



The DSi International Guidelines for the Education of
Learners with Down Syndrome aim to improve the
education of learners with Down syndrome
internationally and to contribute to the realisation of
their right to inclusive and equitable quality education
and the promotion of lifelong learning opportunities.

The following text is an extract from pages 22-26 of the Guidelines (reproduced with permission).

Inclusive education as a philosophy and practice avoids a focus on some students who are different to others in the class and in need of remediation. Rather, there is attention to provision of learning adjustments and curriculum differentiation that support the learning of everyone in the class.

Classroom planning techniques such as the Universal Design for Learning (UDL) framework (Rose, Gravel, & Gordon, 2014) underpin inclusive practice. By designing into the lesson learning adjustments available to any student who finds them helpful, teachers develop curricula that accommodate the diverse strengths and challenges of all learners, minimising the need for additional adjustments.

An important concept in inclusive practice is the teaching of year level curriculum with adjustments (Spooner & Browder, 2006), also known as 'age-appropriate' curriculum. In this approach, a classroom teacher begins planning with the curriculum materials established for the year level of the class. Appropriate adjustments are then planned, taking account of the anticipated needs of the diverse learners in the class, and paying careful attention to adjustments specified in Individual Education Plans. Enabling prompts are designed to assist a learner to be able to engage with the task but are only offered after the learner indicates the need for this support. Extending prompts are designed to provide challenge and greater depth for learners to go beyond the set task. This is preferable to assigning work from later year levels which would lead to boredom in subsequent classes. Examples of this approach in the context of mathematics have been developed by Sullivan and colleagues (Sullivan, Mousley, & Zevenbergen, 2006).

Mitchell and colleagues in a review of research identified the following approaches for curriculum adjustment and modification:

To make the curriculum accessible, consideration should be given to the following alternatives in relation to content, teaching materials, and the responses expected from the learners:

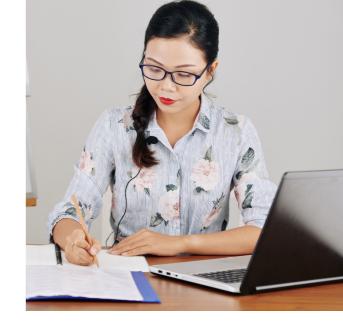
- (a) modifications (e.g., computer responses instead of oral responses, enlarging the print);
- (b) substitutions (e.g., Braille for written materials);
- (c) omissions (e.g., omitting very complex work); and
- (d) compensations (e.g., self care skills).

Other modifications can include:

- (a) expecting the same, but only less,
- (b) streamlining the curriculum by reducing its size or breadth,
- (c) employing the same activity but infusing IEP objectives, and
- (d) curriculum overlapping to help students grasp the connections between different subjects, for example.

(Mitchell, Morton, & Hornby, 2010, p. 51)

Following the approach of adjusting the curriculum for the year level has led to remarkable results in the area of mathematics. Examples of learners with Down syndrome who had not demonstrated accomplishment of simple arithmetic achieving learning goals in areas such as algebra and trigonometry have been reported (Faragher, 2014; Monari Martinez, 1998; Monari Martinez & Pellegrini, 2010). It is important to note that these students were supported by the use of calculators as needed.



Strategies for learning support needs

The learning of students with Down syndrome in the general class will be enhanced with good teaching and the right support. Fundamentally, the most significant factor in inclusive education is the implementation of established effective education pedagogy, as noted by Jordan and colleagues, "effective teaching is effective intervention for all students" (Jordan et al., 2009, p. 536), and it underpins the clear research findings that high quality inclusive education benefits all learners (Hehir et al., 2016).

Students with Down syndrome will benefit from effective support targeted to their individual requirements. In keeping with inclusive practice, additional supports and adjustments should be made available to all students in the class, should they wish to make use of them (Florian, 2012).

The following supports have been found from extensive practice evidence to be effective for many students with Down syndrome. It is important to reiterate that learners with Down syndrome are individuals, and teachers should determine whether or not these or other supports are required. In the classroom, limitations of verbal short-term memory may need practical supports in classroom contexts requiring extended attention and listening, such as whole class discussions, listening to a story, participating in school assemblies and responding to long sentences or complicated requests.

Effective strategies include the use of:

- visual supports to focus attention;
- visual scaffolds such as photos and pictures to support language teaching;
- common classroom aids such as number lines, calculators, letter charts, grids and diagrams (ready availability of these supports reduces the load on a student's working memory and visual supports, such as letter and number charts, can be affixed to a child's desk or kept in the back of an older student's workbook);
- commonly available tools, such as using the calendar on smart phones for the classroom schedule (this supports attention as well as providing opportunities to become adept with devices in common usage);
- models, where relevant, of completed work as a guide.

Individualised planning

The practice of developing Individual Education Plans (IEP) for students with disability originated in the United States in the 1970s (Mitchell et al., 2010) and it is now common practice in many countries around the world (King, Ni Bhroin, & Prunty, 2018). IEP have been criticised in recent times for entrenching a theoretical perspective which is at odds with inclusive practice with the focus on individual difference requiring remediation (Shaddock, MacDonald, Hook, Giorcelli, & Arthur-Kelly, 2009).

In a literature review undertaken by Mitchell and colleagues (2010), three main criticisms of IEP were identified: (i) an undue influence on behavioural psychology where learning is reduced to achievement of component parts; (ii) over-emphasis on the individual, in contradiction to the aims of inclusive practice; and (iii) unproven efficacy, where aside from behaviour intervention plans which have some evidence base, the evidence for the effectiveness of IEP does not exist.

Individual planning is a common approach, so it is important to ensure the planning process and the resulting plan follow best practice principles. The following recommendations arise from research, policy and practice evidence.

- Plans must be developed collaboratively, including the family, and with the learner as a key
 member. Planning meetings should be arranged at a convenient time for the family, not at
 a time that suits school or system personnel. Planning should also include input from other
 agencies if they are involved in supporting the learning of the child, such as therapists and
 learning support experts.
- Involvement of students in planning meetings must be supported and can serve as the development of expertise in self-advocacy. Students can be supported to understand planning meetings and to improve their involvement. Gibbons et al (2016, p. 89) note, 'using clear and simple language understandable to the student, speaking directly to the student, and preparing the student prior to the meeting can help enhance student performance and increase self-determination'.
- Students can be encouraged to set their own learning goals that might be generic learning skills such as giving oral presentations or identifying keywords in a sentence. Teachers can then fold those goals into curriculum planning.
- Plans should be reviewed regularly, and goals should not be carried over from one plan to the next. This ensures that the plan is a 'living' document that genuinely underpins learning. Goals that were not achieved are studied to understand the reason for their non-achievement.
- All staff involved in the planning process (including all classroom teachers in secondary schools) should undertake professional development (Stephenson & Carter, 2015) focused on the development of IEP and ways of collaborating with families.

• Plans should be comprehensive of all school learning, including social (social inclusion and friendships) and academic learning and suggested adjustments. Transition planning for learners at an appropriate age should be included in the plan. (For planning strategies, see Browder & Spooner, 2014).

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