

Appendix 4 - Information for tutors on neurodiversity

Learning is not simple. The way we each experience learning is not only complex, it is unique. While it is simple and tidy to label our learning and our learners, it is not at all realistic nor is it helpful to do so.

It is much more effective for the learner to understand their specific challenges than to give these a label. A label will often mask their real difficulties rather than highlight them so that we might find the best possible strategies. It is our role to provide person-centred, individualised learning in a neurodiverse population, wherever possible.

Many students have a number of challenges while not always provided with a label or diagnosis. Therefore, it is important to observe behaviours rather than ask for a label. This is, in any case, good teaching practice. If we stick to a label, we may miss understanding how to address a learner's particular needs.

Many difficulties we find in one learning difficulty are found in others. There is a great deal of overlapping. In addition, it is very common to find that learners with difficulties in any area of their learning/cognition experience anxiety, low self-confidence and other challenges to their mental wellbeing.

Categories of observable challenges/difficulties for learners and associated strategies for the classroom.

1. Spelling and reading challenges
2. Attention challenges and ADHD
3. Coordination challenges
4. 'Working memory' challenges
5. Slow cognitive processing
6. Speech communication challenges
7. Auditory processing challenges
8. Stammering and stroke, head injuries
9. ASD (Autism spectrum disorder)
10. Mental health concerns

Spelling and reading challenges

Behaviours and typical traits to look for:

- Can comprehend what they read but struggle when 'decoding' some words. These words will be different for every person who is 'dyslexic'.
- Has poor or inconsistent phonetic decoding. (Poor phonological awareness)
- May struggle to read some words and not be able to read/sound out the end of the word or the beginning.
- May be reluctant to read aloud.
- Comprehend when text is read to them but struggle with some lexically similar words.
- Cannot learn phonetics easily.
- May have not learnt to read at school.

- Slow at reading.
- Makes spelling errors for common words
- Sometimes misses out small words (not necessarily a sign of dyslexia on its own.)

Strategies:

- Provide glossaries for each topic.
- Encourage students who have poor phonology to learn whole words.
- Be aware of how they best learn.
- Break down reading and writing tasks to step by step process so that the student can concentrate on the more difficult task of reading without other distractions.
- Assistive technology for reading and writing wherever possible/necessary.
- Give students any reading material in advance (for some students this is essential)
If possible, allow students to record your class and/or provide them with clearly written hand-outs from the class. Use images where you can.
- Write key terminology on the board and recommend a personal vocabulary book for new specialist terminology.
- Introduce tasks in relation to their purpose – so that tasks are meaningful.
- Make sure students know how words are pronounced as well as written.
- Improving phonological awareness outside class would be recommended for adults with dyslexia who are required to read text.
- Chunk reading. The size of the chunk will depend on the student's difficulties.
- Turn passive sentences into active ones.
- Rephrase. Have students reword and rephrase.
- Students identify difficult words prior to reading whole texts.
- Developing reading strategies outside class would be recommended for adults with poor comprehension or SLI.

Attention challenges and ADHD

Attention is a spectrum of capacity. Everyone's experience of attention is different depending on their interests, motivation, levels of anxiety and other mental health, and their genetic capacity.

ADHD is not on the spectrum of attention but is a 'psychiatrically' diagnosed condition. Those with ADHD/ADD are under-stimulated and seek additional stimulation unconsciously. It therefore will be 'treated' differently from those who have poor attention. Those with ADHD will though be affected by their environment in similar ways to those without ADHD.

Behaviours and typical traits to look for:

Impulsivity:

- Interrupting others and finding it difficult to wait for their turn
- Acting without thinking
- Can appear frustrated by their own impulsivity

- Hyperactivity: (not so obvious in adulthood)
- Difficulty staying in one position, particularly sitting
- Restless and fidgety, can tap feet and fiddle
- Difficulty in waiting, so can appear impatient

Inattention:

- Easily distracted by movement and noise
- Start tasks and skips parts of it
- Not always following the instructions
- Doesn't finish a task, losing interest if it is quite a repetitive task
- Can find organisation of belongings and self tricky.

Anxiety:

- Anxiety often accompanies ADHD (is understood to be comorbid)

Strategies:

- Provide additional tasks to undertake while the main task is being undertaken.
- Doodling can help a student stay on task.
- Take mini breaks more often (at least every 15-20 minutes). Brains become distracted because they need breaks. The breaks help to refocus.
- Observe fidgeting. Allow physical activity if possible.
- Provide checklists to tick off for longer more repetitive tasks. Or have a learner create their own for the task.
- Break large tasks down into its parts
- Set timer for the task or parts of it to keep a learner on task and on track.
- Observe for increasing or decreasing anxiety and talk.

