Contents

Foreword 3
Introduction 4

Chapter 1: Definitions
1.1 Psycho-educational Assessment 6
1.2 Special Educational Needs (SEN) 6
1.3 Educational Placement 7

Chapter 2: Psycho-educational Assessment Data
2.1 Sources of Assessment Data 10
2.2 Types and Areas of Assessment 10
2.3 User of Assessment Tools and Data 11
2.4 Factors to Consider in Selecting and Using Different Assessment Measures
   2.4.1 Norm-referenced/Standardised Tests 12
   2.4.2 School-based Tests 13
   2.4.3 Direct Observations 14
   2.4.4 Reports by Caregivers and Teachers 14
   2.4.5 Self-Reports 14

Chapter 3: Assessment for Specific Purposes
3.1 Assessment to Ascertain Appropriate Special Educational Placement 17
3.2 Ascertaining Student’s Suitability for Placement into a Mainstream School 18
3.3 Ascertaining Student’s Suitability for Placement into an Appropriate Special Education (SPED) School 18
Foreword

It gives me great pleasure to be writing the foreword for the Professional Practice Guidelines (the ‘Guidelines’) on the Psycho-educational Assessment and Placement of Students with Special Educational Needs (SEN). This marks a milestone in the collaboration among specialists from the Ministry of Education, the Department of Child Development (KK Women’s and Children’s Hospital), the Department of Paediatrics (National University Hospital), Department of Child and Adolescent Psychiatry (Institute of Mental Health), and Special Education (SPED) schools in the effort to enhance the professionalism in the special needs sector.

In recent years, the special needs landscape in Singapore has evolved significantly. With the diversification of the landscape and the availability of more specialised education programmes for students with disabilities, we need to ensure that professionals providing assessment and advice to parents regarding their children’s SEN have a shared understanding of best practices that are appropriate to the local context and needs of our students. This shared understanding is important so that professionals providing recommendations to parents offer consistent views on a child’s SEN, and hence help parents to make informed decisions about the education programmes that are more appropriate for their child.

It is therefore timely, that with the development of these ‘Guidelines’, professionals will now have a set of best practice recommendations and common framework that are both evidence-informed and contextualised for use in Singapore. As the local special education landscape evolves, and the research on special needs develops further, there will be a need for the ‘Guidelines’ to continually evolve and be refined in the future. Nonetheless, within the current context, with these shared ‘Guidelines’, we look forward to establishing common standards for best practices for professionals across SPED schools and referring agencies.

The ‘Guidelines’ that you have in your hands today is the result of numerous discussions and contributions by professionals from the various agencies that are involved in the assessment of students with SEN. I wish to thank all those who have participated in its development.

Ms Sum Chee Wah
Director, Education Programmes
Ministry of Education, Singapore
Introduction

Scope of the Professional Practice Guidelines (PPG)

The PPG is focused on the psycho-educational assessment and educational placement of students with Special Educational Needs (SEN) aged 6 to 18 years. It does not include standards for assessment for therapy and social care.

Target Group

The PPG is intended for use by psychologists, medical and allied health professionals (e.g., occupational therapists, speech and language therapists) who are involved in advising parents about the SEN and placement of students with disabilities.

Development of Professional Practice Guidelines (PPG)

The PPG is developed by a workgroup comprising professionals representing the various public agencies involved in the assessment of and provision of advice for students with SEN. These include specialists from Ministry of Education (MOE), Ministry of Health (MOH), and senior psychologists from Special Education (SPED) schools. Personnel from the National Council of Social Service (NCSS) and National Institute of Education (NIE) have also provided inputs on policy and contextual issues that may affect assessment and placement of students with SEN.

Development of the Professional Practice Guidelines (PPG)

Technical sub-teams were formed within the workgroup to look into specific areas and to make recommendations based on research evidence and internationally-recognised best practices.

These were then discussed with all workgroup members to agree on the recommendations that should be included in the PPG.

The development of the PPG is guided by the following principles:

- The PPG must be applicable to the local context. It must be aligned with current national educational policies as well as current provisions for SEN in Singapore.

- The PPG must be implementable in the current local context. Translation of recommendations into practice by the majority of practitioners in Singapore must take place.

To ensure that the PPG is applicable and implementable in the local context, the following actions were undertaken:

- Interviews were conducted with relevant personnel in all SPED schools to gather information about the schools’ admission processes.

- The draft PPG was disseminated to relevant stakeholders and resource persons for their input and feedback.

Statement of Intent

The content of the PPG is based on information available at the time of its development, from March 2010 to September 2011. This information is subject to change as scientific knowledge advances, and the policies and provisions for SEN evolve.

The PPG is not intended to replace professional judgment. Practitioners should use the PPG to enhance professional practice standards. Adherence to the PPG should be balanced with the need to consider the best interests of the student.
Chapter 1: Definitions

1.1 Psycho-educational Assessment

Psycho-educational assessment is a systematic process of gathering relevant and valid information about a student’s strengths and needs, and the student’s interactions with the environment to understand learning and developmental concerns, and to assist with appropriate educational planning for the student, which includes placement, intervention, and accommodations.

It involves the implementation of a set of assessment procedures, selected to address a set of referral questions. The student’s learning needs are the focus of a psycho-educational assessment. However, behavioural/emotional and medical issues would need to be taken into consideration in the assessment.

The intent and findings of the psycho-educational assessment should be communicated to parents/caregivers, and where appropriate, to the student and those working with the student (e.g., teachers, therapists), in a language and manner that is accessible or understandable to them.

1.2 Special Educational Needs (SEN)

A student’s SEN arise out of a complex interaction between the student’s strengths and weaknesses, the level of support available in the environment, and the appropriateness of the education being provided.

A student is considered to have SEN when all of the criteria, a, b, and c, stated below have been fulfilled:

a) Has a disability and

b) Displays:

- Greater difficulty in learning as compared to the majority of peers of the same age
- Difficulty accessing educational facilities catered for the majority of peers of the same age

Or

- Some areas of impairment, in terms of social, academic, physical or sensory functioning (i.e., the student is not on par with the majority of the peers)
- Requires different and/or additional resources beyond what is conventionally available

As a student’s SEN are the result of interactions between the student and the environment, the type and level of needs may change over time and across different contexts.

1.3 Educational Placement

An educational placement is a setting in which educational services are delivered to the student. There are currently two broad categories of educational placement in Singapore: mainstream schools and Special Education (SPED) schools.

SPED schools offer a specialised curriculum to cater to the needs of students with different types of disability. In addition, some SPED schools offer both mainstream and specialised curriculum (refer to Annex A for a list of schools).

