risks, get involved in decisions and projects*

*Perseverance = individuals have the ability to keep at projects, learn how to deal with setbacks*

*Set attainable goals = individuals can identify realistic short and long term goals*

*Support systems = individuals can find and use needed support from others, and at the same time can offer support to others.*

*Emotional coping strategies = individuals can recognize stress triggers, develop strategies, and know when to ask for help.*<sup>92</sup>

A longitudinal study following individuals with learning disabilities who became successful later in life, compared to those who did not, found no significant differences between the groups with regard to gender, IQ, socio-economic background, ethnicity, or the kind of disability with which they were diagnosed. However, the authors found significant differences in other areas. Successful individuals were those who learned to see their disability as only one aspect of themselves; who took an active approach to life choices and were able to reciprocate the caring and mentoring roles from which they had benefited; who were flexible in finding routes around obstacles; who could set concrete, attainable goals; who had mentors who helped them grow rather than fostering continued dependence; and who learned to cope effectively with stress. Successful individuals use these strategies for success throughout their lives, not only in school, and developed the "personal passions" that carried them through their challenges.<sup>93</sup>

<sup>91</sup> Broach and Margalit, "How to Help a Child with Learning Disabilities Who Is Lonely," p. 8.

<sup>92</sup> Frostig Center, "Life Success for Children with Learning Disabilities: A Parent Guide" <http://www.lidsuccess.org/index.html> (2005).

<sup>93</sup> Roberta J. Goldberg, Eleanor L. Higgins, Marshall H. Raskind, and Kenneth L. Herman, "Predictors of Success in Individuals with Learning Disabilities: A Qualitative Analysis of a 20-Year Longitudinal Study," *Learning Disabilities Research and Practice* 18 (4) (2003): 236, passim.

## WHAT ARE STUDENTS' RIGHTS AND RESOURCES?

### Federal and state law

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- **Individuals with Disabilities Act (IDEA):** The Individuals with Disabilities Education Act (IDEA) provides for free testing and special education for children attending public school. The act, initially passed in 1975 and reauthorized in 2004, requires schools to provide students with disabilities an education that meets their unique needs. IDEA provides federal funds to the states to help make special education services available for students with disabilities. It also articulates specific requirements to ensure a free appropriate public education (FAPE) for students with disabilities. FAPE is the protected right of every eligible child in the United States and its territories. In addition to the provision of services, the law also guarantees the right of due process to children and their families.

The Hawai'i state Department of Education states:

“Parents and students are protected by procedural safeguards and will be informed of their rights at identified points throughout the process. Parents will be informed of their procedural safeguards as requested or required by law. If parents are not in agreement with the findings and recommendations of the Department of Education, they are entitled to request an administrative hearing at any point in the process.”<sup>94</sup>

Parents who are challenging an IEP in an administrative hearing can seek assistance from the Disability Rights Center of Hawai'i (see local resources at the end of this guide for details).

Some key changes in the IDEA draft regulations in 2005 include:

- o **FAPE requirements:** Section 300.101 moves away from the old “wait to fail” model. This section states that Free Appropriate Public Education (FAPE) must be made available to students with disabilities who require special education, even if the students have not failed and have been advancing from grade to grade.
- o **Evaluation of students with specific learning disabilities (SLD):** Section 300.307-311 requires states to adopt new eligibility requirements permitting the use of scientific, research-based interventions to assess students. Parents must be notified when assessments are used to identify a specific learning disability.

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<sup>94</sup> <http://doe.k12.hi.us/specialeducation/spedisitforyourchild.htm>.

ity (SLD) and informed of their right to request an evaluation under IDEA.

- o *Individualized Education Plans (IEP)*: Section 300.320-324 requires schools to “do what it takes” to ensure parents understand the IEP process, including interpreters for deaf or non-English speaking parents. Schools must also inform relevant teachers and other service providers of their responsibilities for implementing the IEP.
- o *Resolution session*: Section 300.510 allows school districts to dismiss parental complaints at the end of the 30 day resolution period if the parents have refused to participate. At the same time, parents are now allowed to request a due process hearing if the school district fails to hold a resolution meeting within 15 days of receiving notice.<sup>95</sup>
- *Section 504*. Section 504 of the Rehabilitation Act of 1973 provides protection against discrimination in federally funded programs for individuals diagnosed with dyslexia. Section 504 is a civil rights law that protects the rights of individuals with disabilities and forbids discrimination on the basis of disability by any program receiving federal funds, including schools. The purpose of the law is to provide “an equal educational opportunity to all students with disabilities.”<sup>96</sup> The eligibility requirements for a 504 Modification Plan, which specify modifications or accommodations in the classroom to help students achieve success, are relatively broad and may include students with mild disabilities who do not qualify under IDEA eligibility requirements.
- *Private School Participation Project*. The Hawai'i DOE has a Private School Participation Project that makes some resources available to disabled students in private schools. Mandated by the federal Individuals with Disabilities Education Act (IDEA) and Chapter 56 of the Hawai'i Administrative Rules, this Project uses federal funds to identify private school students in greatest need for special education services and to deliver selected services to those students. While students whose parents have voluntarily taken them out of DOE schools and placed them in private schools do not have the same rights to DOE services as do public school students, some assistance is available.<sup>97</sup>

<sup>95</sup> “IDEA 2004: Highlights of the Final Regulations,” *Spin News* XXIII (1) pp. 2-3. <http://www.spinhawaii.org/NEWSLETTER/Septo6issue.pdf> (September 2006).

<sup>96</sup> See <http://doe.k12.hi.us/specialeducation/sped504rights.htm> for further details on Section 504. See “Accommodations and Modifications” in LD On-Line at <http://www.ldonline.org/in-depth/accommodations> for useful information on creating a 504 plan.

Today, more than six million school-age children in the United States receive special education services. Almost half - approximately 2.8 million - are students identified with a specific learning disability.<sup>98</sup>

## **Modifications and accommodations**

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The following arrangements will assist dyslexic students in all areas of school, and are often useful for other students as well:

- Break assignments into small steps and provide examples.
- Check assignments frequently.
- Give simple oral directions and provide a written copy of the directions.
- Have students repeat the directions in their own words.
- Create a buddy system for understanding and remembering directions.
- Limit the amount of copying required by including information on handouts.
- Accept alternative tasks, for example, oral book reports in lieu of written book reports.
- Present information in a multisensory manner.
- Provide preferential seating in the front of the class and away from distractions.
- Mask or block off sections of work that the student has completed.
- Provide an environment that is structured and free of distractions.
- Assess performance by marking the correct and acceptable parts of the work, rather than by calling attention only to the mistakes.
- Give credit for oral participation and give some grades based on oral performance.
- Tape record lectures, directions, stories, or specific lessons.
- Maintain daily routines to establish expectations.
- Provide students with a graphic organizer, outline, or blank web for students to fill in during presentations to help focus on key information and see relations among concepts.

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<sup>97</sup> See Private School Participation Project, Hawai'i Department of Education (DOE) at [http://doe.k12.hi.us/specialeducation/sped\\_in\\_privateschools.htm](http://doe.k12.hi.us/specialeducation/sped_in_privateschools.htm) (no date).

<sup>98</sup> See IDA's website at <http://www.interdys.org/> for further information.

- Use mnemonic devices to help students recall information or steps in a process.
- Provide an outline or notes on lectures.
- Encourage the use of assignment books or daily calendars to help students organize work.
- Display examples of successful work so that students can understand expectations.

The following arrangements will assist the dyslexic student in reading:

- Adjust the reading level of the materials as needed.
- Provide extended time.
- Utilize oral reading only for specific instructional reasons and avoid humiliating dyslexic students by requiring them to read aloud in front of peers.
- Utilize books on tape to substitute for or supplement written text.
- Use optical character recognition software such as Kurzweil 3000 or Texthelp (see next section).
- Provide a textbook which the student can highlight or underline important information and write notes in the margins.
- Encourage parents to read materials to the child, remembering that the dyslexic learner's spoken vocabulary may be significantly more advanced than her/his reading vocabulary.
- Introduce new vocabulary, using index cards to record important information and using outlining or webbing to retain meaning.
- Distribute reading materials early.

The following arrangements will assist the dyslexic student in spelling:

- Use an electronic dictionary such as a Franklin speller (see next section).
- Use a computer word processor and spell checker, on-line dictionary, or software such as Collins COBUILD dictionary resource pack.
- Employ a proofreader to call the student's attention to remaining errors, especially those not identified by spell checkers, such as homonyms (two or more words with the same pronunciation but different spellings and different meanings, such as *to*, *two*, and *too*).
- Provide extended time on tests.

- Omit spelling as a criteria on in-class assignments or pro-rate the spelling portion of the grade.

The following arrangements will assist the dyslexic student in writing:

- Use a word processor and/or lap top computer.
- Use a reading pen to scan notes directly into a computer (e.g., Reading Pen Elite from Wizcom Technologies).
- Utilize a proofreader.
- Utilize a note-taker and encourage note sharing so the student can listen in class without the distraction of simultaneously taking notes.
- Tape lectures and encourage the student to listen to them later.
- Utilize a transcriber to write down the student's dictated work.
- Request alternative assignments utilizing other media, such as art, collage, diorama, film, music, etc.
- Give two grades – one for ideas and content and another for mechanics, including spelling, grammar, punctuation, sentence structure, etc.
- Use speech recognition software such as Dragon Dictate or Via Voice (see next section).

The following arrangements will assist the dyslexic or dysgraphic student in math:

- Use a calculator.
- Reduce the quantity of problems assigned.
- Use graph paper to keep columns and lines straight in computation.
- Reduce need for copying problems from the board.
- Read word problems orally to the student.
- Provide a double set of textbooks so that one is available at home and the other at school.
- Use manipulatives to visually represent mathematical concepts such as Mortensen math or Math U See (see next section).
- Use key words or signal words to assist in problem-solving by routinizing the language used in specific computations.
- Provide extended time.

The following arrangements will assist the dyslexic learner in testing:

- Provide extended time.
- Provide oral or taped tests or other alternative format for testing, such as open book, take-home, essays, etc.
- Arrange for minimal distractions in the test-taking environment.
- Provide a reader.
- Provide a scribe.

### **Assistive technologies**

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The realm of assistive technologies is vast and rapidly changing. We list some of the commonly used assistive technologies below, but this list does not constitute a product endorsement.

- *AlphaSmart* – a portable, lightweight, durable word processing system with regular size key board and small screen. [www.alphasmart.com/index.html](http://www.alphasmart.com/index.html)
- *Bookshare* – a free service for students with qualifying disabilities to download books and periodicals. [www.bookshare.org](http://www.bookshare.org)
- *Calculator* – a small device that performs arithmetic calculations. Graphic calculators perform more sophisticated calculations.
- *Collins COBUILD resource pack* – a CD containing a talking dictionary giving definitions in whole sentences, a thesaurus, and guides to idioms, grammar, and usage. [www.elearnaid.com/colcoboncdroi.html](http://www.elearnaid.com/colcoboncdroi.html)
- *Dragon Naturally Speaking* –speech recognition software that types spoken words. [www.nuance.com/products/](http://www.nuance.com/products/)
- *Franklin speller* – an electronic spelling aid that also contains a dictionary, thesaurus, translator, and games. [www.franklin.com/](http://www.franklin.com/)
- *Inspiration* – a graphic organizer software program that helps the user generate and organize ideas. [www.inspiration.com/home.cfm](http://www.inspiration.com/home.cfm)
- *Kurzweil 3000* and *TextHelp* – reading, writing, and learning software programs. They access electronic texts and scan written text, then read the words out loud in a synthetic voice while highlighting the written words to reinforce learning. When the student types, the software speaks each typed word aloud. They include study skills, self-editing tools, teacher editing tools, and test-taking arrangements. [www.kurzweilededu.com](http://www.kurzweilededu.com) and [www.texthelp.com](http://www.texthelp.com)

- *Mortensen Math* and *Math U See* – a set of manipulatives that make arithmetic relations more concrete and easier to visualize. [www.mortensenmathdirect.com/](http://www.mortensenmathdirect.com/) and [www.mathusee.com/](http://www.mathusee.com/)
- *Recording for the Blind and Dyslexic* – a membership service to download digitally recorded and downloadable audio textbooks and literature. [www.rfd.org](http://www.rfd.org)
- *Spelling and Grammar Check* – On your word processing system's main tool bar, click on "Tools," then click "Spelling and Grammar." Students must spell and write with sufficient accuracy that they can distinguish correct from incorrect answers. In "Tools," click on "Language," then "Thesaurus," to access the thesaurus.
- *Via Voice* – a speech recognition software that types spoken words. [www-306.ibm.com/software/info1/wesphere/index.jsp?tab=products/mobilespeech](http://www-306.ibm.com/software/info1/wesphere/index.jsp?tab=products/mobilespeech)
- *Wizcom Technologies*: portable, hand-held scanners to support reading and scanning text ("reads" text). [www.wizcomtech.com/](http://www.wizcomtech.com/)
- *Wynn 5.1* – a reading, writing and learning software that allows the student to see and hear text simultaneously, using human-sounding voices; accesses most print and electronic texts; study tools include spell check, highlighting, Text Note, Voice Note, dictionary, and thesaurus. [www.freedomscientific.com/LSG/index.asp](http://www.freedomscientific.com/LSG/index.asp)



## MAKING TRANSITIONS

Change is often frightening. It is particularly challenging for dyslexic learners and their families because new situations may trigger more intense problems with performance.<sup>99</sup> A dyslexic child becomes a dyslexic teenager who becomes a dyslexic adult, and each transformation brings new demands and poses fresh dilemmas. Special educator Rick Lavoie has noted that families are often thrown into turmoil when new challenges unexpectedly re-invoke old fears.<sup>100</sup> Dyslexic learners and their families are apt to feel a sense of panic or defeat: having come so far, it is disheartening to feel, “here we go again.” Yet the skills and confidence gained with each successful transition are cumulative, forming a reservoir of resources that can be recruited to meet each new transformation.

