Adapting with integrity

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Standardised assessment tools or subtests for specific access skill difficulties

Access skill difficulty	Test	Notes
Communication – nonverbal	WISC/WAIS Nonverbal Index (NVI)	Still requires receptive verbal communication to access the test
	Wechsler nonverbal (WNV)	Very out of date norms May inflate IQ Still requires receptive communication to access the test
	UNIT-2	Requires understanding of gestures (receptive communication)
	CTONI	Requires understanding of either gestures or verbal information (receptive communication)
	Leiter	Specific gestures can be complex – requires participants to understand the gestures (receptive communication) Some subtests have no time limits – this may have significant implications for ceiling effect May inflate IQ Not Australian norms Note – some stimuli don't directly match what needs to be found! (e.g., asking to find triangle in a picture, but the stimulus is a different type of triangle to the one in the picture)

Fine motor	WISC-V - international non motor full scale score (NMFSS-I)	Developed in response to COVID-19 lockdowns
	WAIS-V – non motor index (NMI)	
	Woodcock Johnson IV Cognitive has a range of indices whose subtests do not require fine motor skills	
	CTONI	

Example accommodations for different access skill limitations

Access Skill Limitation	Accommodation examples
Vision	- Blowing up/ increasing contrast on the visual stimuli - Using verbal items - More frequent breaks See also: https://documents.nationaldb.org/AppropriateAssessmentStrategies_a.pdf
Hearing	- Sign language interpreter (may impact on what verbal items may be used) - Written instructions/responses See also: https://documents.nationaldb.org/AppropriateAssessmentStrategies_a.pdf
Deafblindness	- Work with familiar communication partner - Use tactile materials - Video sessions to interpret with MDT See also: https://documents.nationaldb.org/AppropriateAssessmentStrategies_a.pdf
Expressive verbal skills	- Use non-verbal tests or subtests - Use AACs (Augmentative and Alternative Communication) - Establish a consistent indication for response choices

	• Work with familiar communication partner and/or Speech Pathologist familiar with AAC • Video sessions to interpret with MDT
Receptive verbal skills	• Simplify language • Use gestures that the client understands • Use non-verbal tests • Work with familiar communication partner • Vido sessions to interpret with MDT
Fine motor	• Use tests and tasks that do not require fine motor skills (e.g., verbal processing speed measures) • Find alternative ways for people to provide response options
Attention/behavioural/motivational/relational	• Take task to the person • Consider task order (critical/most informative first or most engaging first or maximise success experiences to promote engagement) • Engage with their interests • Progressive rewards • Breaks
Sensory/environmental	• Adapt the environment to the client's needs (e.g., reduced lighting, minimise external noise, reduce components that may be distracting, consider seating preferences) • Pick comfortable location for the client

Safety	• Consider having known person in the room
	• Consider known person as an intermediary in handing stimuli to the client
	Whenever someone else is in the room, consider:
	    • Their exposure to tasks and implications (remember even if you are using a child/adolescent test many of the concepts translate to adult tests!)
	    • Clear instructions to the additional person to only provide instructed input during the assessment and not to assist the client in any way

Example informal assessment approaches described by our participants (note these are to provoke ideas!)

Tools/approach/Observations	What it is examining
How communicates needs, wants	• Learning of different ways to communicate and applying these (e.g., learning how to use AAC) • Problem solving when someone does not understand (ie using different mechanisms to communicate) • Problem solving and applying learning to novel situations - Communicating needs/wants to new people or in new settings or for new things
Caregiver report of client-initiated problem solving (e.g. hacking parent's tablet password, retrieving confiscated items when parents distracted, adaptation to disability)	• Memory and planning • Learning from experience • Adaptability in problem solving • Sustained attention
Alphabet and number puzzles, shape sorters Identify / sort shapes, letters, numbers; providing in order AND out of order; new puzzles and applications	• Knowledge • Categorisation • Matching • Correspondence
Games such as "pairs" - may use digital versions	• Visual spatial working memory • Processing speed • Matching/categorisation
Puzzles (esp novel ones) - may use digital versions	• Concept formation • Strategy formation • Visual spatial processing • Problem solving
Games such as Uno, Snap – may use digital versions	• Understanding of and following rules • Memory and learning • Working memory • Processing speed • Attention • Impulse control