Discussions on the assessment for appropriate educational placement are found in Chapter 3 (Assessment for Specific Purposes).
References


Endnotes

a Disability is an umbrella term, covering impairments, activity limitations, and participation restrictions. An impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations. (World Health Organization. Retrieved July 5, 2010, from http://www.who.int/topics/disabilities/en/)

b Includes mainstream Government, Government-aided, Independent, Specialised Independent (School of the Arts, Singapore Sports School, NUS High of Mathematics and Science), and Specialised Schools (Northlight School, Assumption Pathway School).
Chapter 2: Psycho-educational Assessment Data

To obtain a holistic understanding of a student, assessment approaches should make use of diverse assessment methods and gather information from multiple sources\(^1,2\). A comprehensive assessment will provide information about student-specific skills and areas of functioning (e.g., medical, developmental, learning/academic and social functioning\(^2,3\)), as well as environmental factors that impact the student’s learning.

2.1 Sources of Assessment Data

Assessment data could be gathered from\(^2,4,5\):

- Formal records on the student (e.g., past psychological, educational, developmental, medical assessments)
- Formal testing to determine functioning levels (e.g., cognitive skills), direct observations, and interviews
- Reports from teachers and other persons who work with the student in and outside of school (e.g., school counsellor, speech and language therapist, social worker, medical professional, peers)
- Reports from primary caregiver, as well as other persons who are involved in the care of the student (e.g., parents, grandparents, domestic helper)

2.2 Types and Areas of Assessment

The choice of assessment methods should be guided by the purpose of the assessment and the dimensions or areas being tested. The assessment could include the use of\(^1,6\):

- Norm-referenced tests
- Criterion-referenced tests
- Curriculum-based assessments
- Screeners/checklists
- Self-report ratings
- Observations (e.g., classroom observations)
- Interviews (e.g., with teacher, parent, student)

Information should be gathered in the following areas of student-specific skills and areas of functioning considered necessary or important for the student’s success at school\(^7\):

- Cognitive skills\(^7,8\) (e.g., intellectual capacity, memory, attention, concentration skills)
- Language skills (e.g., receptive and expressive language skills)
- Academic skills\(^5,9\) (e.g., literacy, numeracy)
- Social, behavioural and interpersonal functioning\(^3\)
- Adaptive behaviour\(^3\)
- Health and body state factors\(^2\) (e.g., motor and sensory difficulties, energy level)
- Strengths, motivation and interests\(^2\)

Where appropriate, students’ views on their own learning should be sought.

In addition to student-specific factors, assessments should also look into the learning environment of the student and its impact on the student’s learning. This could cover the following\(^2\):

a) Instructional factors:
   - Curriculum (e.g., content, assessment methods)
   - Pedagogy (e.g., pace of instruction, mode of instruction, use of assistive technology, use of augmentative communications)

b) Interaction patterns between the student and peers (e.g., level of social acceptance, incidence of bullying), and between the student and teachers

c) Physical setting:
   - Physical and sensory environment (e.g., lighting, classroom displays, background noise, seating)
   - Accessibility and safety issues (especially for students with orientation and mobility concerns)

2.3 User of Assessment Tools and Data

Assessments should be conducted by persons who are competent in the psychological and educational assessments of students\(^5,8\). Competence involves having the training, knowledge, skills and experience necessary to\(^4,8,9\):

- Select reliable and valid psycho-educational tests that are appropriate for the student and consistent with the purpose of the assessment.
• Administer psycho-educational tests and provide appropriate and acceptable accommodations where necessary (i.e., accommodations recommended within standardised test instructions: refer to Section 2.4.1b).
• Correctly interpret assessment results based on the understanding of developmental milestones and characteristics of the student.

Users of psycho-educational tests should also fulfill the stipulations of test publishers on the minimum qualifications for test administration. Based on the criteria defined by test publishers, the person conducting Level C tests (e.g., individually-administered tests of cognitive functioning, personality tests and projective methods) could be an independent user or a supervised user of the test.

• An independent user is a registered psychologist with certification by the Singapore Psychological Society or by any of its recognised professional bodies.
• A supervised user should only administer the test in the context of a planned supervisory relationship with an independent user of the test.

2.4 Factors to Consider in Selecting and Using Different Assessment Measures

2.4.1 Norm-referenced/Standardised Tests

a) Test Selection

Standardised tests selected to assess cognitive functioning and attainment must be valid and reliable.

Priority of selection should be given to assessment tools with the most current norms, which are applicable to the local population. Assessors should avoid using obsolete tests where more current editions are available. In the absence of appropriate norms, careful consideration should be made with regard to language and cultural factors. Assessors should be familiar with the instrument, including its limitations.

The test should be selected based on its ability to provide relevant information for decision-making. For the purpose of assessing cognitive functioning, tests that have been designed for group-based screening cannot be used to replace standardised individual tests.

b) Assessment

Standardised testing procedures should be adhered to. If necessary, users of standardised tests should abide by the accommodations that are allowed in the test manual (e.g., pacing and using breaks between subtests, using assistive devices).

Where modifications are made to standardised testing procedures (e.g., modifying the language of instructions, not timing a “speeded” test, extending the teaching items), the validity of inferences made from test scores may be compromised. In such cases, alternative tools or modes of assessment should be considered.

c) Scoring/Reporting

When scoring and reporting test results, the range or confidence interval should be reported alongside the standard score. When accommodations or modifications are used, these must be recorded in test protocols and stated clearly when psychological reports are written.

When modifications made violate standardised testing procedures and compromise the validity of the assessment, standard scores should not be reported. Emphasis could be placed on the student's qualitative responses to the test items.

When any subtests are aborted during administration, or when computation of scores involves proration, clear justification must be recorded in test protocols and reported accordingly.

The interpretation of test scores can be complex, and great caution should be exercised in this area. The assessor must conduct a careful evaluation of the effects of various factors on test results (e.g., situational factors, age and socio-economic status of the student, motivation/fatigue, effects of language and/or cultural differences, impact of specific disabilities, use of accommodations).
It should also be noted that there could be accommodations provided (e.g., extra time, frequent breaks) which could affect a student’s performance. Given variations in purpose and difficulty level, school-based tests cannot solely be used to reflect a student’s abilities and attainments.

2.4.3 Direct Observations

Direct observations are the most common means to assess skills that cannot be tested (e.g., social skills).

Validity and reliability of data from observation is optimised when:

- Behaviour is taken in context
- The student’s behaviour is seen across a range of settings and over a period of time
- Structured observation protocols are used (e.g., Autism Diagnostic Observation Schedule)

The observation data collected should be interpreted in relation to what preceded and followed the session that could impact the student’s behaviour during the session. In addition, feedback from teachers or significant adults could be obtained to ascertain the representativeness of the behaviours observed.

2.4.4 Reports by Caregivers and Teachers

Reports by caregivers and teachers are important. When interpreting the reliability and validity of these reports, evidence of concurrence across different sources of information should be considered.