It is important to examine alternatives and marshal available resources in assisting persons with dyslexia to transition through the educational system and into the workforce.

### **Entering pre-school, kindergarten, or other early childhood programs**

Nearly all learners flourish best in quality programs with small class size, run by caring professionals, offering stimulating, hand-on activities and utilizing multi-sensory approaches to learning. These traits are particularly important for children with learning disabilities. An early childhood program that provides enriched opportunities for language development in the forms of art, music, conversation, stories and other forms of play will help a child who is having difficulty with the world of language. While specific diagnoses of dyslexia would probably be premature during early childhood, early recognition of risk factors enables parents and teachers to anticipate children's needs.<sup>101</sup> If dyslexia runs in your family, or if your child has significantly delayed speech, difficulty with rhyming or sequencing words, difficulty remembering names or functions of common objects, or significant problems with coordination, early assessment is especially helpful.

### **Entering elementary school**

- If you suspect that your child is dyslexic, s/he can be tested as early as 5 years of age. Do not wait: early assessment is key to successful intervention.
- If your instincts tell you something isn't quite right with your child's learning, trust your feelings. Do not accept benign assurances that your child will “grow out of it.”

<sup>99</sup> Ryan, “The Other Sixteen Hours,” p. 8.

<sup>100</sup> Rick Lavoie, “On the Waterbed.”

<sup>101</sup> Carole Hill, “Early Childhood Education,” (Orton Emeritus Series) (Baltimore, MD: International Dyslexia Association: 2000).

- Talk to your child's teachers about how they teach reading. While children learn in many different ways, most learners benefit from acquiring basic phonics and morphology. Stale debates about "whole language" versus phonics should not be allowed to get in the way of teaching every child to read, write, and spell in ways that are effective for that child.
- Pay attention to changes in your child's demeanor. If a formerly cheerful and upbeat child becomes morose and negative toward school, that child may be experiencing undetected academic problems. Dyslexic children can often "fake it" for the first 2 years of school by memorizing needed vocabulary words and substituting general knowledge for actual reading. By third grade, however, students are expected to cease learning to read and commence reading to learn; at this point it becomes impossible to memorize everything, and the dyslexic child falters. The child will probably not have the vocabulary or self-awareness to communicate these experiences directly. Parents and teachers need to pay attention to indirect communication, including body language and emotional expressions, as well as listen to the child's words.
- Look at all available educational alternatives within your community, including public schools, private schools, charter schools, home schooling, and tutoring programs. (See the section on Resources in Hawai'i at the end of this document.) Schools with excellent reputations may be good for some learners but not for others. Find the best match for your child.

### **Entering middle school**

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- Anticipate logistical changes: your child will probably be required to change classrooms, respond to a larger number of teachers, negotiate a larger campus, utilize a locker, and arrive at classes on time.
- Take your child on a tour of the campus. Take a friend along so they can reinforce one another's recollections.
- Get a campus map and practice moving between classrooms, dining hall, library, sports facilities, etc.
- Anticipate social changes: your child will probably be in a larger and more varied social situation and will be worried about making friends.
- Encourage your child to become involved in extra-curricular activities and invite friends home.

- Help your child with social skills such as making eye contact, joining a conversation without interrupting, being an attentive listener, and including others in activities.
- Anticipate academic changes: your child will face a more demanding curriculum and greater organizational stress.
- Stay on top of IEP procedures.
- Meet early with teachers to let them know what works with your child and what areas need help.
- Work on time management skills. Create a schedule that fits the child's and the family's needs.
- Assist with organization. Set up a system to keep track of and transport materials.
- Have high expectations, but do not overreact to grades.
- Cultivate the distinction between supporting your child and doing the work for her/him. While parental support is critical in structuring the child for success, it will not advantage the child in the long run if parents “help” by taking over the homework.<sup>102</sup>

### **Entering high school**

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- Be prepared for a heavier workload.
- Arrange a quiet place to study and a workable studying schedule.
- Talk with the principal, teachers, or counselors at the school to find out about their services and accommodations.
- Take advantage of school tours, freshman orientation, parent-teacher meetings, and other opportunities to become familiar with the school.
- Continue to be aware of school alternatives and tutoring resources within your community; remember that the “best school” is not necessarily the most prestigious school, but rather the best match for each particular student.
- Learn to type and use word processing systems.
- Understand your own learning requirements and be willing to advocate for yourself. Do you need extended time on tests? Help with note taking? A quiet place to work? Assistance writing papers, including selecting topics, locating relevant information, taking notes,

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<sup>102</sup> This list is adapted from Nancy Firchow, “Smoothing Your Child’s Transition to Middle School,” <http://www.schwablearning.org/articles.aspx?f=1106&f=search> (2006).

organizing material, writing a draft, revising, editing? Would it help you significantly to tape record lectures so you can listen without taking notes? Does it help you to sit in the front of the room? Study with a buddy? Listen to a book-on-tape while you follow along in the written text? Becoming familiar with your own best ways of learning are essential to success at all levels of education.

- Learn to be independent in planning, organizing, and completing your work. Learn to be realistic in assessing tasks and estimating the time and labor they will require. A planner, either paper or electronic, is fundamental to successful organization. After you buy it, be sure to use it.
- Remember there is more to school than classes. Clubs, sports, hobbies, volunteer work, and informal socializing are important, too.
- If you have not completed high school, consider enrolling in the General Educational Development (GED) Program to obtain your high school diploma. Consult the DOE website at [doe.k12.hi.us/communityschools/diplomaged.htm](http://doe.k12.hi.us/communityschools/diplomaged.htm) for information about the GED.

### **Entering college or university**

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- Ask your high school counselor for a copy of your school's official documentation of your learning disabilities. Official documentation is necessary for acceptance to college or other post-high school services. This documentation may no longer be available once you leave high school or reach 21 years of age, so don't put this off. Have your parents keep a copy in case you lose yours.
- Ask your counselor for copies of all special assessments and tests administered in relation to the provision of special services.
- Keep these documents in a file or binder and retain for future use.
- Find out the specific procedures for securing needed accommodations on the Scholastic Aptitude Test (SAT). The SAT is often required for entrance to college. It takes up to 6 months to complete the paperwork to obtain accommodations. The process requires your high school to submit documentation.
- Check out the alternative to the SAT, the American College Test (ACT). Many colleges accept the ACT in addition to, or instead of, the SAT. Dyslexic learners often score higher on the ACT because the scoring system is broken down to show specific areas of verbal, math, science, and social science ability, while the SAT lumps all aspects of language arts into the verbal score and all aspects of mathematics into the math score.

- Learn to type and use word processing systems. These are essential in college.
- Understand your own learning requirements. All the same questions dyslexic learners asked themselves in high school remain critical in college: you must know your requirements for successfully reading, writing, studying, researching, preparing, and performing academically. A clear understanding of your own needs as an effective learner will help you ask the right questions of college advisors.
- Prepare yourself to be independent in organizing your work, identifying your needs, locating the appropriate assistance, and taking advantage of available services. Buy a planner and use it. Learn to look at the “big picture” of your assignments and requirements, so you pace yourself and manage your workload.
- Understand that colleges and universities are not allowed to ask if an applicant has a disability. Disability therefore is not factored into the admissions decision.
- Investigate the admission requirements of the colleges or universities you are most interested in attending. In addition to minimum ACT or SAT scores, universities usually require successful completion of certain high school courses in math, science, and language and a specified grade point average. Community colleges, in contrast, are often “open door” institutions and may not require admissions tests, high school diploma, or GED.
- Check out one of the college guides that specialize in resources for students with learning differences such as *Lovejoy’s College Guide for the Learning Disabled* by Charles Straughn. Identify the services offered by the institutions that interest you and contact their Disability Student Services Office directly for more detailed information. Some of the questions you should ask include:
  - o Is there a special program for dyslexic/learning disabled students?
  - o How long has it been in existence; how many students does it serve?
  - o Who staffs the program? Are they trained professionals? Full or part time? How many?
  - o How will you access services? Will you be assigned to a particular staff member? Have regularly scheduled appointments?
  - o Is there a counselor available to help deal with the stresses and pressures of college?
  - o Can you speak with students who are veterans of the program?

- o What is the application process, including closing date and needed paperwork?
- o Is there a required summer program or other pre-admission requirement?
- o Are there any fees associated with the services?
- o Does the program have a computer lab where assistance is available? What are its hours?
- o Does the university accept documentation of prior testing or does it require new testing? If new testing is required, how is it arranged and how much does it cost? Where are the documentation papers kept?
- o Does the program offer note-takers, texts on tape, tutoring in various subjects, oral testing, extended time on tests, foreign language course substitutions and waivers, and assistance in communicating with professors?
- o What kind of tutoring is available (individual vs. group; professional vs. peer; free vs. fee)?
- o How hospitable is the rest of the university to dyslexic students? How big are the classes? How accessible and cooperative is the faculty?
- o What is the recommended course load? What is the minimum load you can take and still be eligible for financial aid? Still be included on your parents' health insurance policy?
- o Should you also hold a job?
- o Is there a student support group?<sup>103</sup>

Once you are admitted to a college or university, work with their Student Services Office to review your documentation and arrange for accommodations.

### **Entering graduate or professional school**

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While graduate programs typically provide much less information about learning disabilities to prospective students than do undergraduate programs, most of the previous advice about college will apply to graduate and professional school as well. Tests required for admission, as well as state and national certifying examinations, can be taken with accommodations.

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<sup>103</sup> This list of questions is culled from Joan Stoner, Mary L. Farrell, and Barbara Priddy Guyer, "College: How Students with Dyslexia Can Maximize the Experience," Orton Emeritus Series (Baltimore, MD: The International Dyslexia Association, 1996): 10-14.

It is sometimes the case that individuals who have successfully completed their earlier educations will discover their learning disability in graduate school or medical school, where the intense requirements and high-stakes testing overwhelm their coping strategies.<sup>104</sup> Services provided to undergraduates at your university are available to graduate students as well. In addition, professional schools may have specific programs to assist learning disabled students.