Strategy games – building from more simple (e.g., Connect Four, naughts and crosses) to more complex (e.g., checkers) - you could also work with digital games	• As above, but at more complex levels • Rule identification • Strategy formation and application
Play – child initiated or you initiated	• Social skills • Learning and memory • Novel application • Problem solving
Shopping expeditions – adding different levels of instruction and requirements	• Learning, memory • Problem solving
Naturalistic observation of daily living skills (may be by video or in person) - building complexity and adding novel tasks	• Initiation • Learning and application • Problem solving
Going for a walk and including crossing the road, going to catch a new bus	• Learning and application • Ability to observe for and respond to risk • Problem solving

Documentation of how you approached the assessment – approach it like you would a research report!

1. Operational definition of intellectual functioning (ie your construct) & rationale
2. Method – how you measured the construct in sufficient detail that someone could replicate; ensure includes multiple settings
3. Analysis method – how you interpreted the data so someone could use the same interpretation approach and standards
   a. Include your "prototype" and what informed the prototype / how it was developed
4. Results
   a. Assessment of access skills
   b. Justification for not using standardised assessments with accommodations
   c. Details evidence, observations
5. Discussion and formulation
   a. Linking the evidence to the operational definition/construct and "prototype" and your interpretation

Description of severity of intellectual developmental disorder at different ages

	Mild	Moderate	Severe	Profound
Up to preschool	Difference from normal development may be minimal

Developmental milestones achieved within expected timeframes, but may be slow (so at later end of "normal")

Learn basic language skills and interact with family and peers

At preschool, indications of less complex speech, slow to develop pre-academic skills,

Immature social interaction | Motor skills often develop typically, but there may be some delays

Delays in language development are evident early – over time develop speech that is focussed around needs/wants and articulated basically (simple, short phrases)

Delays in pre-academic skill development | Usually identified in infancy – with early delays in basic developmental milestones including walking, sitting

May have dysmorphic features or other physical features or disabilities

By commencement of Preschool – usually mobile, able to manipulate some objects, but delays in fine motor abilities

Delays in developing self-care skills such as toileting

May not communicate verbally

Play is immature – some exploration of world around them but no deliberate play | Usually identified in infancy with significant delays in early development; often other significant physical disabilities; often co-occurring sensory and physical impairments that impact on conceptual, social and practical skill development (esp motor skills incl motor coordination, fine motor skills, speech and language, social skills, emotional development)

Unlikely to develop any verbal language skills by preschool – communication of needs and wants may be through emotion, vocalisations or behaviour

Understanding of language is very limited – simple, routine instructions |

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			May enjoy swings, slides and cause-effect toys	and gestures may be understood
				Play is immature – may have limited interest in world around them
Early Primary school	Need more time, support and practice to develop academic skills such as letter and number recognition, reading, maths Immature play, social interactions Conversation = more concrete, immature - functional	Self care skills may be equivalent to toddlers Difficulties learning basic reading, writing, maths with skills developing slowly Language is under-developed; simple short phrases are used	May engage with objects, cause-effect toys' play is object directed Limited self care skills - May not be toilet trained Fine motor skills often significantly delayed May not communicate verbally or have limited words May engage in some early literacy skills (e.g., making marks on paper)	Communication of needs and wants is typically through nonsymbolic means (emotion, behaviour) Joy is evident in engagement with well known family members, caretakers, familiar others; responds to initiates and responds to social interaction through gestural and emotional cues