The use of structured administration protocols (e.g., Autism Diagnostic Interview-Revised, Vineland-II) to obtain reports from caregivers and teachers is recommended. This would improve the accuracy and reliability of information obtained.

2.4.5 Self-Reports

Self-reports are important means of obtaining the views of the student. Methods of eliciting self-report include structured protocols, open-ended interviews, projective techniques (e.g., kinetic family drawings) and reflection journals.

References


Chapter 3: Assessment for Specific Purposes

3.1 Assessment to Ascertained Appropriate Special Educational Placement

The educational placement of a student is determined through careful deliberation, after balancing the following considerations\textsuperscript{1,2}:

- Student’s strengths and learning needs
- School’s capacity in meeting the student’s level of SEN i.e., the physical resources and expertise in the school
- Parents’ choice

Recommendations of appropriate educational placement should be made by qualified professionals with good knowledge of the student and available educational placement options.

As parents’ choice is one of the key considerations, parents should be guided in making informed decisions about placement options. Assessment results should be shared with parents in a clear and useful manner, incorporating information on the availability and suitability of placement options. When guiding parents, due consideration should be given to their need for information, for support to understand and accept their child’s SEN, and for time for decision making\textsuperscript{2,3}.

Decisions and recommendations regarding school placement or provision should be reviewed over time to ascertain the extent to which they meet the student’s current needs\textsuperscript{4-9}. It is important to review the student’s needs before each major transition point (e.g., when the student transits from one setting or programme to another\textsuperscript{3,6}).

In some cases, a review to consider a move or a change of placement may be needed, especially in instances where the student develops more severe needs or challenging behaviours which require an increased intensity of support.

Challenging behaviours refer to those that are considered unacceptable by social standards. They are behaviours that have a significantly negative impact on the student’s education and social interaction, and/or those that impact on the lives of others (e.g., behaviours that pose immediate harm to others and/or self, disruption of the learning environment)\textsuperscript{8}.

In the assessment of challenging behaviours in students with SEN, the following considerations need to be made:

---

Endnote

\textsuperscript{3}In instances where the standardisation sample differs from the population that the student is from, cautionary statements should be made in the report, e.g., "These results should be interpreted with caution inasmuch as the instruments were standardised on a sighted population, and certain accommodations were made for the student’s access to the visual materials.”


• A student’s challenging behaviours should not be considered in isolation. They should be considered holistically to gain a full understanding of their possible causes and functions.

• Specific assessment considerations could include conducting the assessments over time and across different settings (e.g., the classroom, school canteen, playground, home). In addition, should the student’s challenging behaviours interfere with standardised testing procedures, the assessor should discontinue the assessment and re-assess the student at a later time. If necessary, alternative test procedures and methods may need to be considered in the re-assessment.

3.2 Ascertaining Student’s Suitability for Placement into a Mainstream School

A student is considered to be suitable for mainstream schools if:

• The student has the cognitive ability to access the mainstream curriculum.
• The student’s needs can be met with minimal adaptation to the mainstream curriculum or learning environment (e.g., the student is able to use assistive devices independently or with minimal support).
• The student has the adaptive skills to cope with the mainstream learning environment (e.g., large group learning settings).
• The student’s SEN can be met without compromising the education of other students.

3.3 Ascertaining Student’s Suitability for Placement into an Appropriate Special Education (SPED) School

A student could be considered for placement into an appropriate SPED school when the student’s SEN require any of the following:

• A specialised curriculum (e.g., functional academics, life skills, adaptive, pre-vocational, community living, Braille instruction).
• Extensive redesign or specially-designed instruction (e.g., use of sign language, extensive use of work schedules and visual schedules).

• Specific expertise and provisions to support the student’s behavioural and/or adaptive functioning level (e.g., intensive therapy services, low student-teacher ratio).

3.4 Assessment for Access Arrangements and Curricular Exemption

The purpose of the access arrangements (also referred to as special arrangements) is to enable students with learning disabilities to demonstrate skills, knowledge and understanding in an examination context. The access arrangements should maintain the integrity of the examination and should not give the student an unfair advantage over other students.

Recommendations for access arrangements should not be based solely on the student’s disability, but also take into account the student’s specific needs. Not every student with a disability needs access arrangements. Also, not all students with the same disability need the same type of access arrangements (e.g., not all students with dyslexia require extra time during examinations).

Recommendations for access arrangements should be accompanied by clear and current evidence of needs to demonstrate that the recommended arrangements would be appropriate (e.g., assessment results that demonstrate impairments in the student’s reading skills and writing speed could indicate that the student would benefit from additional time during examinations).

In addition to the student’s needs, it is also important to consider the student’s familiarity with the specific arrangements (e.g., students who are not familiar with using a computer may not find this arrangement useful during examinations).

In the event that students with SEN are unable to demonstrate skills even when appropriate arrangements are provided, curricular exemption (e.g., exemption from offering Mother Tongue Language at the national examinations) and/or exemption from a component in a subject area (e.g., oral examination, listening comprehension) can be recommended.
References


Endnotes

Access arrangements may also be referred to as special arrangements. These arrangements allow candidates with substantial and long-term disabilities access to the examination and the opportunity to demonstrate their attainment. These could include, for example, an extra time allowance, the provision of specially adapted papers and assistance with reading or writing.


For the purposes of access arrangements, the evaluation of learning needs arising from the disability should be completed within three years prior to the date of the examination.
Chapter 4: Assessment Considerations for Specific Populations

While the general principles of assessment have been covered previously in Chapter 2 (Psycho-educational Assessment Data), the subsequent sections highlight assessment considerations for the specific populations below:

Students with:
- Visual Impairment
- Hearing Impairment
- Cerebral Palsy
- Attention Deficit Hyperactivity Disorder
- Autism Spectrum Disorders
- Central Auditory Processing Disorder
- Dyslexia
- Intellectual Disability
- Multiple Disabilities

The above list represents the commonly-occurring disabilities amongst students in Singapore. This list of disabilities is not intended to be exhaustive. The assessment considerations mentioned here need to be viewed alongside the general principles of assessment highlighted in Chapter 2.

4.1 Assessment Considerations for Students with Visual Impairment (VI)

VI refers to an impairment in vision that, even with correction, adversely affects students' educational performance. The term includes both partial sight and blindness. Visual problems include visual field loss, visual fatigue and difficulties with figure-ground perception and visual efficiency.

Assessors need to be aware of the enormous variability among students with VI and need to take into account such variability when planning an assessment. Hence, information on the cause and nature of the visual loss and the specific effects of students' visual loss need to be taken into account for the assessment (e.g., blind versus partial vision).

Assessors need to be aware that VI can result in difficulties in other domains (e.g., reading development). A significant number of students with VI will have co-morbid learning disabilities but caution should be exercised to avoid over-identification of additional disabilities in students with VI.