## Entering the workplace

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- If you are an adult and unemployed or underemployed, contact the Vocational Rehabilitation and Services division of the State Department of Human Services at 808-586-5167 to reserve a spot at their weekly group orientation session. At that point, individuals can schedule an appointment with a vocational rehabilitation counselor to determine eligibility for services, including testing. The counselor will help you make a plan, identifying your strengths and interests. This office may provide needed retraining or direct you to available training elsewhere. The Vocational Rehabilitation office works with students from special education programs in local high schools as well as those who have dropped out of high school. The office also coordinates with substance abuse facilities and programs for ex-offenders. Their goal is to help persons find employment.
- If you do not have current documentation of your disability and you are over 22 years of age, seek a private assessment with a professional qualified to administer the needed tests for dyslexia. Call HIDA for referrals to qualified testers in your area.
- Educate yourself about the provisions of the Americans with Disabilities Act (ADA), which prohibits discrimination against qualified individuals with disabilities in job application procedures, hiring, firing, advancement, compensation, job training, and other terms, conditions and privileges of employment. Employers are required to provide reasonable accommodations to qualified applicants or employees so long as such changes do not impose “undue hardship” on the operation of the business. Go to [www.eeoc.gov/facts/fs-ada.html](http://www.eeoc.gov/facts/fs-ada.html) for further information on ADA.

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<sup>104</sup> Kevin Takakuwa, “Coping with a Learning Disability in Medical School,” *Journal of the American Medical Association*; 279: 81 <http://jama.ama-assn.org/cgi/content/full/279/1/81> (1998). See also Doric Little and Celeste Lajala, “Learning Differences and Medical Students: What We’ve Learned,” *Journal for Minority Medical Students* 18 (1) Fall, 2005): 33-35.

## TAX IMPLICATIONS

With each transition, it is wise to check with your tax-preparer to determine if any of the expenses you will be incurring are tax deductible. Documentation papers are essential and may establish all or part of expenses as medical expenses, depending on the family's level of income, tax form (long or short) and other variables.

- Relevant tax deductions may include medical and dental expenses involved in raising a child with a disability. You may benefit from these deductions if a) your total itemized deductions (including medical) are greater than your standard deduction would be, and b) your medical expenses are greater than 7.5% of your adjusted gross income. Acceptable items under medical deductions include costs of transportation to and from doctors, dentists and therapy appointments, including gas, mileage, and parking fees; tutoring that has been ordered by your child's doctor; long-distance phone calls regarding medical care; meals and hotels related to getting medical care; tuition for special schools or day camps; subscriptions to disability magazines. (See IRS publication 502)
- Relevant tax credits may include child or dependent care. Parents who pay for someone to care for their dependent child while they work or look for work may qualify for a tax credit if the child is under 13 or has a disability requiring supervision. Care includes regular child-care services, after-school programs, and day camps. The average credit is about \$600. (See IRS publication 503)
- For further information visit the IRS website at [www.irs.gov](http://www.irs.gov) or call the IRS at 1-800-829-1040.<sup>105</sup>

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<sup>105</sup> HIDA and this pamphlet do not claim to offer advice on preparing taxes. For further discussion of the tax circumstances of parents of children with disabilities, see, "It's Tax Time Again," *Spin News* XXII (3) (February 2006): 2.



## INTERVIEWS WITH TEACHERS

Since 5-15% of the general population is dyslexic, most teachers have encountered dyslexic students. Yet they often lack knowledge of reliable teaching strategies. Because the hands-on skills of multisensory structured language instruction (MSL) are usually not included in the training of teachers, teachers must go out of their way to seek the knowledge they need to effectively teach dyslexic students.

Teacher #1 is a public school teacher who has found the resources available in Hawai'i to advance her training. Public school teachers #2 and #3 have not had access to these resources.

### **HIDA: How do you know if a student in your class is dyslexic?**

**Teacher #1:** As a special education teacher for the Department of Education, the majority of students that I taught were identified as SLD or specific learning disabled. Most commonly the areas of difficulty were reading, writing, spelling and sometimes math.

**Teacher #2:** I don't know a lot about dyslexia but here are some things I have observed

- difficulty with reading, writing and language skills
- reversals of letters like “b” and “d”
- verbal skills usually strong
- poor spelling-transposition of letters
- problems with memory and organizing skills

**Teacher #3:** I would know a student is dyslexic if given prior information, i.e. from parents, prior teacher or student records. I rely on the written records because I don't have specific criteria to apply and in any case I have many other students needing my attention.

### **HIDA: How do you help a dyslexic student in your class?**

**Teacher #1:** I used the Orton-Gillingham approach to tutor my students [with dyslexia]. This approach is: simultaneous; multisensory (visual-auditory-kinesthetic-tactile); cumulative, and systematic. However, I modified the common one-to-one approach to use with a small group of students, usually 3 to 5. Organizational skills that include specific routines and written checklists are helpful tools that foster classroom management and student independence.

**Teacher #2:** I try to help a dyslexic student by having the student sit in the front of the classroom, take away any distractions, repeat directions, use spell check, tape things on their desk to remind them of “tricks” that they

would use, give lots of drill and practice, and use multisensory approaches. I would also use alternative methods of testing children who have dyslexia.

**Teacher #3:** I am not sure how I would help a dyslexic student. I need more information and training.

**HIDA: How do you learn about dyslexia?**

**Teacher #1:** I have completed extensive training from Fellows of the Academy of Orton-Gillingham Practitioners and Educators (AOGPE) to become a language therapist. As a member of the Hawai'i branch of the International Dyslexia Association (HIDA) I receive *The Annals of Dyslexia* and *Perspectives* which both provide excellent up-to-date research in the field of dyslexia. I also attend workshops and conferences sponsored by HIDA and the Learning Disabilities Association of Hawai'i (LDAH). Networking with colleagues is also helpful. Listening to parents and their concerns and locating resources to assist them also broadens my knowledge base. Many resources (CDs, videos, cassette tapes, and books) are available to borrow and/or purchase at the HIDA office. Various websites are also helpful to obtain up to date information on dyslexia.

**Teacher #2:** I learned about dyslexia through colleagues, professional reading materials, the Learning Disabilities Association of Hawai'i and through direct interactions with students.

**Teacher #3:** I would take a class, go on-line, borrow a book, or ask someone who works with dyslexic students. I am aware that there are resources available, but finding them takes time.

**HIDA: What does it feel like to be the teacher of a dyslexic student?**

**Teacher #1:** At times teaching dyslexic students can be a frustrating experience. The traditional structure of a classroom is generally not conducive to teaching a student with a learning difference. A lot of creative modification to the environment and curriculum is required in order to successfully teach these bright children. Also, educating colleagues and administrators can be time-consuming yet rewarding. When a child comes to me with eyes sparkling and a bright smile, exclaiming, "I read aloud in class by myself!" the joy I feel is indescribable!

**Teacher #2:** It makes me a better teacher. I'm there to provide them with tools that they can use to better deal with dyslexia.

**Teacher #3:** I feel frustrated. I do not have good strategies at my fingertips to help these students.

## HOW CAN YOU LEARN TO TEACH DYSLEXIC STUDENTS EFFECTIVELY?

To those untrained in multi-sensory structured language methods, spelling in the English language often looks completely chaotic and arbitrary. Why do we write “igh” to say /i/ in *light*, for example, but add a silent “e” to make the same sound in *bite*? Why do we write the sound /ā/ as “ay” in *play*, “ai” in *rain*, “a-consonant-e” in *Jane*, “eigh” in *eight*, “ei” in *vein*, and “ea” in *steak*? Why do we double the “l” in *hill* but not in *peel*?

Despite appearances, however, English is a largely rule-governed language. Approximately 85% of the spelling patterns in our language can be accounted for by stable rules and consistent generalizations, leaving only about 15% that is truly irregular. Dyslexic learners need to know these rules and generalizations, because this information is their key to entering the world of written signs. Additionally, it is helpful to all learners to know this information because it makes our language more comprehensible and prepares even strong spellers to be able to spell unfamiliar words and puzzle out their meanings.

Reading failure often appears in children at about 3rd grade because at that level they are expected to cease “learning to read” and commence “reading to learn.” At that point, vocabulary increases rapidly, largely from exposure to words through reading. But the dyslexic child, who has not really learned to read, has probably been getting by through memorizing each word. At about 3rd grade, this strategy falters: there are simply too many words to memorize them all. The child must learn the basic patterns of the language.

HIDA provides periodic professional development opportunities, including accredited training in multisensory structured language instruction for teachers, tutors, and parents on O’ahu, the Big Island, and other islands upon request. These programs also provide support for tutors and information for parents. Annually, HIDA offers a fall symposium and spring conference. In addition, our Outreach Program offers both scheduled and requested workshops. Check our website for scheduled events. The State Department of Education (DOE) and some private schools also provide educational opportunities. See “Resources in Hawai’i” at the end of this resource guide for contact information.

## WHAT CAN WE DO?

The disadvantages associated with dyslexia could be ameliorated through better education. Dyslexia's characteristic advantages could then blossom without the life-damaging obstacles that current educational systems often impose. These changes would be particularly effective:

### **Assess children early.**

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Every child should be assessed in kindergarten or first grade, before the child has fallen behind in language arts, and the curriculum should be adjusted as needed. Kids who are poor readers at the end of first grade almost never catch up. Nine out of 10 children who are deficient in reading in first grade are still poor readers in 4th grade. It is unlikely that the child will simply grow out of his/her problems.<sup>106</sup>

### **Read to children.**

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Help them learn to handle books, to move their eyes across the page from left to right and top to bottom. Hearing the works of Dr. Seuss or classic children's poetry read aloud helps to teach rhyming skills. Children exposed to nursery rhymes tend to develop stronger phonological awareness.<sup>107</sup> Similarly, those who have been exposed to letters, sounds, and texts develop better vocabularies and have a head start on reading. While all children benefit from being read to, children who face difficulties in cracking the code are particularly in need of experiences in which they share the joy of the written word.

### **Improve teacher education.**

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We now have rigorous scientific research explaining dyslexia and establishing effective remediation, yet we face enormous resistance from schools and universities to change their curricula and teaching methods. Louisa Moats found that "even motivated and experienced teachers typically understand too little about spoken and written language structure" to be able to teach it effectively.<sup>108</sup> Moats also found that these same teachers, after taking a course on phonemic awareness and sound/symbol relations, "judged this information to be essential for teaching and advised that it become a prerequisite for certification."<sup>109</sup>

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<sup>106</sup> Sherman and Ramsey, *The Reading Glitch*, p. 167.

<sup>107</sup> Joseph Torgesen, "Phonological Awareness: A Critical Factor in Dyslexia," *The Orton Emeritus Series* (Baltimore, MD: The Orton Dyslexia Society, 1995), p. 14.

<sup>108</sup> Louisa Moats, "The Missing Foundation in Teacher Education: Knowledge of the Structure of Spoken and Written Language," *Annals of Dyslexia* 44 (1994): 81.

<sup>109</sup> Moats, "The Missing Foundation in Teacher Education," p. 82.

Teacher preparation programs need to put aside tired old debates over “whole language” vs. “phonics.” Native Hawaiian educator Edward Kame‘enui, head of the National Center for Special Education Research, calls this stand-off a “terrible dichotomy.”<sup>110</sup> Instead, teacher training programs need to recognize the value of both direct phonetic instruction and exposure to rich literature, and give pre-teachers practical, hands-on skills for teaching both. Colleges of Education need to cease arguing over the “one best way” to teach language arts and instead equip teachers to identify and respond to different ways of learning.

### **Make multisensory structured language methods (MSL) available in every classroom.**

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While some children do not need MSL instruction, most learners would benefit academically from understanding the phonetic structure of their language, even if they can read, write and spell without that knowledge. Nearly all students who struggle with language, for whatever reason, would benefit substantially from MSL instruction. According to G. Reid Lyon, former Chief of the Child Development & Behavior Branch within the National Institute of Health (NIH), the two biggest causes of reading failure in the US are poverty and dyslexia.<sup>111</sup> The rate of reading failure in schools with high percentages of students from low income families is very high, as much as 60-70%.<sup>112</sup> Fifty-five percent of the students in 4th grade across the U.S. who are eligible for subsidized school lunch are also poor readers, while less than a quarter (24%) of the other children are poor readers.<sup>113</sup> MSL helps poor readers who are not dyslexic as well as those who are.

### **Educate the public.**

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While there is more accurate information about dyslexia available to the general public now than ever before, there is still much to be done to educate people about dyslexia’s challenges and opportunities. Dyslexia is often associated with children, as though it were only a problem in school. Yet the broader costs of an educational system that is unfriendly to dyslexic ways of

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<sup>110</sup> Edward Kame‘enui, quoted in Sherman and Ramsey, *The Reading Glitch*, p. 157.