Mid to late primary school	Academic skills have continued to develop slowly, with increased time and practice	Develop basic reading, writing and maths abilities	Limited self care skills - May not be toilet trained	Slow development of deliberate reaching and grabbing
	Academic skills below grade expectations – learn basic reading and maths, but difficulties evident in problem solving, applying skills to new situations, comprehension skills	Has concept of money and time, but application of concepts remains very immature	Fine motor skills often significantly delayed	May engage in some cause-effect toys
	Best with rote learnt information and skills	Basic self-care skills developed	May not communicate verbally or have limited words/short phrases and some limited gestures	Communication of needs and wants is typically through emotion/behaviour
	Learns best through demonstration and practice	Language is underdeveloped; relies on simple short or slightly longer phrases but without complexity	Play may still be object directed; is immature and at a level of a young toddler	Dependent on others for self-care
	Needs more time to practice, more demonstrations	Play is immature with interests similar to toddlers/younger students in early primary school		Limited understanding of language – simple phrases, routine instructions, gestures may have been learnt
	Play = immature (may be like student in Yr 3 when in Yr 6) Conversation = more concrete, less abstract, focussed on own likes, wants, needs, not future directed			

| High School | Difficulties with abstract thinking, planning, organising, strategising, prioritising

Concrete approaches to solving problems

Interests remain immature

Conversations = around areas of interest, what they have done, short term things in future (e.g. holidays), what need; do not talk abstractly about future goals (although may discuss future big events like birthdays)

Do not discuss complex, abstract concepts such as politics, religion Able to enjoy leisure such as sport, simple movies but unlikely to enjoy movies with complex themes or plots | Verbal language is primary means of communication

Difficulties with managing money, performing arithmetic

Have basic-self-care skills that are learnt over time with practice and scaffolding

Need support to learn

Academic skills develop to a mid primary school level, but with ongoing difficulties with abstract concepts and application of skills

Support needed to use academic skills for everyday living (e.g. money management, using time as mechanism to plan, reading timetables will be difficult, planning trips using online tools will be challenging)

Planning will be needed for long term supports – | Adult support needed throughout life

Independent living highly unlikely – rather usually needs some support 24 hrs a day particularly for safety – e.g. managing an emergency situation

May have some basic verbal communication skills, however communication is more likely to be through gesture and behaviour

Communication is usually to express needs and wants rather than for social purposes; communication is not usually future directed
Limited vocabulary, grammar; speech may be single words or phrases;

Receptive language is limited – understanding simple speech and gestures | Objects used for functional purposes; no symbolic play

Unlikely to develop basic literacy or numeracy skills

May engage in visuospatial skills – e.g. matching, sorting based on physical characteristics

Dependent on adults for all aspects of daily physical care, health and safety – may be able to participate in some level in these basic activities

May be able to engage in basic chores (e.g. taking dishes to the table), and work activities (e.g. rote learnt, routine simple activities such as wrapping cutlery) – but this is with high levels of support

May enjoy listening to music, watching movies, outdoor activities or water activities – all is |
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Support needed to manage money, plan (e.g. for holiday, going to a new place); long term life planning needs support and the development of actions for the now that are revised by others	may be able to function in independent home with sufficient support (daily)	Relationships are with family members and familiar others – which provide pleasure and help; typically not an equal, reciprocal relationship	done with support of others
Need support to generalise skills into different arenas	Problem solving in an emergency will be problematic – need to have a clear plan	Extremely limited literacy skills – may identify some letters/numbers, may be able to write and recognise own name and a few basic words	Interests remain very immature – early preschool level songs, music, movies
Socially vulnerable and susceptible to manipulation	Able to manage self-care needs (eating, dressing, hygiene) with considerable teaching, support, practice and scaffolding – as older teenager/adult – reminders may be required	Dependent on adults to support money management, health care, planning, legal matters	Functioning may be at or lower than 2 yr to 3 yr old
Able to develop life independence skills with support, practice, routines & scaffolding (e.g. catching a bus, shopping, domestic chores, self-care)	Able to learn simple household tasks with a lot of teaching, support, practice and reminders	May participate in some simple chores, but this is with adult support	Emotion regulation – needs support of others (coregulation); some self injury may occur – may be as a means of communicating distress
Friendships & relationships will be less complex and likely to be with either younger students or others with mild disability	More complex household tasks (e.g. maintenance, problem solving when appliances not working etc) will need adult support	Needs support for all aspects of daily living including meals, dressing, bathing, elimination – support may range from prompts and reminders to physical assistance	
Planning required for how will be supported throughout adulthood –	Support needed to manage social		

| | independent living will be possible with supports

Will need support to plan nutritious meals

New technology will need to be explained, demonstrated with the person practicing its use