It is important to ensure that adequate educational opportunities and training in disability-specific skills have been provided to students before a clear diagnosis of an additional learning disability is made. It is therefore recommended that any assessment to determine the presence of learning disabilities in students with VI is conducted only after they have had two years of appropriate formal academic instruction (i.e., after Primary 2).

Assessors need to take note of response behaviours unique to students with VI:
- “Passive”, neutral facial expressions should not be taken to indicate that the students are not listening attentively.
- Students may display resistance to having their hands directed to unknown objects; and may use protective responses such as pulling their hands away. They may also display protective responses to unanticipated events.
- Students may display visual responses such as eccentric viewing, head tilt, holding objects close to them, and/or closing their eyes.
- Students may avert their gaze if objects are too close or if they want to disengage from a task.
- Students may be in a low arousal state due to a lack of visual stimulus and a low postural tone.
- Students may use “immature” patterns or repetitive patterns of object exploration such as repeated dropping for auditory feedback, tapping or mouthing.
- Students may be auditorily distracted by environmental noises.
- Students may manifest other behaviours such as echolalia, self-stimulation and egocentricity in their interpersonal skills, especially if there are other disabilities.

It is important to choose the correct assessment instruments so that the assessments do not disadvantage students on the basis of visual loss. Hence, tests that rely heavily on students' visual ability should be used with caution, especially timed tests. It is also important, for tests that require Braille reading, to enquire about students' Braille reading ability.

The following conditions are recommended for assessing students with VI:
- Assessors should ensure an appropriate testing environment with minimal distractions and adequate lighting as variable visual loss can be affected by lighting conditions.
- Assessors must take time to describe testing materials that are part of the test. Students should be given the opportunity to experience touching the materials before the test starts.
- Typed material should be represented in large print. A copier may be used to enlarge a stimulus, though this may result in a loss of...
of their typical speech. It is helpful for assessors to be familiar with the speech patterns of students they assess.

Some students with cochlear implants may produce significant improvement in speech and language skills after two years. Therefore, a re-assessment of students’ language skills should be done within two to three years of the cochlear implant so as to review their current functioning.

4.3 Assessment Considerations for Students with Cerebral Palsy (CP)

CP refers to a group of disorders of movement and posture, causing activity limitations which are attributed to non-progressive disturbances that occurred in the developing foetal or infant brain. CP is often accompanied by disturbances of sensation, perception, cognition, communication and behaviour; and by epilepsy; and by secondary musculoskeletal problems.

In preparation for an assessment, it is important to understand the characteristics of students with CP that may influence the assessment:

- Motor impairments, unusual appearance, and difficulties with speech and gait may mask intelligence in students with CP. Intellectual disability should not be immediately assumed as a co-morbid condition. On the other hand, assessors must also be cognisant of other possible co-morbid impaired cognitive functions such as attention and perceptual deficits.

- Irregular sleep patterns are common among students with CP and these may result in daytime behaviour problems such as drowsiness.

- Problems such as poor coordination and abnormal muscle tone interfere with their manipulation of materials and make it difficult for students to respond to some motor tasks in a meaningful way.

The following considerations should be made when choosing an appropriate assessment tool:

- The assessment of cognitive functioning is often challenging in students with motor impairment because the majority of tests require verbal and motor responses. Students with CP can be assessed with standard assessment batteries if they can see, hear and speak adequately and have at least one functional arm and hand.

- For students with CP for whom standardised cognitive assessments are not appropriate, the use of developmental scales,
which assess progress along a continuum rather than providing comparative performance data with peers, may be an appropriate alternative12,13.

- For CP students with severe disabilities, it is important to conduct a functional skills assessment14-18. A functional skills assessment targets the skills needed in a given environment and activity, and includes measures of social and adaptive functioning with a focus on basic life skills14-18. It focuses on practical independent living skills. It also considers students’ functioning in their environments, and examines the process of learning and performance. Based on the results of the assessment, intervention techniques are implemented and evaluated on a regular basis19.

The following test accommodations are helpful in supporting students with CP so as to obtain the best responses during the assessment session11:

- Body positioning is of specific relevance to students with CP. Students should be positioned in a way that facilitates the support of the trunk and independent use of the arms and hands. Appropriate positioning can permit better fine motor function, facilitate attention, reduce fatigue, and promote improved social interaction, thereby optimising performance. Assessors should consult a physiotherapist on positioning students for testing.
- Students should be assisted to make responses (e.g., stabilising their hands) or use assistive devices (e.g., via the use of a pointer attached to their headgear).
- Family/caregiver involvement may be crucial during the assessment of students with CP19 to assist in the interpretation of students’ responses.

### 4.4 Assessment Considerations for Students with Attention Deficit Hyperactivity Disorder (ADHD)

At the time of publication of this PPG, the Academy of Medicine, Singapore and the Ministry of Health (MOH) have initiated the development of a set of evidence-based clinical practice guidelines (CPG) on Attention Deficit Hyperactivity Disorder (ADHD). For further guidelines on the assessment and diagnosis of students with ADHD, assessors should take direct reference from the CPG on ADHD.

ADHD is a neuro-behavioural disorder of childhood. The core symptoms of ADHD include inattention, hyperactivity and impulsivity20-22. Assessment of attention or executive functioning should be considered as part of the comprehensive assessment for students with ADHD.

The following conditions are recommended for assessing students with ADHD:

- The assessment context should be similar to the students’ usual context. For example, if students are prescribed medication for ADHD, assessors should ensure that medication has been taken for the day. In the event of changes to the type or dosage of medication, assessors should wait for the effect of the medication to stabilise before conducting the assessment.
- Frequent breaks can be provided to ensure optimum attention during presentation of test items. Assessors should ensure that distraction in the assessment room is minimised. The assessment can be broken up into separate sessions if necessary but a reasonable time interval between testing should be maintained as recommended by the test publishers.

A majority of students with ADHD have co-morbid conditions. The presence and effects of these co-morbid conditions must be taken into account during the assessment23-25.

### 4.5 Assessment Considerations for Students with Autism Spectrum Disorders (ASD)

For further guidelines on the assessment and diagnosis of students with ASD, assessors are advised to make direct reference to the local Clinical Practice Guidelines on Autism jointly developed by the Academy of Medicine, Singapore and the Ministry Of Health26.

ASD is a neuro-behavioural syndrome resulting from a dysfunction of the central nervous system that leads to disordered development27. Symptoms of ASD can be grouped under three general categories of behavioural impairment23,27:

- Qualitative impairments in social interaction
- Qualitative impairments in communication
- Restricted, repetitive and stereotyped patterns of behaviour, interest and activities

Additionally, ASD is often found in combination with other disabilities/conditions (e.g., epilepsy, attention deficit disorder, mood disorder, anxiety disorder, and cognitive or learning disabilities)28.