<sup>111</sup> G. Reid Lyon, “Why Scientific Evidence Must Guide Reading Assessment & Reading Instruction,” 2004 Pacific Basin Learning Disabilities, ADHD & Teen Conference, Waikiki Beach Marriott Resort (February 13-14, 2004).

<sup>112</sup> Louisa Moats, “Basic Facts about Dyslexia, Part II: What Every Professional Ought to Know,” Orton Emeritus Series (Baltimore, MD: International Dyslexia Association, 1999), p. 10.

<sup>113</sup> Sherman and Ramsey, *The Reading Glitch*, p. 23.

knowing last a lifetime and affect our society in countless ways. According to the National Adult Literacy Survey, about half of Americans do not read for pleasure at all, not even one piece of literature in a year.<sup>114</sup> Alarming high numbers of Americans cannot read well enough to interpret literature, comprehend documents, or follow written instructions.<sup>115</sup> While no doubt many factors contribute to this “nationwide deficit in reading ability,” dyslexia is one major cause.<sup>116</sup>

While many Americans imagine that the cost of higher education is the biggest barrier to achieving a college education, in reality lack of adequate preparation is more detrimental than inability to pay. Research by Greg Forster at the Manhattan Institute found that only 1.4 million 18 year olds in the U.S., out of a total of some 4 million in 2000, had the academic qualifications to apply to a 4 year college. At 18 years of age, fewer than 50% of Caucasian students, fewer than 25% of Latino students, and fewer than 20% of African American students can read well enough to succeed in college. More scholarships, while needed, will only do a limited amount of good if the K-12 system continues to fail so many people.<sup>117</sup>

### **Educate government officials.**

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Dyslexia is a public health concern and economic liability as well as an educational problem. If children are assessed early and taught appropriately, costly and less effective special services will not be needed later. The National Center for Education Statistics concludes, “Although difficult to translate into actual dollar amounts, the costs to society are probably quite high in terms of lower productivity, underemployment, mental health services, and other measures.”<sup>118</sup> About 25 % of adults in our society are functionally illiterate; the rates go up significantly among individuals who are incarcerated, single teenage mothers, and persons dependent on public assistance.<sup>119</sup> Seventy-five percent of youth who drop out of school report difficulties in learning to read.<sup>120</sup> Dyslexic teens and adults who never learn to read, write, and spell are alarmingly over-represented in our nation’s prisons. The Executive Summary of *Literacy behind Prison Walls* reported that “learning disabled people are disproportionately represented in the

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<sup>114</sup> Sherman and Ramsey, *The Reading Glitch*, p. 44.

<sup>115</sup> Sherman and Ramsey, *The Reading Glitch*, p. 72.

<sup>116</sup> Sherman and Ramsey, *The Reading Glitch*, p. 72.

<sup>117</sup> Sherman and Ramsey, *The Reading Glitch*, pp. 70-72.

<sup>118</sup> National Center for Educational Statistics, quoted in Sherman and Ramsey, *The Reading Glitch*, p. 74.

<sup>119</sup> Hall and Moats, *Parenting a Struggling Reader*, p. 70.

<sup>120</sup> Lyon, quoted in Sherman and Ramsey, *The Reading Glitch*, p. 194.

prison population.”<sup>121</sup> About 1/3 of inmates taking classes at Eastern Oregon Correctional Institution, where state law mandates literacy for inmates, are learning disabled.<sup>122</sup> As many as 3/4 of young people in youth corrections facilities in Oregon have learning disabilities.<sup>123</sup> It is much cheaper in the long run to fund programs for young children than to wait and deal with far *more* costly effects of poverty, violence, and crime.

### **Abandon the old “wait to fail” model in favor of “response to intervention.”**

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The “wait to fail” method looks for a discrepancy between ability and performance: a person who scores high on IQ tests but fails on tests of achievement is likely to be dyslexic. However, the discrepancy model misses some students and focuses on the test rather than the learner. It also requires that the student fail badly enough to create a noticeable discrepancy, thus missing crucial opportunities for early intervention, producing low self-esteem, and compounding the person’s problems.<sup>124</sup> A newer approach is called “response to intervention” (RTI). This approach, endorsed by the IDEA in its 2004 reauthorization, requires a paradigm shift away from standardized testing and from the current focus on deciding who is eligible for special education services, and toward extensive teacher training to prepare teachers to see problems, intervene in a timely manner, conduct multiple short assessments to see if the intervention is working, and plan further interventions based on changes in the student’s performance over time.

Response to Intervention (RTI) utilizes a three tiered model of intervention in which students who do not thrive at one level will move to the next level of intensive, individualized instruction until they succeed. At the first level: all students receive high-quality instruction and behavioral supports in general education. Every student in kindergarten, first, and second grade is screened to identify those at-risk for reading and writing problems. At the second level: teachers monitor the progress of students and modify the curriculum as needed, offering supplemental interventions for students who do not thrive at the first level. At the third level: diagnosis and remediation is provided to those students who do not respond well to the first two levels. These students would primarily be those with significant learning disabilities.

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<sup>121</sup> Karl O. Haigler, Caroline Harlow, Patricia O’Connor, and Anne Campbell, Executive Summary, *Literacy Behind Prison Walls* (Washington, D.C.: National Center for Education Statistics, 1994), quoted in Sherman and Ramsey, *The Reading Glitch*, p. 75.

<sup>122</sup> Sherman and Ramsey, *The Reading Glitch*, p. 106.

<sup>123</sup> Sherman and Ramsey, *The Reading Glitch*, p. 218.

<sup>124</sup> Jack M. Fletcher, “Operationalizing Learning Disabilities: The Importance of Treatment-Oriented Models,” *Perspectives* 29 (2) (Spring, 2003): pp. 23-24.

Advocates of Response to Intervention (RTI), including the International Dyslexia Association and the National Research Council, argue that it would strengthen teachers' capacities to respond to struggling students and focus on students' classroom performance over time rather than their test scores. Edward Kame'enui emphasizes the importance of a coordinated approach to teaching at all three levels: "the kid gets kapakahi – 'mixed up' – when he's getting a little of this and a little of that."<sup>125</sup> The goal is systematic, focused intervention to prevent reading failure. For RTI to be successful, teachers must be fully qualified to conduct the assessments properly and administrators must provide adequate and timely support for the multi-tiered process throughout the school. While the National Center for Learning Disabilities has expressed concern that the RTI process would overlook highly intelligent children whose hidden disability is interfering with developing their potential, the organization joins IDA in welcoming this "improved, research-based process."<sup>126</sup>

### **Cherish diversity.**

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Neurologists Gordon Sherman and Carolyn Cowen, following the work of Stephen Jay Gould, suggest that we regard dyslexia as "a byproduct of *cerebro-diversity*."<sup>127</sup> Successful professional and business leaders, looking back at their struggles with dyslexia in school, see it as a kind of "boot camp" for later challenges: "it fostered risk taking, problem solving, resilience." "Many times in business, different is better than better," says CEO Bill Samuels. "And we dyslexics do different without blinking an eye."<sup>128</sup> Diversity in types of brains and ways of thinking may be an evolutionary asset to the human race.

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<sup>125</sup> Edward Kame'enui, quoted in Sherman and Ramsey, *The Reading Glitch*, p. 166.

<sup>126</sup> National Center for Learning Disabilities, "Parent Advocacy Brief: A Parent's Guide to Response-to-Intervention," p. 1. [http://www.ncl.org/images/stories/downloads/parent\\_center/rti\\_final.pdf](http://www.ncl.org/images/stories/downloads/parent_center/rti_final.pdf) (Users of this web page must register; registration is free.) Page 11 of this brief provides 10 questions parents should ask about the implementation of RTI.

<sup>127</sup> Sherman and Cowen, p. 11.

<sup>128</sup> Morris, Munoz, and Neering, "Overcoming Dyslexia."



## RESOURCES IN HAWAI‘I

### HIDA and IDA

- **The Hawai‘i branch of the International Dyslexia Association (HIDA)**

The Hawai‘i branch of the International Dyslexia Association (HIDA) is a not-for-profit organization formed to increase public awareness of dyslexia in the state of Hawai‘i. We have been serving individuals with dyslexia, their families, and professionals in our communities since 1986. For further information on our history, including the dedicated, hard-working individuals whose labor has brought us to our current standing as a recognized community leader in the area of learning disabilities, please visit our website at **[www.dyslexia-hawaii.org](http://www.dyslexia-hawaii.org)** or request a copy of the brochure “Basic Facts about Dyslexia and HIDA.”

We educate the public, train teachers, tutors, and parents, offer limited tutoring scholarships for economically disadvantaged learners with dyslexia through our Odyssey Project, and provide a wide spectrum of information. Contact us at **808-538-7007** or **HIDA@dyslexia-hawaii.org** for:

- o Names and contact information for trained tutors in your area.
- o Names and contact information for private specialists who conduct assessments for dyslexia.
- o Information on our Odyssey Project, which provides tutoring to low-income dyslexic children and adults in Hawai‘i, based on available funds and tutors.
- o Lists of qualified speakers from our Board of Directors who donate their time to speak with organizations interested in dyslexia.
- o Information on upcoming conferences and workshops. We sponsor an annual symposium that attracts hundreds of teachers, parents, school administrators, and health professionals. Throughout the year we offer workshops and seminars on a variety of topics related to dyslexia. Partial scholarships are often available. Visit our website at [www.dyslexia-hawaii.org](http://www.dyslexia-hawaii.org) for our current calendar of events.
- o Information on scheduled teacher training workshops.
- o Access to our lending library of books, pamphlets, articles, videotapes, audiotapes, CDs, and DVDs about dyslexia and related topics. Our loan period for our lending library is two weeks. If it is impossible for you to come to our office, we can mail videotapes from the HIDA library. We ask that you pay the costs of postage.

- o Access to the most up-to-date publications and handouts.
- o Information on how to join HIDA. We accept MasterCard and Visa for membership fees, donations, payment of audiotape and videotape rental fees, book purchases, and registration for workshops and conferences.
- o Support from other dyslexics and their parents who have been in your shoes.

- **The International Dyslexia Association (IDA)**

HIDA is one of the most active state branches of the International Dyslexia Association (IDA), the oldest learning disabilities organization in the United States. Founded in 1949, the IDA is a not-for-profit organization with 13,000 members, more than 40 branch offices, and affiliated partners in Singapore, Canada, Brazil, the Czech Republic, Israel, and the Philippines. IDA sponsors research on neurological, educational, and developmental dimensions of dyslexia. The organization hosts an annual conference that brings together several hundred experts on all aspects of dyslexia with approximately 3,000 parents, educators, and dyslexic persons eager to learn how dyslexia works. IDA is also a civil rights organization, fighting in court and through the legislative process for the rights of persons with dyslexia. Membership in IDA includes the scientific, peer-reviewed journal *Annals of Dyslexia*, and the quarterly newsletter *Perspectives*, which contains abbreviated reports on recent scientific studies for the lay reader. Please visit the IDA website at [www.interdys.org](http://www.interdys.org) for more information.

## **K-12 schools**

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### **Assets School**

1 Ohana Nui Way  
Honolulu, HI 96818  
Ph: (808) 423-1356  
Fax: (808) 422-1920  
Email: [info@assets-school.net](mailto:info@assets-school.net)  
[www.assets-school.net](http://www.assets-school.net)

ASSETS School is an independent school for gifted and/or dyslexic children, providing an individualized, integrated learning environment. ASSETS' environment empowers these children to maximize their potential and to find their places as lifelong learners in school and society. Check Assets School website for information on their Teacher Training Outreach Program and Student Summer School Programs.

**Horizons Academy of Maui, Inc.**

P.O. Box 1308  
 740 Haiku Road  
 Haiku, HI 96708  
 Ph: (808) 575-2954  
 Fax: (808) 575-9180  
 Email: [hacademy@maui.net](mailto:hacademy@maui.net)  
[www.horizonsacademy.org/](http://www.horizonsacademy.org/)

Horizons Academy is the only private, non-profit, special education school in Maui County and one of only three in the state of Hawai'i. Horizons Academy offers kindergarten through 11th grade.

