Diverse learning abilities and challenges

Educational planners who understand student differences in cognitive characteristics and support school professionals in adopting standards for inclusive schools are, by extension, helping to promote social equity for inclusive societies.

It is important for educators and education planners at all levels to understand students’ diverse cognitive abilities and challenges. Teachers need to be competent in addressing particular types of learning challenges while encouraging the growth of high ability learners. It is also important to consider the learning impacts of mainstreaming and grouping students based on abilities, and the implications that theories of learning have for assessment.

Issues and Discussion

Multiple intelligences, learning styles, or range of abilities: Although there is limited evidence to theories of multiple intelligences or learning styles, there is a range of cognitive abilities that can result in students excelling in one or more content areas relative to others. (8, 11) This includes learners’ strengths to use words and language, logic and reasoning, spatial relationships, sounds and rhythms, body movements and coordination, naturalistic observation, and inter and intra-personal skills. (8, 12) Narrowly matching teaching instruction with students’ preferred learning style may not lead to improved academic outcomes, but students benefit when schools and teachers understand and prepare for diverse capacities to learn the curriculum, as well as differences in motivation to learn one content area compared to another. (9, 13)

Understanding and addressing learning challenges: Learning challenges involve any impairments in physical, cognitive, language, and behavioural development that affect one’s ability to learn. (1, 2, 8, 9, 13) Particular challenges include intellectual disabilities, learning disabilities, visual impairments, speech and hearing disorders, Cerebral Palsy, autistic spectrum disorders, attention-deficit/hyperactivity disorder, and epilepsy among others. (1, 2, 8, 9, 11, 13) The umbrella term “intellectual disability” implies generalized difficulties with understanding, reasoning, and other features of general intelligence. However, many other learning challenges may actually mask an otherwise average or even above-average mental capacity. Educators and family members who are unaware of the specific issues involved in different learning challenges, may mistakenly assume that children and youth who are affected by them are unable to learn—yet this is not the case.

Educational planners can include these learners by adopting a universal design for learning with resources, services, and features of the physical school environment that are usable by all students,
to the greatest extent possible, without the need for adaptation or specialised design.(1, 12) Teachers can also teach students specific strategies for working around their learning disabilities, and can address the needs of students with behavioural challenges through the use of meta-cognitive strategies and self-regulation activities.(5)

High ability and twice-exceptional students: High ability learners, also known as gifted students, demonstrate superior performance or talents in any number of intelligences, whereas students who are twice-exceptional demonstrate giftedness in one or more areas in addition to a diagnosed learning challenge.(3, 4) In cases of twice-exceptionality, sometimes only the learning challenge is noted, or neither the talents nor disabilities are identified because they mask each other. It is therefore important that students with learning challenges as well as high abilities be encouraged through strength-based approaches that centre around a student’s creativity, problem-solving skills, and analytic abilities.(3, 4) Growth for gifted students can be encouraged when the curriculum is individualized and flexible to those subjects students excel in, and when the environment allows for self-direction, collaboration and group discussions, problem solving, self-evaluation, and inquiry-based activities.(3, 4)

Mainstreaming versus ability grouping: Educators must address the question of whether learners with particular abilities or challenges should be mainstreamed along with all other students, or whether they should be grouped apart in order to provide specialized learning opportunities. Students with learning challenges who are taught in the mainstream classroom alongside same-aged peers without learning challenges do better academically and socially than those students who spend most of their instructional hours in separate or specialized classrooms.(1) Teachers can improve their approaches to teaching students with low abilities and learning challenges through professional development training, actively involving students’ families, focusing on students’ strengths no matter the ability level, and making curriculum adaptations when necessary.(1)

On the other hand, accelerated learning opportunities have many academic benefits for gifted and twice-exceptional students. Such opportunities may include being placed in advanced courses, being mentored by content experts to extend on the student’s knowledge, having access to out-of-school programs that support growth in their gifted areas, and through ability grouping and grade skipping.(3, 4) Peer ability grouping has significant academic benefits for gifted students; however, there is a potential for negative social or emotional impacts, especially for twice-exceptional students.(3) Schools should not restrict the ability for students to accelerate their learning, but students’ social and emotional development should be assessed if they are to be grouped with older students.(3)

Implications for assessment: While there is diversity in student learning capabilities, there remains inadequate empirical support for assessments of multiple intelligences and learning styles.(8, 12) Rather than individualizing instruction and assessment for every single child which may be impractical and costly for many schools, teachers should instead focus on diversified teaching and assessment practices shown to be effective for students with diverse learning abilities while providing individualized attention when necessary.(8) Effective strategies include formative assessment methods, direct instruction, feedback on performance, embedded instruction, cooperative learning, and developing an educational framework that reflects an inclusive school pedagogy.(1, 8)

**Inclusiveness and Equity**
Learning disability as a hidden disability: The total population of children with learning disabilities is unknown largely due to the hidden nature of the disability.(13) Because more severe disabilities tend to take priority and children with learning disabilities are not often part of the identification system, their difficulties may go unacknowledged. Educational planners can emphasize the need for government and school policies that include students with learning challenges and disabilities as a target group for academic intervention and support.(13) Government policies can improve the understanding and visibility of learning disabilities through explicit targeting initiatives to identify, assess, and provide academic intervention and support to populations with learning disabilities while offering pre-service teachers specialized training in this issue as part of the certification process.(13)

Assistive technology for low-income schools: Educational planners should develop school guidelines for technology in schools that outline the acquisition, integration, maintenance, and expansion of low-cost technologies in schools for students with an array of learning abilities.(1, 5, 13) Low-cost assistive technology can be integrated into the school environment, including providing carbon copies of notes for students with writing difficulties, color overlays for students with reading and/or visual-perception challenges, and communication boards or keychains with simple response messages for students with speech/language challenges. (1, 5, 13) Utensil grips and slant boards not only benefit students with writing challenges but are also beneficial for all students.(1, 5, 13)

Policy Examples

Kingdom of Lesotho: Ministry of Education Curriculum and Assessment Policy, Pages 10-16 [PDF]

Palau: Ministry of Education/Special Education Services - Special Education Policies [PDF]


United Republic of Tanzania: National Policy on Disability [PDF]

References and sources


2015. Fatigue is a major issue for children and adolescents with physical disabilities. Developmental Medicine and Child Neurology 57(8), 742-747.