In preparation for an assessment, it is important to understand the characteristics of students with ASD that may influence the assessment:
Students with ASD may have unique strengths and communication styles, uneven patterns of skill development, and unusual motivators or aversions (e.g., sensory and tactile-based stimuli). In addition, students with ASD have difficulty reading social cues in the environment and have a strong need for predictability. Social demands in any situation can be very stressful and as a result, they may not participate optimally in the test session.

Students with ASD perform best when they are prepared for changes and are provided with clear expectations. For example, information about the assessors and the time and venue of the assessment can be communicated to students as a form of advance preparation. In addition, visual support and work systems which indicate clearly the start and end of an activity can increase predictability for students.

As students with ASD may react strongly to unpredictable and new environments by demonstrating challenging behaviour, assessors may need to employ strategies to calm students (e.g., providing a calming down area) during testing.

Some test modifications may be helpful in supporting students with ASD so as to obtain the best responses during the assessment session. For example, giving specific short and clear instructions augmented with visuals (e.g., photographs, symbols, written instructions) can make communication more effective for students with ASD. Where modifications are made, this should be stated in the report. (Please see Section 2.4.1c for more details.)

### 4.6 Assessment Considerations for Students with Central Auditory Processing Disorder (CAPD)

CAPD is defined as problems in one or more of the following auditory behaviours despite normal peripheral hearing: auditory performance, sound localisation and temporal processing.

Students with CAPD are often uncertain about what they hear under different listening conditions even though they have normal peripheral hearing. For example, they may have difficulties listening to or following directions in background noise, and understanding rapid and/or recorded speech or speech from unfamiliar speakers. Students with CAPD often appear inattentive and easily distracted and may have secondary difficulties in reading, spelling and language.

While students’ responses to certain psycho-educational tests may suggest deficits in auditory processing skills, it is not sufficient to diagnose CAPD solely based on cognitive assessment. The audiologist plays a key role in the diagnosis and overall management of CAPD. The diagnosis is done in the context of a multidisciplinary assessment comprising a doctor, a psychologist, a speech and language therapist and an audiologist.

A CAPD diagnosis can only be made after the age of seven so as to allow students’ language development to stabilise.

Difficulties associated with CAPD can change over time. Therefore, psycho-educational assessments for students with CAPD need to be repeated after two to three years to determine students’ current levels of functioning and need for continued special accommodations in learning.

### 4.7 Assessment Considerations for Students with Dyslexia

Dyslexia is a type of specific learning difficulty identifiable as a developmental difficulty of language learning and cognition.

It is a learning difficulty that primarily affects the skills involved in accurate and fluent word reading and spelling. Characteristic features of dyslexia are difficulties in phonological awareness, verbal memory and processing speed. Co-occurring difficulties may be seen in aspects of language, motor co-ordination, mental calculation, concentration and personal organisation, but these are not, by themselves, markers of dyslexia.

A good indication of the severity and persistence of dyslexia difficulties can be gained by examining how the individual responds to or has responded to appropriate literacy instruction. An appropriate literacy programme should include the following components: phonemic awareness, phonic fluency, vocabulary and comprehension.

Assessors should ensure that students’ difficulties are not primarily the result of:
- Inadequate or inappropriate literacy instruction
- A visual, hearing or motor difficulty
- Intellectual disability
- Environmental or economic disadvantage
- Inadequate exposure to the English Language
- Emotional disturbance

In addition, assessors should also be aware that physiological difficulties (e.g., middle ear infections) can affect speech processing ability and literacy development.
The diagnosis of dyslexia should be made by a qualified psychologist, with the use of standardised psycho-educational assessments. These assessments should comprise the following components: cognitive and literacy skills, including reading accuracy, fluency, comprehension and spelling, and tests of phonological awareness. Students’ attainment on these tests should be viewed in the context of their background, instruction and intervention received. Diagnosis of dyslexia in a language other than English should be based on appropriate literacy assessments in the language concerned.

When assessing students with dyslexia, it is important to consider the following areas:

- The multidimensional nature of literacy skills and its underlying phonological basis.
- Students’ fluency in reading and writing. This is necessary because, with instruction, students may be able to cope with basic word reading, although difficulties with fluency often remain.
- Difficulties in language, mathematics and visual-spatial domains which may present additional barriers for students with dyslexia.
- Emotional and motivational issues arising from persistent difficulties in learning.

Given that difficulties associated with dyslexia can be overcome with intervention, psycho-educational assessments for students with dyslexia would need to be repeated after two to three years to determine students’ current levels of functioning and need for continued access arrangements in learning.

4.8 Assessment Considerations for Students with Intellectual Disability (ID)

ID is defined as having significant limitations in cognitive and adaptive functioning, as expressed in conceptual, social and practical adaptive skills. Therefore, cognitive and adaptive functioning are both important components for a diagnosis of ID.

ID is the new term for what was previously known as Mental Retardation.

The purpose of diagnosis of ID is to identify the support needed by the student (e.g., special education) and to make recommendations for provisions to be made.

The diagnosis of ID should be made by a psychologist through the use of standardised assessments of cognitive and adaptive functioning. In addition, the assessment should include students’ current and past educational performance, family information, developmental history, medical history (e.g., Williams Syndrome, Downs Syndrome, Fragile X) and psychiatric history (e.g., schizophrenia, OCD, depression, mood disorders).

In the assessment of adaptive functioning, the validity and reliability of data obtained is optimised when a standardised instrument is used.

Students with ID may have additional difficulties which need to be taken into consideration during assessment. For example, they may have difficulties in attention, verbal comprehension and expression. They may also have emotional and motivational problems arising from persistent difficulties in learning. These may result in task avoidance and test fatigue.

4.9 Assessment Considerations for Students with Multiple Disabilities

Students with multiple disabilities have two or more impairments, the combination of which causes such severe SEN that they cannot be accommodated in special education programmes designed solely for one of the impairments. Multiple disabilities have interactional rather than additive effects, making instruction and learning complex.

Examples of common Multiple Disabilities include:

- Sensory and cognitive impairments such as blindness and intellectual disability
- Sensory and physical impairments such as blindness and paraplegia
- Cognitive and physical impairments such as intellectual disability and spastic quadraplegia

In preparation for an assessment, it is important to understand the characteristics of students with multiple disabilities that may influence the assessment. These include:

- Limited speech or communication
- Difficulty in basic physical mobility
- Tendency to forget skills through disuse
- Trouble generalising skills from one situation to another
- A (lifelong) need for support in major life activities (e.g., domestic, leisure, community use, vocational)
- Alertness, i.e., how alert are the students, the duration that the students can remain alert, and the variables affecting their alertness
• Orienting reflex, i.e., the students’ preferred way of showing that they have oriented to a stimulus

In addition, assessors need to understand the various subtle responses and communication forms of students with multiple disabilities. For example, a response to presented stimuli during assessment may be inconspicuous, such as a change in respiration, muscle tone, vocalisation, quieting and/or slight body movement or stilling\(^9\).