**The Hawai'i Department of Education (DOE)**

- o The state DOE provides testing and other services as required by law. See Chapter 56, subsection 3: Evaluation and Reevaluation [doe.k12.hi.us/specialeducation/chapter56/subchapter3.htm](http://doe.k12.hi.us/specialeducation/chapter56/subchapter3.htm) and "Special Education: Is it for your child?" [doe.k12.hi.us/specialeducation/spedisitforyourchild.htm](http://doe.k12.hi.us/specialeducation/spedisitforyourchild.htm) (June 2007).
- o For information about the Private School Participation Project, which makes some federal funding available to private school students with special needs, see [doe.k12.hi.us/special\\_education/sped\\_in\\_privateschools.htm](http://doe.k12.hi.us/special_education/sped_in_privateschools.htm) (2005-2006).
- o For information about multisensory structured language instruction through the DOE, call the Special Education/Student Support Services Branch, ph: (808) 735-6222, or consult the DOE on-line publication CSSS (Comprehensive Student Support Service) Schools at [doe.k12.hi.us/periodicals/csss/](http://doe.k12.hi.us/periodicals/csss/) (2007).
- o DOE phone numbers (all area codes are 808):

**State:** 733-4400

**O'ahu:**

Honolulu: 733-4977; 733-4940

Central: 622-6425; 622-6432

Leeward: 675-0384; 675-0335

Windward: 233-5710; 233-5711

**Hawai'i:**

East Hawai'i: 974-4535

North Hawai'i: 775-8895

South Hawai'i: 982-4252

West Hawai'i: 323-0015

**Maui:** 873-3520; 873-3526

**Molokai:** 533-1723

**Lanai:** 553-1723

**Kaua'i:** 274-3504

### **Variety School**

710 Palekaua Street

Honolulu, HI 96816

Ph: (808) 732-2835

Fax: (808) 732-4334

Email: [denneyvariety@inets.com](mailto:denneyvariety@inets.com)

[www.hais.org/variety.htm](http://www.hais.org/variety.htm)

Variety School provides education and training for children, ages 5 to 13, with learning disabilities, developmental and/or social delays, and autism, and also offers an after-school enrichment program.

## **The University of Hawai'i**

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There is a disability service provider on each of the ten campuses of the University of Hawai'i system. For a summary of assistive technology available at UH campuses, visit <http://www.hawaii.edu/access/at.html#top> (14 May 2007).

### **Hawai'i Community College (HawCC)**

#### *Counseling and Support Services Center*

Ha'awi Kokua Program

Services to Students with Disabilities and Academic Challenges

Building 388, room 106 (Program Office) 104 (Lab)

Manono Campus

Hilo, HI 96720-4091

Ph: (808) 974-7741

Email: [hawccssc@hawaii.edu](mailto:hawccssc@hawaii.edu)

[www.hawaii.edu/hawaiiicc/learningresources/pdf/catalogo1/counselingsuppsvcs.pdf](http://www.hawaii.edu/hawaiiicc/learningresources/pdf/catalogo1/counselingsuppsvcs.pdf)

Ha'awi Kokua provides services to students with documented disabilities, including application and registration assistance; campus orientation; placement test accommodations; financial aid information; personal, academic and career counseling; enlargement of course materials; note-takers, readers, and sign-language interpreters; cassette recorders, talking calculators, large print calculators; computer adaptations (including screen

enlargers, ergonomic keyboards, voice recognition software); voice activated tape recorders and 4-track tape recorders; accessibility map; table-top microphones; pocket size spell checkers; auxiliary equipment; a student support group; etc.

### *The Learning Center*

200 W. Kawili St.

Hilo, HI 96720-4091

Ph: (808) 974-7503

Fax: (808) 974-7785

[hawaii.hawaii.edu/learningresources/learningcenter.html](http://hawaii.hawaii.edu/learningresources/learningcenter.html)

The Learning Center provides tutoring and support for students to develop into independent, active learners. The Center offers labs in reading, writing, math, English as a second language, tutoring in content areas, study skills development, study space, and a computer lab. These services are provided to all students at both Hawai'i Community College and UH-Hilo, and are particularly useful for dyslexic learners.

### **Honolulu Community College (HCC)**

#### *ACCESS*

Honolulu Community College

Building 2, Room 409

874 Dillingham Boulevard

Honolulu, HI 96817-4598

Ph: (808) 844-2392 voice/text

Email: [waynes@hcc.hawaii.edu](mailto:waynes@hcc.hawaii.edu)

[honolulu.hawaii.edu/disability/disability/student.htm](http://honolulu.hawaii.edu/disability/disability/student.htm)

ACCESS provides an array of services to students with documented disabilities, including academic planning; counseling; assistance with registration; referral to other appropriate services; special parking; mobility assistance and elevator key authorization for some buildings; building access and evacuation plan; lockers; special equipment (cassette recorders, 4-track tape players, talking calculators, amplification devices, Reading Edge); sign language interpreters; taped text; enlargement of printed materials; chairs and adjustable desks; testing accommodations; note takers; scribes; readers, lab assistants; enlarged materials; computer access programs, keyboards, and work stations; large screen monitor; closed circuit TV; a text payphone.

**Kapiolani Community College (KCC):**

*Disability Support Service Office (DSSO)*

Ilima Building, Room 103  
4303 Diamond Head Road  
Honolulu, HI 96816-4421  
Ph: (808) 734-9552  
Fax: (808) 734-9456  
Email: kapdss@hawaii.edu  
[kapiolani.hawaii.edu/object/ssso.html](http://kapiolani.hawaii.edu/object/ssso.html)

The Disability Support Service Office provides a variety of services to students with documented disabilities, including counseling, liaison/referral to community agencies, registration assistance, note-takers, readers, auxiliary aids (tape recorders, calculators, and amplification and magnification devices), accessible furniture and technology, alternative formats (including conversion of instructional material to Braille or audio tapes), and extended time for testing in a distraction-free environment.

*Waikiki Lifelong Learning Center*

Waikiki Town Center  
(formerly Kuhio Mall)  
2301 Kuhio Avenue, #212  
Honolulu, HI 96815  
Ph: (808) 924-7505  
Fax: (808) 921-0187  
Email: dicesare@hawaii.edu  
[www.hawaii.edu/lifelong/](http://www.hawaii.edu/lifelong/)

Offers help in developing speaking, reading, writing, and listening skills focusing on jobs in tourist industries. Waikiki Lifelong Learning Center is a collaborative private-public effort involving KCC.

**Kaua'i Community College**

*Disability Services*

Campus Center room 206  
3-1901 Kaunualii Highway  
Lihue, HI 96766  
Ph: (808) 245-8212  
Fax: (808) 245-8297  
[kauai.hawaii.edu/admissions/ar/disabsvcs.htm](http://kauai.hawaii.edu/admissions/ar/disabsvcs.htm)

Students with documented disabilities can gain access to services, including alternative formats for materials, note takers, sign language interpreters, and testing accommodations.

***Learning Center and College Success Program***

Learning Resource Center Building 3-1901  
Kaunuaui'i Highway  
Lihue, HI 96766  
Ph: (808) 245-8346  
[kauai.hawaii.edu/resources/lc/](http://kauai.hawaii.edu/resources/lc/)

The Learning Center makes available services that assist all students, and are particularly useful to dyslexic students, including individual and group tutoring in several subject areas; labs in writing, math, science, and computers; help with active reading; etc.

**Lanai Education Center**

329 7th St  
Lanai City, HI 96763  
Ph: (808) 565-7266

The Lanai Education Center offers classes on Lanai through Maui Community College. Students with dyslexia are referred to the Disability Student Services at MCC (see below).

**Leeward Community College (LCC)**

***Kako'o 'Iki (KI) Program***

96-045 Ala 'Ike L-208  
Pearl City, HI 96782  
Ph. / Fax: (808) 455-0421  
Email: [kprogram@hawaii.edu](mailto:kprogram@hawaii.edu)  
[emedia.leeward.hawaii.edu/kiprogram/](http://emedia.leeward.hawaii.edu/kiprogram/)

The KI Program provides accommodations and support to students with documented disabilities, including audio textbooks; note takers; extended time; tape recorders; informational handouts on success skills in college; assistive technology with voice recognition software and free training in how to use it; counseling and guidance.

***Math Learning Resource Center***

Math and Science Building room 204  
[emedia.leeward.hawaii.edu/mathlab/](http://emedia.leeward.hawaii.edu/mathlab/)

The Math Learning Resource Center provides assistance to any student taking math classes at LCC. Provides tutoring, worksheets, videos, graphic and scientific calculators, computers with software for algebra and pre-algebra classes, and a library. Technology and one-on-one assistance are particularly helpful to dyslexic learners.

**Maui Community College**

***Special Needs Coordinator***

Services for Students with Disabilities  
310 Ka'ahumanu Ave  
Kahului, HI 96732  
Ph: (808) 984-3306 or 984-3227

Students with documented disabilities can receive services, including personal, academic and career counseling; admissions, financial aid, and registration assistance; campus orientation; tutorial, reader, note-taker, and interpreter; campus accessibility map; auxiliary services; 2 and 4 track tape players, assistive technologies, voice recognition software, accessible computer equipment, etc.

***The Learning Center***

310 West Ka'ahumanu Ave  
Kahului, HI 96732-1617  
Ph: (808) 994-3240  
Fax: (808) 244-1009  
Email: [mcc-tlc@hawaii.edu](mailto:mcc-tlc@hawaii.edu)  
[www.hawaii.edu/mcc/tlc/](http://www.hawaii.edu/mcc/tlc/)

The Learning Center provides services that benefit all students, and are particularly useful for dyslexic students, including test-taking skills, study skills, writing labs, tutoring in various subjects, time management, reading skills, note taking, and stress management.



**Molokai Education Center**

375 Kamehameha V. Highway  
 Kaunakakai, HI 97648  
 Ph: (808) 553-4490  
 Fax: (808) 242-9618  
 Email: payba@hawaii.edu

The Molokai Education Center offers class through Maui Community College. Students with disabilities should contact Disability Student Services at MCC (see above).

**UH Center, West Hawai'i**

*Ha'awi Kooka Coordinator*  
 81-964 Haleki'i St.  
 Kealahou, HI 96751  
 Ph: (808) 322-4856 (V/TTY)  
 Fax: (808) 322-4839  
 Email: aureala@hawaii.edu  
 hawaii.hawaii.edu/ucwh

The UH Center in West Hawai'i is a receiving site for distance education and UH programs. They provide reasonable accommodations to students with documented learning disabilities, including extended test time, note takers, assistive technologies, etc.

**UH-Hilo**

*University Disability Services (UDS)*  
 Hale Kauano'e A Wing Lounge  
 200 West Kawili St.  
 Hilo, HI 96720-4091  
 Ph: (V) (808) 933-0816  
 Fax: (808) 974-7691  
 TTY: (808) 933-3334  
 Email: shirachi@hawaii.edu  
 www.uhh.hawaii.edu/studentaffairs/uds/

University Disability Services (UDS) provides services to students with documented disabilities. Services include counseling, accommodation, and access services, such as 4 track tape recorders, voice-activated tape recorders, Franklin Spelling Ace, Talking Calculator; a variety of assistive technologies available in the UDS office, Student Support Services, and libraries; distraction-free testing rooms; etc.

***Student Services Support Program (SSSP)***

Student Services Building rm 211  
Hilo, HI 64720-4091  
Ph: (808) 974-7616  
[www.uhh.hawaii.edu/studentaffairs/sssp/tutoring.php](http://www.uhh.hawaii.edu/studentaffairs/sssp/tutoring.php)

Student Support Services provides academic tutoring, help with studying and test taking, help with researching and writing papers, math lab, and writing assistance. These services are available to all students and are particularly valuable to dyslexic students.

**UH-Manoa**

***KOKUA Program (Kahi O Ka Ulu 'Ana: "Place of Growing")***

Queen Lili'uokalani Center for Student Services, rm. 013  
2600 Campus Road  
Honolulu, HI 96822  
Ph: (808) 956-7511 or 956-7612 (voice/text)  
Fax: (808) 956-8093  
Email: [kokua@hawaii.edu](mailto:kokua@hawaii.edu)  
[www.hawaii.edu/kokua](http://www.hawaii.edu/kokua)

The KOKUA Program is the UH-Manoa office for students with disabilities. KOKUA serves graduate and undergraduate students with learning, physical, psychiatric, and other documented disabilities. KOKUA provides disability access services to students on a case-by-case basis, and students are not charged for these services. A student's disability status is considered confidential information and is only disclosed with the student's permission.

