

DIVERSITY'S FORGOTTEN DIMENSION

The number of students with learning challenges is growing. We need to work with them.

By Barbara M. Moskal

I recently overheard a discussion between two fourth graders, a girl and boy, who had just finished a chess game. Both have distinguished themselves by displaying advanced mathematical and scientific reasoning. Both also wrestle with tough learning challenges. “I’m dyslexic. How about you?” the girl began. “No, I’m not that. I have ADHD,” replied the boy. “It means that I have a lot of energy and I have a tough time focusing. I used to take medicine for it, but it didn’t work.” He asked the girl to explain dyslexia. “I have a tough time reading, spelling, and remembering things,” she said. “I don’t think there is a medication for mine.”

That these children felt comfortable revealing their symptoms suggests that – at least in elementary school – such learning problems are no longer stigmatized as signs of lesser intelligence. If so, word has probably reached their instructors and parents that attention deficit hyperactivity disorder (ADHD) and dyslexia can exist alongside – and might even assist – strong ability in science, technology, engineering, and mathematics.

In college-level engineering, however, students with learning disabilities are often a forgotten and underserved group. As we seek to promote diversity in all its dimensions, educators need to be aware that these students are appearing in increasing numbers on college campuses. Many of them are aspiring engineers. We will need to work with these students and the Disability Services Office at our institution to create a productive, fair, and supportive learning environment.

Nationwide, we’re not talking about a small population. According to the Centers for Disease Control and Prevention, 6.4 million children in the United States – 11 percent – between the ages of 4 and 17

were diagnosed with ADHD as of 2011. The number of children diagnosed with ADHD has risen by more than 3 percent per year since 1997, the National Center for Learning Disabilities (NCLD) reports.

ADHD is not considered a learning disability; it is considered a brain-based disorder that results in significant distractibility and may result in additional learning challenges. However, many children diagnosed with ADHD also have learning disabilities. These are a collection of disorders that interfere with an individual’s efficiency in learning to read, write, spell, or compute. Many individuals with normal and above average intelligence also have learning disabilities. Common types of learning disabilities include: dyslexia, dyscalculia, dysgraphia, and dyspraxia. These disabilities impact an individual’s ability to learn language, mathematics, writing, and physical manipulation skills, respectively.

Approximately 2.4 million students have been diagnosed with learning disabilities, according to the NCLD. Eighty percent of children with a known learning disability are diagnosed with dyslexia; in other words, close to 2 million elementary, middle and high school students have been diagnosed with dyslexia.

As university awareness of students with learning problems increases, more students are receiving the support that they need to succeed in their education, and more students with known learning disabilities are pursuing a college degree. University faculty, who already have overburdened schedules, now have a legal responsibility to accommodate disabled students’ learning needs.

Will society as a whole benefit from this requirement and the increased demand it imposes? Let me answer by introducing two

academics, whom I’ll call Drs. Beta and Delta. Dr. Beta holds a B.S., M.S., and Ph.D. in engineering, has several patents, and is broadly published and recognized in his field. In middle school, Dr. Beta was diagnosed with dyslexia. He admits that he was different and that this came with challenges. He naturally sees the world, including language and text, in colors and patterns. Now he connects his differences to his successes. Dr. Delta is another internationally recognized researcher, with several prestigious awards. She grew up before learning disabilities were commonly diagnosed and only suspects that a learning disability caused her early learning challenges. For her, elementary school was “a beast,” middle school was bearable, and high school and college were easy. Reading was a burden; it was not until she was in graduate school that she felt she could read at the same level and pace as her peers.

Could our two young chess players be future Drs. Beta and Delta? And are we ready to equip them with the skills that they need?

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