Because of the limited skills of students with multiple disabilities, the use of functional skills assessment is crucial. (Please refer to Section 4.3 for a description of a functional skills assessment.)

In addition to the test accommodations mentioned in Section 4.3, students with multiple disabilities may require the use of specially-designed chairs for trunk support.

References


Visual efficiency refers to a group of visual skills important for success in school, sports, driving, and the modern workplace. Visual efficiency skills include: depth perception, colour perception, and oculomotor skills such as eye teaming, eye movement, and eye focusing speed and accuracy. An individual with 20/20 vision can still have problems with visual efficiency skills. (Retrieved from http://www.visionfirstfoundation.org/vision_faq.php#2)

Visual fatigue provides a label for conditions experienced by individuals whose work involves extended visual concentration. It describes phenomena related to intensive use of the eyes. It can include complaints of eye or pericircular pain, itching or burning, tearing, oculomotor changes, focal problems, performance degradation, “after colours,” and other phenomena. (Retrieved from http://www.mdguidelines.com/visual-fatigue)

Visual figure-ground perception is the ability to distinguish an object from the background field. (Retrieved from http://www.healthline.com/galecontent/figure-ground-perception)

In the local context, the term ‘closed-circuit television’ (CCTV) is often used interchangeably with the term ‘video magnifier’.

Some examples of tests for students with VI that are adaptations of instruments used with the sighted are the Woodcock-Johnson – III Tests of Achievement and the Wechsler Intelligence Scale for Children – Fourth Edition (WISC-IV). An example of a test that is designed specifically for students with VI is the Intelligence Test for Visually Impaired Children (ITVIC).

For the purpose of this PPG, the term “autism spectrum disorders” (ASD) includes Autism (299.00), Asperger Syndrome (299.80), and PDD-NOS (299.80) in the DSM-IV-TR, as well as Studenthood Autism (F84.0) and Atypical Autism (F84.1) in the ICD-10.

Some examples of tests that can be used to assess adaptive functioning include the Vineland Adaptive Behaviour Scales – Second Edition (VABS-II), and the Adaptive Behaviour Assessment System – Second Edition (ABAS-II).

Endnotes

Visual field refers to the entire area that can be seen with the eye, including peripheral vision. The visual field is the portion of the individual’s surroundings that can be seen at any one time. The normal extent of field of vision is 50° superiorly, 60° nasally, 70° inferiorly and 90° temporally. A visual field defect is a loss of part of the usual field of vision. (Retrieved from http://www.patient.co.uk/doctor/Visual-Field-Defects.htm and http://www.mneye.com/minneapolis-minnesota/about-your-eyes/glossary.htm)
This chapter provides an overview of the categories of SEN and the support provisions available, as well as the pathways for educational placement of students with SEN in Singapore. Students with SEN span the full range of disabilities, from high functioning students who are educated in the mainstream schools, to students with severe disabilities who are educated in SPED schools. It should be noted that as the educational landscape evolves with time, the provisions and options available for students with SEN would also change.

### 5.1 Framework for Special Educational Needs (SEN)

In the current landscape, a differentiated approach is adopted to cater to the wide ranging needs of students with SEN. On one end of the continuum, students with adequate cognitive functioning and who are able to access the mainstream curriculum are provided with support within mainstream settings; while those with cognitive impairments and require more intensive specialised support are provided for in alternative specialised settings, namely SPED schools. Students with adequate cognitive abilities but have significant deficits in adaptive skills and/or sensory and physical functioning can choose to study in alternative specialised settings offering the mainstream curriculum.

For assessment of students for the purpose of ascertaining suitability for mainstream or SPED schools, please refer to the guidelines in Chapter 3 (Assessment for Specific Purposes), Sections 3.2 and 3.3 respectively.

### 5.2 Categorisation of Special Educational Needs (SEN)

The full range of SEN encompasses a wide spectrum. This could range from high functioning students to students with severe disabilities. In the local context, seven broad categories of SEN can be described based on the interaction of students’ cognitive and adaptive functioning:

**Table 1: Categories of SEN**

<table>
<thead>
<tr>
<th>Cognitive functionality</th>
<th>Adequate cognitive functioning</th>
<th>Mild cognitive impairment</th>
<th>Moderate to severe cognitive impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptive Functioning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild deficit in adaptive functioning</td>
<td>1A1</td>
<td>2A</td>
<td>3A</td>
</tr>
<tr>
<td></td>
<td>1A2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate to severe deficit in adaptive functioning</td>
<td>1B</td>
<td>2B</td>
<td>3B</td>
</tr>
</tbody>
</table>

*Cognitive functioning* refers to the intellectual processes by which the student becomes aware of, perceives, or comprehends ideas. It involves aspects of perception, thinking, reasoning, and memory. The assessment of the student’s cognitive functioning is commonly conducted through (but not limited to) the use of standardised tests of intellectual quotient (IQ)\(^1\)\(^-\)\(^3\). ‘Mild cognitive impairment’ is indicated by standard scores that are more than two standard deviations below the mean, while ‘moderate to severe cognitive impairment’ refers to standard scores that are more than three standard deviations below the mean.

*Adaptive functioning* is an umbrella term referring to a range of skills which affects how effectively an individual copes with everyday demands. The main aspects of adaptive functions include the following areas: communication, self-care, home living, motor skills, social/interpersonal skills, self-direction, functional academic skills (literacy and numeracy), work, leisure, health, and safety\(^2\). The assessment of a student’s adaptive functioning is commonly based on (but not limited to) the use of care-givers’ or teachers’ reports of the student’s skills and abilities in everyday activities. The use of standardised protocols for obtaining care-givers’ report on the student’s functioning increases the reliability of the information gathered\(^3\). Mild deficit in adaptive functioning is indicated by a delay of two to four years from a student’s chronological age (e.g., a student with reading age that is 2.5 years below chronological age); while moderate to severe deficits refers to delays that are more than four years from a student’s chronological age.
When standardised measures are used to gauge level of functioning, the degree of deficit/impairment should be interpreted with reference to distribution within the population or gap between the student’s chronological age and testing age\(^6,7\). Caution should be exercised when using or interpreting scores derived from norms that are not appropriate for the local population. In cases where standardised measures are inappropriate, psychologists can also use developmental checklists to ascertain the extent to which a student’s adaptive or cognitive abilities are age-appropriate.

Table 2 provides a description of each category of SEN in terms of the students’ profile and provisions available in the current landscape.