KOKUA aims to provide equal opportunity to disabled students. Access services often provided to students with learning disabilities include academic counseling; alternate media; assistance with course substitution for foreign language requirement; assistive technologies; campus intervention; community liaison; faculty liaison; lockers and study facilities; note-taking; priority registration; proof reading; testing accommodations; etc. Other access services may be available depending upon the individual student's strengths and disability-related need.

***Center on Disability Studies (CDS)***

College of Education  
Ph: 956-5011  
[www.cds.hawaii.edu](http://www.cds.hawaii.edu)

The Center on Disability Studies focuses upon development and conduct of interdisciplinary education/training, research/demonstration and evaluation, and university and community service.

*The Learning Assistance Center*

Queen Lili'uokalani Center for Student Services room 306  
Ph: 956-3456  
Email: [learning@hawaii.edu](mailto:learning@hawaii.edu)  
[manoa.hawaii.edu/learning/calendar.html](http://manoa.hawaii.edu/learning/calendar.html)

The Learning Assistance Center provides academic counseling services to assist students in developing learning skills to increase academic success. Students can participate in facilitated study groups or individual sessions to become more proficient in managing time, reading, writing, taking notes, taking exams, and enhancing academic motivation. Tutoring available in specific courses varies, generally including introductory math, statistics, chemistry, biology, religion and economics. Counseling and support services for students with learning disabilities are also provided.

*Other learning centers at UH-Manoa that, while not specifically for dyslexic students, provide individualized attention to learning that will benefit all students:*

*The Writing Workshop*

Department of English  
415 Kuykendall Hall  
Honolulu, HI 96822  
Ph: (808) 956-7619  
[maven.english.hawaii.edu/workshop/](http://maven.english.hawaii.edu/workshop/)

Provides limited assistance with writing to all UHM students.

*Language Learning Center*

256 Moore Hall  
1890 East-West Road  
Honolulu, HI 96822  
[mcl.lll.hawaii.edu/llc/links.stm](http://mcl.lll.hawaii.edu/llc/links.stm)

Assists students in learning foreign languages.

*GEE Technology Learning Center and Computer Lab*

Email: [tim-info@hawaii.edu](mailto:tim-info@hawaii.edu)

[www.tim.hawaii.edu/Document%20Library%20%20Knowledge%20Management/gee\\_technology\\_learning\\_center.aspx](http://www.tim.hawaii.edu/Document%20Library%20%20Knowledge%20Management/gee_technology_learning_center.aspx)

Supports students in Travel Industry Management.

**UH-West O'ahu (UHWO)**

Work station with adjustable table and speech input software

*Writing and Learning Center*

96-129 Ala Ike

Building B room 108

Pearl City, HI 96782

Ph: (808) 454-4794

Fax: (808) 453-6045

Email: [writing@uhwo.hawaii.edu](mailto:writing@uhwo.hawaii.edu)

[homepages.uhwo.hawaii.edu/~writing/](http://homepages.uhwo.hawaii.edu/~writing/)

The mission of the Writing and Learning Center is to help people become better writers. Their services are available to all students, and are particularly helpful for dyslexic learners. Services include on-line writing tutorials, one-on-one tutoring, some tutoring in academic subjects, and a lending library.

**Windward Community College**

*Disabilities Coordinator*

Ph: (808) 235-7413

*The Learning Center*

Hale Manaleo 113

45-720 Kea'ahala Rd.

Kane'ohe, HI 96744

Ph: (808) 235-7498

[www.wcc.hawaii.edu/tlc/index.htm](http://www.wcc.hawaii.edu/tlc/index.htm)

The Learning Center provides testing services, study skills development, computer accessibility and loans, language tapes and CDs, resource instructors, and self-teaching materials for some classes. Some of these services are particularly useful for dyslexic learners.

## **Private colleges and universities**

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### **Brigham Young University Hawai'i**

#### *Services for Students with Special Needs*

BYU Hawai'i Counseling Services

55-220 Kulanui St, Box 1837

Laie, HI 96762-1294

Ph: (808) 293-3999; 293-3518; 293-3578

[w2.byuh.edu/studentlife/sdc/counseling/sns\\_services.html](http://w2.byuh.edu/studentlife/sdc/counseling/sns_services.html)

Students with documented disabilities are assisted with classroom and housing accommodations; advocacy and assistance communicating with instructors; ordering textbooks on tape; assistance locating tutors, readers, scribes, note takers; testing accommodations; computer equipment with assistive technology; distraction-free rooms for studying and taking exams; etc.

### **Chaminade University**

#### *Academic Achievement Program*

Student Support Services

3140 Waialae Ave.

Honolulu, HI 96816-1576

Ph: (808) 735-4711

[www.chaminade.edu/studentLife/aap.php](http://www.chaminade.edu/studentLife/aap.php)

The Academic Achievement Program provides tutoring, workshops, cultural events, grant aid, laptop and media loan-out program, academic/personal advising, and preparation for graduate school exams to eligible students.

### **Hawai'i Pacific University (HPU)**

#### *Tutoring and Testing Center*

1060 Bishop St., LB Building, Floor 6 (downtown campus)

Honolulu, HI 96813

#### *Tutoring Center, Atherton Library*

Hawai'i Loa Campus (windward side)

45-045 Kamehameha Highway

Kane'ohe, HI 96755-5297

Ph: 544-0200

[www.hpu.edu/index.cfm?section=studentservices3410](http://www.hpu.edu/index.cfm?section=studentservices3410)

The Tutoring Centers offer one-on-one and small group tutoring to all HPU students to develop basic learning skills and refine analytic skills. Tutoring in several subjects and writing assistance are available.

## **Workforce**

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### **Vocational Rehabilitation and Services**

[www.hawaii.gov/dhs/self-sufficiency/vr/index\\_html#VR](http://www.hawaii.gov/dhs/self-sufficiency/vr/index_html#VR)

#### *O'ahu Branch*

600 Kapiolani Blvd., #301  
Honolulu, HI 96813  
Ph: (808) 586-5167

#### *Kaua' i Branch*

3060 Eiwa St., #304  
Lihue, HI 96766-1877  
Ph: (808) 274-3333

#### *Maui Branch*

54 So. High St., #309  
Wailuku, HI 96793  
Ph: (808) 984-8350

#### *Molokai Field Office*

P.O. Box 1068  
Kaunakakai, HI 96648  
Ph: (808) 553-3621

#### *Hawai' i Branch*

75 Aupuni Street, #110  
Hilo, HI 96720  
Ph: (808) 974-6444

#### *Kona Field Office*

P.O. Box 459  
Captain Cook, HI 96704  
Ph: (808) 323-0025

Vocational rehabilitation (VR) counselors work with clients to set employment goals, make plans for reaching those goals, and identify services needed to prepare for and find a job. If applicants meet VR's eligibility requirements, VR may pay for testing.

## Armed Forces

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### **The Armed Services Exceptional Family Member Program (EFMP)**

Each branch has an Exceptional Family Member Program (EFMP) which provides support, resources, and referrals for military families with special medical and educational needs.

#### *Army Community Service Exceptional Family Member Program*

US Army Garrison Hawai'i  
 Bldg 2091  
 Scofield Barracks  
 HI 96857-5019  
 Ph: (808) 655-4777; -4227 (main number)  
 Fax: (808) 655-1639

#### *Army Exceptional Family Member Program*

Tripler Army Medical Center  
 Department of Pediatrics (MCHK-PEF)  
 7th floor, C Wing  
 1 Jarrett White Road  
 Honolulu, HI 96859-5000  
 Ph: (808) 433-6205  
 Fax: (808) 433-4316  
[www.tamc.amedd.army.mil/services/exceptfamily.htm](http://www.tamc.amedd.army.mil/services/exceptfamily.htm)

#### *Coast Guard Exceptional Family Member Program*

Ph: 842-2089; 2085; 2086

#### *Marine Exceptional Family Member Program*

Marine and Family Services MCBH  
 Bldg 216, Box 63073  
 MCBH Kane'ohe Bay, HI 96863-307  
 Ph: (808) 257-7783  
 Fax: (808) 257-1808  
[www.mccshawaii.com/exceptional.htm](http://www.mccshawaii.com/exceptional.htm)

#### *Navy Exceptional Family Member Program*

Fleet and Family Support Center (FFSC)  
 Navy Region Hawai'i  
 Ph: (808) 474-1999  
[www.greatlifehawaii.com/Activity/listActivity.asp?catid=65&catname=Exceptional+Family+Member+Program+%28EFMP%29Exceptional](http://www.greatlifehawaii.com/Activity/listActivity.asp?catid=65&catname=Exceptional+Family+Member+Program+%28EFMP%29Exceptional)

## Prisons

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### **Education Specialist**

Department of Public Safety  
Education Program Services  
919 Ala Moana Blvd #405  
Honolulu, HI 96813  
Ph: (808) 587-2555

This office oversees the Education Centers in each correctional facility and center in the state. The Education Centers offer a wide range of programs from pre-literacy to GED and some college classes. The Centers conduct some assessments, and administer the Test of Adult Basic Education (TABE) to all inmates, but lack the staff to conduct full professional assessments.

Prisoners can request to go to the Education Centers; some restrictions apply, but the general population usually has access. Friends or family members who are seeking educational resources for an incarcerated individual can contact this office for recommendations. Individuals with dyslexia are heavily overrepresented in the criminal justice system, so it is likely that many prisoners would benefit from multisensory structured language instruction. For a promising account of successful use of MSL instruction in Oregon correctional facilities, see chapter 3 of Lee Sherman and Betsy Ramsey, *The Reading Glitch* (Lanham, MD: Rowman and Littlefield Education, 2006).

## Other local resources

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### **ALOHA STAC (Special Technology Access Center)**

710 Green St.  
Honolulu, HI  
Ph: (808) 523-5547  
Email: [astachi@yahoo.com](mailto:astachi@yahoo.com)  
[www.geocities.com/astachi/index.html](http://www.geocities.com/astachi/index.html)

Aloha STAC is a not-for-profit Hawai'i Easter Seal program. The mission of ALOHA STAC is to provide individuals with disabilities and their families access to computers, peripheral tools, and appropriate software. ALOHA STAC aims to increase awareness, understanding, and implementation of microcomputer technology by establishing a program of activities and events to educate the community about the contribution computers can make to the lives of persons with disabilities.



**Assistive Technology Resource Centers of Hawaii (ATRC)**

414 Kuwili St., Ste. 104  
 Honolulu, HI 96817  
 Ph: (808) 532-7110  
 Fax: (808) 532-7120  
 Email: atrc-info@atrc.org  
 www.atrc.org

ATRC is a 501 (c) (3) non-profit organization linking people with assistive technology (AT). ATRC offers many programs and services, including demonstrating assistive technology, lending devices to “try before you buy,” training in technology use, advising on AT in IEP or VR meetings, and providing information and referrals on what to buy and how to pay for it.

**Hawai'i Disability Rights Center**

900 Fort Street Mall  
 Suite 1040  
 Honolulu, HI 96813  
 Ph: (808) 949-2922, 1 (800) 882-1057  
 Fax: (808) 949-2928  
 Email: info@hawaiidisabilityrights.org  
 www.hawaiidisabilityrights.org

The mission of the Corporation is to protect and promote the human, civil and legal rights of individuals with disabilities through the provision of information and advocacy. This Center is Hawai'i's designated Client Assistance Program under the Rehabilitation Act, and also our designated Protection and Advocacy System for People with Disabilities, serving all disabilities as authorized under several federal statutes. The Center provides advocacy and representation for parents of children who are eligible for 504 plans or IDEA educational benefits, including IEPs. Assistance is available in determining eligibility for services, acquisition of services through the IEP process and 504 plans, transition plans, placement, and representation at administrative hearings. The Center is particularly interested in disciplinary action such as arrest, suspension, and expulsion resulting from disability-related behavior.

The Center works in eight basic issue or problem areas: care and treatment; citizenship, including accessibility and voting rights; education; employment, especially reasonable accommodations; freedom of association; housing; justice, including emancipation from unneeded guardianships; and programs and services addressing legal entitlements. Services are always free and available to persons with any disability at any age.

