

An In-depth Discussion of Special Learning Needs of Individuals in Adult Education, At-Risk Youth Programs, and One-Stop Centers

Part 2—The Impact of Visual Stress Syndrome

By Laura Weisel, Ph.D., Clinical Director, The TLP Group, Columbus, Ohio, NAASLN Past-President and Current Board Member

This is the second in a series of educator-driven articles that summarize the current status of struggling learners who have left the K-12 system and have come to adult basic education, literacy, and workforce development services. Dr. Weisel conducted the study on which these articles are based. Data related to the study, *Special Learning Needs of Individuals in Adult Basic and Literacy Education, At-Risk Youth Programs, and One-Stop Centers*® (PowerPath to Education and Employment, The TLP Group, Columbus, OH) can be found at [Special Learning Needs Data 2003-2006](#).

The findings of the TLP Group's study, *Special Learning Needs of Individuals in Adult Basic and Literacy Education, At-Risk Youth Programs, and One-Stop Centers*® clearly indicate that prior to making any referrals for diagnoses, LD programs need to find out if the student/client can hear and see. I like to think of it as being a customer service to ensure that the two major modalities for learning are in working order.

Nearly 45% of the 4,567 individuals surveyed by TLP were found to have visual function challenges and were screened with their glasses on, using a standardized, validated, and highly reliable screening tool. In most of the cases, the vision challenges were near-vision and/or binocularity (the ability of the two eyes to align, move, focus and see together)—just the type of visual functioning that is needed for reading accuracy, reading comprehension, and mathematical problem solving. Challenges with near acuity and binocularity can lead to low reading scores, poor demonstrations of progress, and the inability to do sustained reading. This would affect both acquired reading skills and potential achievement in reading. All of these are typical of the impact of vision on reading that could be misdiagnosed as dyslexia.

Another 40% were found to have auditory challenges. The two statistics cannot be combined together, i.e., 45% visual challenges and 40% auditory challenges do not equal 85% of our learners have vision and hearing challenges. I do suspect there are overlaps and our data did not look at combined challenges. Functional limitations do call for alternative learning techniques. These individuals with visual and auditory functional challenges would not qualify for LD support services—unless LD was also present

These statistics are not surprising when access to healthcare has been limited for many students/clients. Vision changes rapidly due to age, head injuries, or other specific health issues. Most children get ear infections that, if untreated, can cause scar tissue and hearing loss. Working with loud machinery or listening to loud music can also impact hearing.

It is crucial for both the student/client and instructor to know about the status of these two functions—some of the vision issues and all of the hearing issues are easy to

accommodate if they are identified. A referral to a vision specialist is often supported through county health clinics, Medicaid, Lions Club, eyeglass drives, etc.

No psychologist would deny that vision and hearing functions impact testing. But, they assume that the client *can* see and hear, which may be the wrong assumption in the case of adult basic education students.

Approximately 90% of the population studied stated a degree of symptoms aligned with visual stress syndrome (VSS), with 66% rated as moderate to severe. These symptoms could be due to many other physical issues, such as high blood pressure or diabetes. The student and instructor can quickly determine if the accommodations for VSS work. If not, recommending a full medical exam makes sense.

If a learner is identified as having some degree of VSS, simple accommodations should be tried. Low-cost accommodations for VSS are readily available and have a quick impact on learners' achievements, e.g., wearing a cap or visor to shade the eyes from bright overhead lights, selecting a seat based upon exposure to natural lighting or away from bright overhead florescent lighting, changing the color of paper, using a colored overlay, using a highlighter, or enlarging print. Furthermore, the GED now allows visors, overlays, seat selection, highlighters, sticky notes, etc., for any student that asks for these when they take the exam, even without a diagnosis.

When VSS is identified as an issue and can be temporarily alleviated, students can begin to focus. Many of them report how "calm" their brains feel, and that they can "think straight." More research is needed to better understand VSS and its impact on learning.

According to Dr. Robert Bornstein, dean for academic affairs at the Ohio State College of Medicine, practical accommodations already exist. "We have a set of very reasonable solutions for VSS—overlays, changing light source, tinted lenses," he said. "Now we just need to clarify the cause/problem with research."

Already research on VSS in the United States, the United Kingdom, and Australia indicates that VSS could be an underlying factor in learning difficulties that go beyond reading, reading comprehension, and phonological development. It may be related to attention difficulties, visual motor integration (copying from a workbook on to a paper or filling in bubble sheets), language processing and comprehension, and migraine headaches. There appears to be hyperactivity radiating from the visual cortex (hence visual stress) into the parietal and temporal lobes.

Clearly, VSS should be ruled out prior to referral for a LD diagnosis. Dr. Andrew Yellen of Northfield, California, believes that screening for VSS should be completed before any standardized (psychological) testing is carried out with students. "If this does not take place," he warns, "the results of their assessments may not be reliable."

Dr. Dale Jordan, author of *Teaching Adults with Learning Disabilities* and *Overcoming Attention Disorders in Children, Adolescents, and Adults*, clearly agrees with Dr. Yellen. As early as 1992, Dr. Jordan advocated that the screening for learning disabilities or diagnostic assessment must look at the issue of VSS prior to screening or assessment.