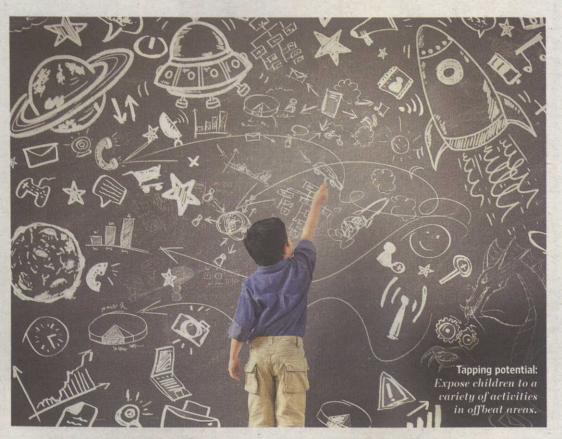
## Look for the ability in disability

Focusing on deficits only makes individuals seem inadequate. Look for areas of strength that may not surface in traditional classrooms



BY ARUNA SANKARANARAYANAN

Children struggle to learn in mainstream classrooms for a host of reasons. Difficulty with reading and spelling, an inability to pay attention, and problems with comprehension are some of the reasons. Those failing to meet teacher expectations are often referred to special educators or psychologists, who dole out labels like "dyslexic," "ADHD (attention deficit hyperactivity disorder)" or "autism spectrum disorder". While these labels may describe and explain a child's difficulty, they stigmatize the child.

The portrayal of these labels, both in education circles and popular culture, highlights what these children cannot do. Some preliminary research suggests that the brains of these individuals may be wired differently to confer certain advantages as well. In a study published in 2003 in the *Brain And Language* journal, Catya von Károlyi and her fellow researchers found that dyslexics were better at a global visual-spatial task. More specifically, those with dyslexia were faster at determining whether certain figures

were possible or not.

Research by Gad Geiger and Jerome Lettvin, published in the New England Journal Of Medicine in 1987, found that dyslexics had a wider visual peripheral field in which they were able to accurately identify letters, but showed compromised performance in the central field and near periphery. Another paper also suggests that dyslexics may have an advantage when it comes to their peripheral field. In a 2007 paper published in the *Mind, Brain, And Education* journal, Mat-thew Schneps, L. Todd Rose and Kurt Fischer hypothesize that dyslexic and normal readers make varying use of their central versus peripheral visions. While our central vision is tailored for visual search tasks, our peripheral vision is better able to scan broad areas rapidly. According to the authors, dyslexics may be more adept at making visual comparisons; however, the "trade-off" is that their visual search capabilities are diminished.

In their 2012 book, *The Dyslexic Advantage: Unlocking The Hidden Potential Of The Dyslexic Brain*, Brock L. Eide and Fernette F. Eide say the visual-spatial strengths of dyslexics are more pronounced in real-world 3D tasks, like navigating objects in space, than the 2D paper and pencil ones used in most standardized IQ tests. In fact, the authors posit that dyslexics may have superior "material reasoning" abilities, which refer to a person's skill at reasoning about the shape, size, location or orientation of physical or material objects. Architecture, design, taxi driving and surgery are some of the professions that require enhanced spatial reasoning skills.

Psychologists typically make a distinction between two types of intelligence. Crystallized intelligence, which refers to the knowledge and skills a person acquires over time, is usually gauged by the Wechsler Intelligence Scale for Children (Wisc). Performance on school tests typically correlates with a person's crystallized intelligence scores.

In contrast, fluid intelligence reflects a person's reasoning skills and ability to solve novel problems. The Raven's Standard Progressive Matrices provide an index of a person's fluid intelligence. In a 2007 study published in the *Brain And Cognition* journal, Mika Hayashi and colleagues in Japan administered two IQ tests to children in the age group of 6-12 with Asperger's Syndrome (AS) and normal, agematched controls. While the two groups did not differ in their Wisc scores, children with AS outperformed the typically developing children on the test of fluid intelligence. The authors conclude that children with AS may have "superior abstract reasoning ability".

The link between creativity and ADHD is explored in a 2011 paper published in the journal Personality And Individual Differences. In addition to replicating the finding of previous studies that individuals with ADHD perform better on measures of creativity in the lab, the researchers, Holly White and Priti Shah, also found that those with ADHD were more likely to have actual creative achievements in the real world, especially in the performing arts, than those without the condition. Interviewed for an article by Denise Mann in 2011 on the health and medical information website WebMD, White said, "While distraction can be a limitation in a traditional learning environment or workplaces with structured approaches, people with ADHD can be very innovative and generate useful and novel ideas.

So what do we make of these disparate findings? The first take-home message is that we should not focus exclusively on the deficits of individuals with disabilities. Rather, we should look for areas of strength that may not typically surface in traditional classrooms. By exposing children to a variety of activities, we may be able to tap their latent potential in offbeat areas like birdwatching, mimicry or sculpture. We then need to nurture these competencies and make sure that children do not feel circumscribed by their deficits. Further, we need to realize that there is a lot of individual variation in development, even among those who have received a diagnostic label.

Even though the studies mentioned club people with dyslexia or ADHD under one umbrella, we have to realize that not all children with dyslexia or ADHD are alike. So the research evidence reported may not hold true for every individual in a diagnostic bracket. While some may show potential in certain areas, others may exhibit talents in different domains. But most importantly, we, as a society, need to recognize that a "disability" in one area does not preclude abilities in others. We owe it to our children and ourselves to celebrate these proclivities.

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