### **Hawai'i Resources for School Success (HRSS)**

North Hawai'i Women and Children's Services  
P.O. Box 1240  
Kamuela, HI 96743  
Ph: (808) 885-9318  
Fax: (808)885-9319  
Email: [info@hawaiischoolsuccess.org](mailto:info@hawaiischoolsuccess.org)  
[www.hawaiistudentsuccess.org](http://www.hawaiistudentsuccess.org)

HRSS is a 501 (c) (3) non-profit organization whose mission is to increase success in school and life for North Hawai'i students, especially diverse learners. Services include providing full or partial scholarships for comprehensive learning assessments, providing scholarships for professional development, mentoring, and supporting professional development for literacy as well as Schools Attuned training.

### **The Hawai'i State Public Library System**

[www.librarieshawaii.org/Default.htm](http://www.librarieshawaii.org/Default.htm)

The state library now offers "eBooks" and Digital Audio Books, two new services from OverDrive/Digital Library Reserve. Learn how to download eBooks or digital audio books at this website: <http://hawaii.lib.overdrive.com> and follow each step carefully. At the state library, you can check out, download, and listen to digital audio books; burn an audio book to CD; and transfer an audio book to your portable audio device or Smartphone.

### **Learning Disabilities Association of Hawai'i (LDAH )**

200 N. Vineyard Street, Suite 310  
Honolulu, HI 96817  
Ph: (808) 546-9684  
Fax: (808) 537-6780  
Neighbor Islands Only: 800-533-9684  
Email: [LDAH@LDAHawaii.org](mailto:LDAH@LDAHawaii.org)  
[www.ldahawaii.org/](http://www.ldahawaii.org/)

LDAH has served Hawai'i's parents, families, and professionals since 1969. LDAH sponsors conferences, training events, parental support activities, workshops on literacy, and one-on-one assistance in understanding and adjusting your child's IEP.

**Pacific Resources for Education and Learning (PREL)**

900 Fort Street Mall, Suite 1300  
 Honolulu, HI 96813-3718  
 Ph: (808) 441-1300  
 Fax: (808) 441-1385 U.S.  
 Toll-free Phone: (800) 377-4773 U.S.  
 Toll-free Fax: (888) 512-7599  
 Email: [askprel@prel.org](mailto:askprel@prel.org)  
[www.prel.org](http://www.prel.org)

PREL is an independent, nonprofit 501(c)(3) corporation that serves the educational community in Hawai'i, the U.S.-affiliated Pacific islands, the continental United States, and other countries throughout the world. PREL bridges the gap between research, theory, and practice in education and works collaboratively with schools and school systems to provide services that range from curriculum development to assessment and evaluation. PREL services in Hawai'i and the Pacific include school improvement planning, professional development services, research and development, and production and delivery of products and services.

**Hawai'i Library for the Blind and Physically Handicapped**

102 Kapahulu Ave  
 Honolulu, HI 96815  
 Ph: (808) 733-8444  
[www.librarieshawaii.org/locations/oahu/lbph.htm](http://www.librarieshawaii.org/locations/oahu/lbph.htm)

The library lends unabridged books on tape with tape machines to individuals who have medical documentation of dyslexia. There is no charge for the equipment or service.

**Scottish Rite Children's Center**

1611 Kewalo Street  
 Honolulu, HI 96822  
 Ph: (808) 545-7758  
 Fax: (808) 533-6493

Scottish Rite Children's Center provides an intensive speech therapy program for children, ages 3 to 6 years, whose primary disability is a speech and/or language delay.

### **Special Parent Information Network (SPIN)**

919 Ala Moana Blvd, # 10 1

Honolulu, HI 96814

Phones on each major island (all area codes are 808):

O'ahu: 586-8126

Kaua'i: 274-3141

Hawai'i: 974-4000

Maui: 984-2400

Molokai: 1-800-468-4644

Lanai: 1-800-468-4644

Email: [spin@doh.hawaii.gov](mailto:spin@doh.hawaii.gov)

[www.spinhawaii.org/](http://www.spinhawaii.org/)

The Special Parent Information Network (SPIN) is a parent-to-parent organization in Hawai'i that provides information, support and referral to parents of children and young adults with disabilities and the professionals who serve them. SPIN provides a calendar of events, local resource listing, free quarterly newsletter called *SPIN News*, annual conference, and community workshops. SPIN is cosponsored by Disability and Communication Access Board and the Special Education branch of the DOE.

## RECOMMENDED WEBSITES

The internet contains a bewildering variety of sources about dyslexia. Readers need to check the scientific credentials of those posting information on web sites and to be aware that some sites are trying to sell products. In general, websites whose addresses end in "edu" are universities and are usually reliable sources of valid information.

Among the forest of available websites, these stand out as providing up-to-date, valid, and reliable information:

- *Hawai'i Branch of the International Dyslexia Association (HIDA)*  
[www.dyslexia-hawaii.org](http://www.dyslexia-hawaii.org)
- *International Dyslexia Association (IDA)*  
[www.interdys.org](http://www.interdys.org)
- *LD On-line*  
[www.ldonline.org](http://www.ldonline.org)
- *National Center for Learning Disabilities (NCLD)*  
[www.nclld.org](http://www.nclld.org)

## GLOSSARY

**504 Modification Plan:** An individual education plan that modifies what the student is expected to demonstrate due to a disability. Section 504 of the Rehabilitation Act protects individuals with disabilities from discrimination due to disability by recipients of federal financial assistance. A 504 Modification Plan may include changes in instructional level, content, and performance criteria, may include changes in test format, and includes alternate assessments.

**Accommodations:** Techniques and materials that may help children with reading and writing difficulties to complete regular classroom curriculum. Examples: books on tape for reading or use of a note taker or word processor for writing.

**Accommodations for testing:** Changes in the administration of tests that do not substantially alter what the tests measure. Examples: changes in presentation format, response format, test setting, or test timing.

**Affixes:** A letter or group of letters added to the beginning (a prefix) or the end (a suffix) of a base word or root. The addition of the affix changes the meaning and/or changes the part of speech of the base word.

**Alphabetic principle:** The basic organizing principle for the English language and for any language in which written symbols (graphemes) represent speech sounds (phonemes) and in turn speech sounds are combined to create spoken words. In English, the 26 letters of its orthography, either singly or in combination, make up the 44 sounds in the language.

**Analytic-synthetic principle:** The relationship between spelling and reading in the coding process. We *analyze* (break apart) spoken words into individual sounds in order to spell. We *synthesize* (blend together) discrete sounds in order to form words in order to read.

**Asperger's Syndrome:** A developmental disorder that is part of the autism spectrum. It is characterized by greater or lesser degrees of impairment in language and communication skills, and repetitive or restrictive patterns of thought and behavior.

**Assessment:** On-going evaluation which compares individuals' current abilities to their former abilities, or compares individuals to others, to evaluate learning.

**Auditory discrimination:** The ability to hear likenesses and differences in phonemes or words (assuming normal hearing acuity). For example, the ability to hear the /t/ in *bat* as compared with the /d/ in *bad*.

**Auditory memory:** Long-term auditory memory is the ability to remember something heard some time ago. Short-term auditory memory is the ability to recall something heard very recently.

**Autism:** The most common condition in a group of developmental disorders called autism spectrum disorders. Autistic persons have difficulties with social interactions, problems with verbal and non-verbal communication, and tendencies toward repetitive or obsessive behaviors.

**Automaticity:** Automatic and correct responses to linguistic stimuli without conscious effort.

**Base word:** A word to which affixes may be added to create related words. Base words in English are frequently from Latin or Greek.

**Blending:** Fusing the segmented speech sounds represented by contiguous graphemes (written letters) into a sound continuum; combining separate sounds (phonemes) to make a whole word.

**Breve:** The curved diacritical mark (shaped like a smile) above a vowel indicating a short sound; for example /ă/ marks the sound made by the letter *a* in *apple*.

**Comprehension (reading):** Understanding the meaning of written expression.

**Comprehensive evaluation:** A comprehensive series of tests administered by one or more testers that determines the source of a reading difficulty and outlines effective strategies for remediation.

**Consonants:** The letters of the alphabet that are not vowels. *Y* can be a vowel, as in *fly* or *candy*, or it can be a consonant, as in *yard*. *W* is usually a consonant, but combines with a vowel to produce a vowel sound, as in *aw* or *ow*. Consonants are letters whose sound is usually blocked or influenced by the lips, tongue, teeth, or other articulators.

**Consonant blend:** Two or three adjacent consonant letters that flow smoothly together; for example, *bl-* and *-nd* in *bland* or *str-* in *strong*. The consonant blend may appear at the beginning or the end of the word.

**Consonant digraph:** Two adjacent consonant letters in the same syllable representing one sound; for example, *sh* in *ship*, *th* in *think*, *ch* in *church*, *wh* in *whale*.

**Cursive:** Joined, rounded handwriting in which words are written as single units without raising the pencil from the paper.

**Decoding:** Reading; the process of recognizing unfamiliar written words by sequentially segmenting the sounds represented by the letters of the word, then blending the sounds into meaningful words or into syllables which are then combined into words.

**Diacritical mark:** A distinguishing mark added to a grapheme (written letter or letter combination) to indicate a specific pronunciation. These marks are especially helpful in clarifying the correct speech sounds represented by let-

ters having more than one speech sound. Macrons, representing the long sound of a vowel (for example, the /ā/ in *shade*), and breves, representing the short sound of a vowel (for example, the /i/ in *trip*), are the two most common diacritical marks in English.

**Diagnostician:** A professional, often a psychologist, trained to analyze, diagnose and provide recommendations about an individual's specific areas of weakness or strength using diagnostic achievement tests.

**Digraph:** Two adjacent letters representing a single speech sound. Consonant digraphs are two adjacent consonant letters that combine to form a single consonant sound; for example, *sh* or *th*. Vowel digraphs are two adjacent vowel letters that combine to form a single or blended vowel sound; for example, *ee* or *oo*.

**Diphthong:** A phoneme that begins with a vowel sound and then glides into another vowel sound; for example, *ou* in *ouch* or *oy* in *boy*. In teaching dyslexic students, the term diphthong is modified to include specified vowel digraphs as well as true diphthongs.

**Direct instruction:** A teaching practice in which the teacher informs the students of the *what*, *why*, and *how* of the material covered in the session. Instruction is structured, modular, and sequential, moving from the simple to the complex and from the concrete to the abstract. Direct instruction stresses practice and mastery, provides frequent positive feedback, and structures the learning situation so that the student experiences success.

**Dyscalculia:** Difficulty in learning to calculate or to remember easily and work accurately with number facts.

**Dysgraphia:** Difficulty in learning the physical act of writing.

**Dysorthography:** Difficulty in learning to spell.

**Dyslexia:** Difficulty in using and processing language, including spoken language, written language, and language comprehension.

**Encoding:** Spelling; the process by which students segment sounds of a word, translate each phoneme (sound unit) into its corresponding letter or letters, then spells the word. For example, the student hears the word *check*, identifies the 3 sounds (/ch/ /ĕ/ /k/), translates each sound into the proper letters, and writes the word. Encoding requires knowledge of sound-symbol correspondences and spelling rules.

**Expressive channel:** The visual, auditory, and kinesthetic/tactile channels that enable the perception and processing of out-going stimuli.

**Expressive language:** The ability to communicate with others through speaking, writing and other visual and non-verbal means.

**Figurative language (idioms):** Language that uses word pictures to compare

or describe, and that is not meant to be taken literally. For example, “It was raining cats and dogs.”

**Finger spelling:** A multisensory spelling technique in which a student uses the fingers of his/her non-writing hand to count out the sounds or syllables in a word, moving from left to right to reinforce the movement of the eyes across a line of text.

**Fluency:** Accurate, automatic reading with comprehension; reading smoothly without needing to stop and identify (decode) a word.

**Gillingham linkages:** The associations used in instructing dyslexic students to connect visual, auditory, and tactile-kinesthetic senses. These multisensory linkages for language learning, essential for the dyslexic learner, are the core of the Orton-Gillingham approach.

**Grapheme:** A single letter or letter combination that represents a phoneme (sound).

**Homonyms:** Words that sound the same but have different spellings and different meanings. For example: *sail* and *sale*.

**Individuals with Disabilities Educational Improvement Act (IDEA):** Passed in 1997 and reauthorized in 2004, this federal law aims to improve education for children with disabilities.