A student’s level of SEN may change over-time either in response to intervention, or, as a result of degenerative conditions. Consequently, the category of SEN that best fits the student’s profile and needs may also change. There could also be cases where a student’s uneven profile of cognitive abilities may not fit neatly into any one category of SEN. Thorough assessments from multiple professionals would be needed to ascertain the SEN provisions for such cases.

Table 2: Description of SEN categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Profile</th>
<th>Educational Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A1</td>
<td>Adequate cognitive functions; no intellectual impairments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At most two aspects of adaptive functioning showing mild deficit, e.g., in academic and/or communication skills</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student is able to access mainstream curriculum in a mainstream school</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Supported within general mainstream classrooms, with student-teacher ratio ranging from 30:1 to 40:1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Additional in-school educational support, where needed, from school-based support programmes or school staff, e.g., teachers trained in special needs, allied educators</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Profile</th>
<th>Educational Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1B</td>
<td>Adequate cognitive functions; no intellectual impairments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Three or more aspects of adaptive functioning showing moderate to severe deficit, e.g., in academic, communication and social-interaction skills</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student is able to access mainstream curriculum, requires significant support for behavioural or adaptive needs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Specialised programmes in SPED schools offering the mainstream curriculum</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Lower student-teacher ratio, ranging from 4:1 to 13:1 with specialised in-class support</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Additional support in speech or occupational therapy, orientation and mobility training, where necessary</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Profile</th>
<th>Educational Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2A</td>
<td>Mild impairment in cognitive functioning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Two or more aspects of adaptive functioning showing mild deficit, e.g., in motor and/or communication skills</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Specialised curriculum (e.g., functional academics, life skills, vocational skills) according to the student’s needs and ability</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Lower student-teacher ratio, ranging from 4:1 to 13:1 with specialised in-class support</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Additional specialised support in speech or occupational therapy, orientation and mobility training, where necessary</td>
<td></td>
</tr>
</tbody>
</table>
Challenging behaviours may be linked to developmental disorders (e.g., ASD, conduct disorder), psychiatric disorders (e.g., schizophrenia, mood disorders) and medical disorders (e.g., epilepsy).

Challenging behaviours usually have an underlying function or motive, including: a means of communicating needs more effectively; seeking social attention or preferred activities; avoiding difficult tasks and aversive situations; or the generation of sensory reinforcement in the form of auditory, visual, tactile, olfactory, and gustatory stimulation.

5.3 Pathways for Educational Placement of Students with Special Educational Needs (SEN)

Figure 1 shows the current educational pathways available for students with SEN.

<table>
<thead>
<tr>
<th>Category</th>
<th>Profile</th>
<th>Educational Provisions</th>
</tr>
</thead>
</table>
| 2B       | Mild impairment in cognitive functioning | • Specialised curriculum (e.g., functional academics, life skills, vocational skills) according to the student’s needs and ability  
• Lower student-teacher ratio, ranging from 4:1 to 13:1 with specialised in-class support  
• Additional specialised support in speech or occupational therapy, orientation and mobility training, where necessary  
• Individualised behavioural support to address challenging behaviours, where necessary |
|          | Three or more aspects of adaptive functioning showing moderate to severe deficit, e.g., in motor, daily living, communication skills | ** |
|          | Significant difficulties in accessing mainstream curriculum, presence of additional challenging behaviours* |
| 3A       | Moderate to severe impairment in cognitive functioning | • Specialised curriculum (e.g., functional academics, life skills, vocational skills) according to the student’s needs and ability  
• Lower student-teacher ratio, ranging from 4:1 to 13:1 with specialised in-class support  
• Additional specialised support in speech or occupational therapy, orientation and mobility training, where necessary |
|          | Two or more aspects of adaptive functioning showing mild deficit, e.g., in motor, daily living, communication skills | ** |
|          | Significant difficulties in accessing mainstream curriculum |
| 3B       | Moderate to severe impairment in cognitive functioning | • Specialised curriculum (e.g., functional academics, life skills, vocational skills) according to the student’s needs and ability  
• Lower student-teacher ratio of 8:1 with specialised in-class support  
• Additional specialised support in speech or occupational therapy, orientation and mobility training, where necessary  
• Individualised behavioural support to address challenging behaviours, where necessary |
|          | Three or more aspects of adaptive functioning showing moderate to severe deficit, e.g., in motor, daily living, communication skills | ** |
|          | Significant difficulties in accessing mainstream curriculum, presence of additional challenging behaviours |

*Explanation for challenging behaviours

• Students with challenging behaviours of such intensity, frequency or duration, as to pose physical harm to themselves or others around them. These are behaviours that are disruptive, destructive and dangerous (e.g., hitting others, property destruction, self-injurious behaviour).
References


ANNEX A

List of Special Education (SPED) Schools

Information was accurate at the point of printing. However, as information about SPED schools may change over time, please be advised to get updates directly from the school websites.