Emotion regulation may need support | expectations, scheduling, planning, transportation, manage health care, money

Enjoy a range of simple leisure and recreational activities, but need support to be able to engage with them – e.g. identifying, planning, arranging and attending

Difficulties with regulating emotion that will need support especially in social situations | Needs support to engage in any recreational activities

Developing a skill needs long term teaching and ongoing support

Emotion regulation is very difficult (similar to a preschool student or younger); self-injury may be present in some | |
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Developed based on Patel et al., (2020) and World Health Organisation (WHO, 2024; see Table 6.1).

Patel DR, Cabral MD, Ho A, Merrick J. (2020). A clinical primer on intellectual disability. *Translational Pediatrics, 9*(Suppl 1), S23-S35. doi: 10.21037/tp.2020.02.02.

World Health Organisation (WHO). (2024). *Clinical descriptions and diagnostic requirements for ICD-11 mental, behavioural and neurodevelopmental disorders*. World Health Organisation. https://iris.who.int/server/api/core/bitstreams/dcf73611-9e0f-4d5c-85f6-85a58b0da6de/content

Key References

Amazing resources from a Nordic collaboration on cognition in Deafblindness

Great for pushing your thinking about what's possible. More information about the detailed case study we used in the training. The principles they describe are applicable to all informal assessments.

Ask Larsen, F., & Damen, S. (Eds). (2014). *Guidelines for assessment of cognition in relation to congenital deafblindness*. Nordic Centre for Welfare and Social Issues. https://nordicwelfare.org/en/publikationer/guidelines-for-assessment-of-cognition-in-relation-to-congenital-deafblindness/

Damen, S., Costain, K., Hart, P., & Nicholas, J. (Eds). (2020). *Revealing hidden potentials – Assessing cognition in individuals with congenital deafblindness*. Nordic Welfare Centre. https://urn.kb.se/resolve?urn=urn:nbn:se:norden:org:diva-6006

Nordic Welfare Centre. (2021, June 30). *Climbing the wall: Assessment of cognition through video analysis* [Video recording]. https://www.youtube.com/watch?v=Mg5Ytgu76Ck

Another paper examining assessment processes in deafblindness

Useful checklist for informal assessments

Nelson, C. & van Dijk, J. (2015). *Every child has potential: Strategies for assessing children using the van Dijk Framework*. https://cvi.aphtech.org/wp-content/uploads/2015/03/Every-Child-has-Potential-Child-guided-Strategies-for-Assessing-Children-using-the-van-Dijk-Framework.pdf

Best resource we've found on adapting & modifying standardised assessments

Thompson, T., Coleman, J.M., Riley, K., Snider, L.A., Howard, L.J., Sansone, S.M., & Hessl, D. (2018). Standardized assessment accommodations for individuals with intellectual disability. *Contemporary School Psychology, 22,* 443-457. https://doi.org/10.1007/s40688-018-0171-4

Useful of table of behavioural indicators of intellectual functioning and severity determinations

Designed to assist where there isn't an appropriate standardised test. Broken down into early childhood, childhood & adolescence, and adulthood.

World Health Organization. (2024). *Clinical descriptions and diagnostic requirements for ICD-11 mental, behavioural and neurodevelopmental disorders*. https://iris.who.int/handle/10665/375767

A wonderful fictional account that brings the reason for this to life

Draper, S. M. (2012). *Out of my mind*. Atheneum Books for Young Readers.

A paper to get you thinking about stability of IQ scores in young people with ASD

Prigge, M.B.D., Bigler, E.D., Lange, N. *et al.* (2022). Longitudinal stability of intellectual functioning in autism spectrum disorder: From age 3 through mid-adulthood. *Journal of Autism and Developmental Disorders,* **52**, 4490–4504. https://doi.org/10.1007/s10803-021-05227-x