**Individualized Educational Plan (IEP):** An IEP is required under federal law for any student in special education; it contains an educational program, based upon multidisciplinary assessment, deemed appropriate for meeting the individual needs of the student. An IEP is developed by school representatives through a process providing parents and professionals with an opportunity to review and discuss the program before its approval. An IEP outlines educational goals, identifies specific services that will be offered to help a student achieve those goals, and formulates a plan for how and when a student’s progress will be assessed.

**Kinesthetic memory:** a remembered pattern of voluntary movement; an integrated pattern of activity which the student can recall after repeated practice and training. Kinesthetic memory can be trained to enhance an individual’s cognitive memories of sounds or words.

**Kinesthetic perception:** Sensory experience derived from muscles, tendons, and joints, which is stimulated by body movements and tensions. It is often applied to the student’s feeling of letter shapes while moving parts of the body through space without reliance on visual guidance.

**Language:** A complex and dynamic system of conventional symbols that is used in various modes for thought and communication. Contemporary views of human language hold that (a) language evolves within specific historical, social, and cultural contexts; (b) language, as rule-governed behavior, is de-



scribed by at least 5 parameters – phonologic (sound system), morphologic (structure of words), syntactic (sentence formation), semantic (meaning), and pragmatic (context); (c) language learning and use are determined by the interaction of biological, cognitive, psychosocial, and environmental factors; and (d) effective use of language for communication requires a broad understanding of human interaction including such associated factors as nonverbal cues, motivation, and sociocultural roles.

**Long-term memory:** Involves the encoding, storage, and retrieval of sensory information. It lasts over a long period of time and has great storage capacity. See also short-term memory, auditory memory, and visual memory.

**Long vowel:** The sound made by a vowel when it says its own name. This is often caused by a silent e at the end of the word; for example, the /ā/ in *cane*. The letter y, when used as a vowel, may represent the long vowel sound /ī/ as in *my* or /ē/ as in *pretty*. Several paired vowel letters also represent long vowel sounds; for example, the long vowel sound /ā/ in *rain* or /ē/ in *green*.

**Low frustration tolerance:** The inability to withstand much frustration without either blowing up or withdrawing.

**Macron:** A straight line diacritical mark above a vowel indicating a long sound; for example, the /ō/ in *stone*.

**Mnemonic:** Pertaining to memory. Teachers can enhance students' memory by using mnemonic devices; for example, the word *HOMES* helps learners remember the names of the Great Lakes: **H**uron, **O**ntario, **M**ichigan, **E**rie, and **S**uperior.

**Monosyllable:** A single syllable. For example: *cub* is a word containing a single syllable.

**Morpheme:** The smallest unit of meaning in a word, including prefixes, root words, and suffixes. Morphemes are usually derived from Latin or Greek and inherit their meanings from these ancient languages. A morpheme can stand alone, as in the word *port*, meaning *carry* in Latin. A morpheme can also be bound to a root word, as in the prefix *re* (meaning again or back) and the suffix *ed* (indicating past tense) in the word *reported*.

**Morphology:** The study of the structure of words; the component of grammar which includes the rules of word formation, including derivation, inflection, and compounding (different ways of combining base words and affixes).

**Multisensory:** Using many sensory channels to learn sounds; the use of visual, auditory, and kinesthetic-tactile (sometimes called VAKT) pathways to reinforce learning in the brain.

**Neurological:** Referring to the brain and central nervous system, especially in relation to its structures, functions and abnormalities.

**Non-phonetic words:** Words whose spelling or pronunciation is irregular; that is, it does not conform to the usual letter-sound correspondences in English and cannot be sounded out. For example, *said* or *was*. Approximately 15% of the words in English are non-phonetic and must be memorized. These are sometimes called red flag words.

**Orthography:** The total writing system of a spoken language. The term also refers to the established spelling rules of a written language.

**Orton-Gillingham (OG):** An approach to teaching reading, writing, and spelling that is multisensory, sequential, cumulative, cognitive, and flexible.

**Perception:** A process involving the reception, selection, differentiation, and integration of sensory stimuli. Proper instruction of dyslexic individuals teaches the student to attend actively and consciously to aspects of the perception process until it becomes automatic.

**Phoneme:** Smallest unit of speech that serves to distinguish one utterance from another; for example, the word *ship* contains three phonemes: /sh/ /i/ /p/. The English language contains 44 phonemes.

**Phonemic awareness:** The understanding that spoken words and syllables are composed of a specific sequence of individual speech sounds.

**Phonemic segmentation:** The process of sequentially isolating the speech sounds (phonemes) that comprise a spoken word or syllable. For example: identifying the sounds /k/ /ā/ and /t/ in *cat*.

**Phonetics:** The study of speech sounds, how they are produced (articulatory phonetics), how they are perceived (auditory phonetics), and what are their physical properties (acoustic phonetics).

**Phonics:** A teaching approach which gives attention to letter-sound correspondences in the teaching of reading and spelling. Phonics is a teaching approach that instructs the student in how to sound out words. It should not be confused with phonetics, which is the study of speech sounds.

**Phonogram:** A letter or letter combination that represents a sound (phoneme).

**Phonological awareness:** The ability to hear similarities and differences among phonemes (sound units) and to perceive syllables and the number and order of sounds within a syllable. Phonological awareness enables individuals to identify and manipulate the individual speech sounds (phonemes) in words; for example, substituting /b/ for /k/ in *cat* to make *bat*; substituting /d/ for /t/ in *bat* to make *bad*; substituting /ē/ for /ā/ in *bad* to make *bed*. Strong phonological awareness results in the ability to rhyme, to list words that begin and end with the same sound, to break words into individual phonemes, and to blend phonemes together to make a familiar word. Phonological awareness is essential for learning to read.

**Phonology:** The sound system of language; the part of grammar that includes the inventory of sounds and rules for their combination and pronunciation; the study of the sound systems of all languages.

**Pragmatics:** The study of how context influences the interpretation of meaning.

**Prefix:** A letter or group of letters added to the beginning of a base word or root which changes the meaning somewhat; for example, *un* in *unload* or *e* in *emerge*.

**Prosody:** The study of the stress and intonation patterns that convey meaning in spoken language.

**Reading:** A complex process in which an individual brings graphic, phonological, orthographic, semantic, and syntactic knowledge to bear on written or printed material in order to understand the meaning or meanings conveyed in written words.

**Receptive channels:** The visual, auditory, and kinesthetic/tactile channels that enable the perception and processing of in-coming stimuli.

**Receptive language:** The ability to comprehend the spoken word.

**Regular words:** Words whose spelling or pronunciation can be correctly produced by sounding out the parts of the word and applying relevant spelling rules and generalizations. Approximately 85% of the words in English are regular.

**Remedial program:** A program designed to provide instruction and practice in skills that are weak or nonexistent in an effort to develop/strengthen these skills.

**Remediation:** Process by which an individual receives instruction and practice in skills that are weak or nonexistent in an effort to develop/strengthen these skills.

**Rett's Disorder or Rett Syndrome:** A pervasive developmental disorder, usually occurring in girls, in which head growth decelerates a few months after birth, motor functions and purposeful hand movement is lost, and serious mental retardation often occurs.

**Root:** The basic element of a word which conveys the heart of the meaning. Prefixes or suffixes may be added to the root to alter the meaning or the grammatical function of the word. Also called the base word or the stem, the root sometimes stands alone as a complete word in English (for example, the word *form*, meaning form or shape) and other times requires an affix (for example, the root *dict*, meaning speak, in *predict* or *dictation*).

**Segmenting:** Breaking words into syllables and sounds.

**Semantics:** The study of the linguistic meaning of words and sentences; the science of written signs.

**Sequencing:** Remembering a series in its proper order, such as sounds that make up a word, letters in a word, days of the week, months of the year, and directions involving more than one action.

**Short-term memory:** Memory that lasts only briefly, has rapid input and output, and is limited in capacity. In the area of language, short-term memory stores and processes language information temporarily. Some part of this information may go on to storage in long-term memory; if not, it is lost.

**Short vowel:** A vocalic sound. The common vowel letters in the alphabet each represent at least two sounds. In phonics programs, these are called short and long vowel sounds. The short sounds of vowels are the /ă/ in *apple*; the /ĕ/ in *Ed*; the /ĭ/ in *igloo*; the /ŏ/ in *ox*; the /ŭ/ in *up*. Short vowel sounds are frequently confused by dyslexic learners and must be directly taught in the early stages of instruction.

**Specific Learning Disability:** A disability category under Individuals with Disabilities Educational Improvement Act (IDEA); a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or to do mathematical calculations.

**Spelling:** The conversion of the separate speech sounds of words or syllables into their letter names (oral spelling) or into their corresponding graphemes, or written forms (written spelling).

**Standardized achievement test:** Provides measures for an individual that can be compared to the performances (norms) of a larger group using techniques of statistical inference.

**Syllable:** A word or a piece of a word containing a single vowel sound. There are different kinds of syllables and knowledge of them can help students learn to spell and write. Short words are made up of a single syllable; for example, *goat* or *drive*. Longer words are made up of two or more syllables; for example, *baseball* (two syllables), *umbrella* (three syllables), and *combination* (four syllables).

**Syllable division:** The process of breaking longer words into separate syllables in order to decode (read) and encode (spell); for example, *base-ball*; *um-brel-la*; *com-bin-a-tion*. The ability to hear and reproduce syllables is important for spelling, writing, and reading comprehension.

**Syntax:** The rules of sentence formation.

**Therapeutic environment:** The total learning environment to be established by the clinician or teacher, in accordance with established psychological or

clinical protocols, which fosters healing and promotes cognitive, emotional, and social growth.

**Visual memory:** Involves the encoding, storage, and retrieval of visually presented information.

**Visual discrimination:** Assuming normal visual acuity, the ability to distinguish slight differences in visual stimuli, especially in letters and words having graphic similarities.

**Visualization:** A teaching technique to increase reading comprehension by teaching readers to form images or pictures in their minds to help retain important points in a text.

**Vowel:** Letters of the alphabet that are not consonants. In English the vowel letters are *a, e, i, o, u* and sometimes *y*. Each vowel letter has a short and a long sound. The letter *w* may function as a vowel in combination with a vowel letter such as *aw* in *saw*, *ew* in *grew*, and *ow* in *snow* or *plow*. Vowels pair up to form diphthongs (for example, *oi* in *coin*; or *ou* in *ground*) and vowel digraphs (for example, *ee* in *feed* or *oa* in *boat*).

**Vowel digraph:** Two adjacent vowel letters in a single syllable which represent a single long sound, such as *ea* in *eat*, *ue* in *argue*, or *ui* in *fruit* (also called a vowel team or vowel pair).

Sources: Glossary of the Academy of Orton-Gillingham Practitioners and Educators, 1995; HIDA website, “Understanding Dyslexia,” “Glossary” at [www.dyslexia-hawaii.org/glossary.php](http://www.dyslexia-hawaii.org/glossary.php). Definitions of autism, Rett’s disorder, and Asperger’s syndrome are taken from The Yale Child Study Center ([www.med.yale.edu/chldstdy/autism/index.html](http://www.med.yale.edu/chldstdy/autism/index.html)) and the National Institute for Neurological Disorders and Stroke, part of the National Institute of Health ([www.ninds.nih.gov/index.htm](http://www.ninds.nih.gov/index.htm)).

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Kathy E. Ferguson is professor of political science and women's studies at the University of Hawai'i, Manoa. She is a member of the Board of Directors of HIDA and has been active in the organization since her first son was assessed as dyslexic in 1994. She sought Orton-Gillingham training in order to home school her two sons, and subsequently took further training in Project Read and Wilson methods of language instruction. She now tutors dyslexic children and adults as well as researches and writes about dyslexia. This *Resource Guide* is the book she wishes she had had back in 1994.

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HIDA's office is located in the American Association of University Women (AAUW) house on the second floor, near the corner of Nehoa and Ke'eaumoku St. Street parking only. Please call before coming to be sure that someone is available to speak with you.

We welcome donations and volunteers to help us meet our mission of securing effective education for every learner. Donations to HIDA are tax deductible as allowed by law.

The mission of HIDA – the Hawai'i Branch of the International Dyslexia Association – is to increase awareness of dyslexia in our community, provide support for dyslexics, families and educators, promote teacher training and improve literacy for struggling readers.