<table>
<thead>
<tr>
<th>School</th>
<th>Address</th>
<th>Contact Information</th>
<th>Disability Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighthouse School</td>
<td>51 Toa Payoh Rise</td>
<td>Tel: (65) 6250 3755 Fax: (65) 6250 5348 Email: <a href="mailto:lighthouse@lighthouse.edu.sg">lighthouse@lighthouse.edu.sg</a> Website: <a href="http://www.lighthouse.edu.sg">http://www.lighthouse.edu.sg</a></td>
<td>Visual Impairment</td>
</tr>
<tr>
<td></td>
<td>Singapore 298106</td>
<td></td>
<td>Autism</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hearing Impairment</td>
</tr>
<tr>
<td>Chaoyang School</td>
<td>18 Ang Mo Kio Ave 9</td>
<td>Tel: (65) 6456 6922 Fax: (65) 6456 2030 Email: <a href="mailto:cys@apsn.org.sg">cys@apsn.org.sg</a> Website: <a href="http://www.apsn.org.sg">http://www.apsn.org.sg</a></td>
<td>Mild Intellectual Disability</td>
</tr>
<tr>
<td></td>
<td>Singapore 569767</td>
<td></td>
<td>Mild Autism</td>
</tr>
<tr>
<td>Katong School</td>
<td>900 New Upper Changi Road</td>
<td>Tel: (65) 6445 8027 Fax: (65) 6445 6313 Email: <a href="mailto:ks@apsn.org.sg">ks@apsn.org.sg</a> Website: <a href="http://www.apsn.org.sg">http://www.apsn.org.sg</a></td>
<td>Mild Intellectual Disability</td>
</tr>
<tr>
<td></td>
<td>Singapore 467354</td>
<td></td>
<td>Mild Autism</td>
</tr>
<tr>
<td>Tanglin School</td>
<td>143 Alexandra Road</td>
<td>Tel: (65) 6475 1511 Fax: (65) 6472 0408 Email: <a href="mailto:ts@apsn.org.sg">ts@apsn.org.sg</a> Website: <a href="http://www.apsn.org.sg">http://www.apsn.org.sg</a></td>
<td>Mild Intellectual Disability</td>
</tr>
<tr>
<td></td>
<td>Singapore 159924</td>
<td></td>
<td>Mild Autism</td>
</tr>
<tr>
<td>Delta Senior School</td>
<td>20 Delta Avenue</td>
<td>Tel: (65) 6276 3818 Fax: (65) 6276 5608 Email: <a href="mailto:dss@apsn.org.sg">dss@apsn.org.sg</a> Website: <a href="http://www.apsn.org.sg">http://www.apsn.org.sg</a></td>
<td>Mild Intellectual Disability</td>
</tr>
<tr>
<td></td>
<td>Singapore 169832 (wef 2012):</td>
<td></td>
<td>Mild Autism</td>
</tr>
<tr>
<td></td>
<td>3 Choa Chu Kang Grove</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Singapore 683237</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grace Orchard School</td>
<td>6A Jurong West St 52</td>
<td>Tel: (65) 6561 9128 Fax: (65) 6561 4133 Email: <a href="mailto:info@go.edu.sg">info@go.edu.sg</a> Website: <a href="http://www.go.edu.sg">http://www.go.edu.sg</a></td>
<td>Mild Intellectual Disability</td>
</tr>
<tr>
<td></td>
<td>Singapore 649297</td>
<td></td>
<td>Mild Autism</td>
</tr>
<tr>
<td>School</td>
<td>Address</td>
<td>Contact Information</td>
<td>Disability Groups</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>------------------------------</td>
<td>----------------------------------------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>Metta School</td>
<td>30 Simei St 1, Singapore 529949</td>
<td>Tel: (65) 6788 5800 Fax: (65) 6788 5507 Email: <a href="mailto:enquiry@mettaschool.edu.sg">enquiry@mettaschool.edu.sg</a> Website: <a href="http://www.mettaschool.edu.sg">http://www.mettaschool.edu.sg</a></td>
<td>Mild Intellectual Disability Mild Autism</td>
</tr>
<tr>
<td>Rainbow Centre – Margaret Drive School</td>
<td>501 Margaret Drive, Singapore 149306</td>
<td>Tel: (65) 6472 7077 Fax: (65) 6475 9739 Email: <a href="mailto:info@rainbowcentre.org.sg">info@rainbowcentre.org.sg</a> Website: <a href="http://www.rainbowcentre.org.sg">http://www.rainbowcentre.org.sg</a></td>
<td>Multiple Disabilities Autism</td>
</tr>
<tr>
<td>Rainbow Centre – Yishun Park School</td>
<td>15 Yishun Street 61, Singapore 768548</td>
<td>Tel: (65) 6482 2592 Fax: (65) 6482 2593 Email: <a href="mailto:info@rainbowcentre.org.sg">info@rainbowcentre.org.sg</a> Website: <a href="http://www.rainbowcentre.org.sg">http://www.rainbowcentre.org.sg</a></td>
<td>Multiple Disabilities Autism</td>
</tr>
<tr>
<td>Spastic Children’s Association School</td>
<td>Cerebral Palsy Centre, 65 Pasir Ris Drive 1, Singapore 519529</td>
<td>Tel: (65) 6585 5639 Fax: (65) 6585 5635 Email: <a href="mailto:spastic@pacific.net.sg">spastic@pacific.net.sg</a> Website: <a href="http://www.spastic.org.sg">http://www.spastic.org.sg</a></td>
<td>Physical Disability</td>
</tr>
</tbody>
</table>

Reference

Workgroup Members

Dr Sharifah Mariam Aljunied (Chairperson)
Lead Specialist, Educational Psychology
Education Programmes Division
Ministry of Education

A/Prof Lim Sok Bee (Co-chairperson)
Head and Senior Consultant
Department of Child Development
KK Women’s and Children’s Hospital

Ministry of Education

Dr Chong Suet Ling
Senior Specialist, Educational Psychology
Ms Lian Thomas Payamal
Senior Specialist, Educational Psychology

National Council of Social Service

Ms Rebecca Tan
Assistant Director
Children Disability Services

Special Education Schools

Ms Chin Hsiao Yun
Psychologist
Asian Women’s Welfare Association School

Mrs Patricia Cheng
Autism Consultant
Autism Resource Centre (Singapore)

Ms Jacqueline Goh
Psychologist
Movement for the Intellectual Disabled of Singapore

KK Women’s and Children’s Hospital,
Department of Child Development

A/Prof Lourdes Mary Daniel
(Alternate Co-chairperson)
Senior Consultant

Ms Dorcas Yap Fen Fung
Senior Psychologist

Institute of Mental Health, Department of Child & Adolescent Psychiatry

Mr Sivananda Penchaliah
Principal Psychologist

National University Hospital,
Department of Paediatrics

Ms Jessie Ooh
Lead & Senior Educational Psychologist
Paediatrics Psychological Services

Ms Susan K. George
Senior Psychologist
Rainbow Centre

Resource Persons

Ms Bhavaani Ambrose
School Social Worker
Spastic Children’s Association of Singapore

Mrs Doris Ang
Habilitation Coordinator
Canossian School

Mrs Goh-Ho Soo Wee
Senior Specialist, Educational Psychology
Ministry of Education

Mrs Leong-Ho Hil May
Senior Specialist, Educational Psychology
Ministry of Education

Ms Clara Lim
Vice Principal
Spastic Children’s Association of Singapore

A/Prof Lynne Lim
Senior Consultant
Otolaryngology - Head & Neck Surgery (ENT)
National University Hospital

Ms Melinda Tan
Associate Psychologist
Ministry of Education

Ms Alethea Kerk
Associate Psychologist
Ministry of Education

Ms Lee Pei Ling
Associate Psychologist
Ministry of Education

Secretariat

Ms Yang Phey Hong
Principal Psychologist
Department of Child Development
KK Women’s and Children’s Hospital

Dr Kenneth Poon Kin Loong
Assistant Professor
Early Childhood and Special Needs Education AG
National Institute of Education
Nanyang Technological University

Ms Iris Yu
Senior Specialist, Educational Psychology
Ministry of Education

Mr Sivananda Penchaliah
Principal Psychologist
National University Hospital,
Department of Paediatrics

Ms Jessie Ooh
Lead & Senior Educational Psychologist
Paediatrics Psychological Services

Ms Chin Hsiao Yun
Psychologist
Asian Women’s Welfare Association School

Mrs Patricia Cheng
Autism Consultant
Autism Resource Centre (Singapore)

Ms Jacqueline Goh
Psychologist
Movement for the Intellectual Disabled of Singapore

Mr Lau Wai Chung Leonard
Senior Psychologist
Metta School

Mr Stanislaus Poh
Psychologist
Grace Orchard School

Ms Sutha Raman
Educational Psychologist
Association for Persons with Special Needs