Coordination Challenges

Behaviours and typical traits to look for:

- Slow at learning a new skill requiring co-ordination when more than one is to be performed at the same time.
- Difficulty writing at speed.
- May have dodgy balance.
- Often, but not always, may not be good at organisational and planning tasks.
- (Difficulties very much depend on the tasks required.) Anxiety often accompanies ADHD

Strategies:

- More practice and trying out will be required when there is a physical coordination component.
- Encourage a learner to practice outside of class hours.
- Must not avoid physical tasks that are challenging, but develop resilience to learn them and persevere.

- May benefit from learning touch typing.
- May need support in getting organised. Encourage use of alarms and diaries; list making possibly.
- Provide specific models for planning tasks. These are best if step by step and can be repeated.

'Working memory' challenges

Working memory gets poor press and therefore needs some explanation. The impact on the learner may well be more prevalent than any other learning difficulty. It is understood that learning for at least 10% of the population is negatively impacted by a poor working memory.

A learner with a poor working memory does not have a poor memory. They do though find it challenging to keep information in their head while working on this information. An example of this might be a simple task such as writing down a phone number. Information held in the working memory can be lost through cognitive overload (too much going on for that learner) and through distraction. There is a huge variation across the population in working memory capacity. This variation may depend on a number of factors but these do not fluctuate from day to day (and does not tend to change across a lifetime).

Behaviours and typical traits to look for:

- Can't always follow more than one or two instructions at a time. Struggle to recall all of the instruction.
- May become frustrated or agitated when on a task that has complexity.
- Learners can lose their place in a written or reading task.
- Makes errors or skips part of a task.
- Loses concentration or appears to have a short attention span but has good attention when tested.
- Doesn't always understand the requirements of a task.
- Make slow progress in English and maths. Will struggle with maths problems, typically.
- Can be reserved in group activities. But has good social relationships.
- Problems learning when both storage and processing is required at the same time.
- Work appears sloppy or unfinished.
- Exhibit high levels of anxiety.

Strategies:

- Learners develop own strategies for place-keeping and staying on task.
- Use memory aids.
- Use repetition to create automaticity of simple parts of a task such as, for example, times tables so that the cognitive load is reduced.
- Do not multi task in learning. Learn or store first and then undertake higher level thinking or processing separately.

- Ensure the task is meaningful.
- Break down tasks into its parts.
- Encourage and model written planning. Create routines for learning. Find a pattern that works and stick with it.
- Internalize routines by adding verbal and visual backups.

PLEASE NOTE: Some tasks may look simple but may require a lot of working memory. With people trying to tackle too much at once it often translates to sloppy – or unfinished – work and creates anxiety.

For example, if students write essays they using working memory to recall important information, generate and organise ideas, use correct spelling and grammar, and even make sure writing is legible or that they are operating the laptop. Trying to think through everything at once can clutter up the mental scratchpad. Instead encourage one task at a time. When you have a task automated, it no longer requires working memory freeing it up for higher level or more difficult tasks. Recalling what to do next also requires cognitive workspace.

Note on 'perfectionism'. Perfectionists often appear to be slower at processing or more to the point, those who are slower at processing often appear to perfectionists. This may be a coping mechanism or strategy that masks their real challenges.

Slow cognitive processing

Slow speed of processing impedes ability to generate ideas quickly. It impacts reading and listening comprehension. It also impacts the take up of new ideas and interfere with logic but can lead to greater creativity. There is great variety of speed of processing amongst students.

Behaviours and typical traits to look for:

- Have difficulty finishing tasks in the allotted or expected time
- Find it difficult to listen and take notes at the same time and are much slower at producing the notes
- May have difficulty keeping up with conversations
- Become overwhelmed by too much information at once
- Needs more time to make decisions or give answers
- Needs to read information more than once for comprehension
- Has trouble executing instructions if told to do more than one thing at once

Strategies:

- Provide extra time
- Prepare tasks well before starting
- Create scaffolding
- Reduce distractions and the opportunity for procrastination
- Encourage students to develop an awareness of how they best learn and think
- Understand that there is a high level of neurodiversity in speed of processing and in the type of information/stimulus that is being processed

Speech communication challenges (SLI and speech communication difficulties – stroke and head injuries)

Behaviours and typical traits to look for:

- May have difficulties remembering instructions in sequence
- May find the written word especially at speed
- May not get other people's jokes or be able to keep up with a conversation when it's at speed.
- Probably will be reluctant to ask for something to be explained especially at speed.
- May become frustrated, angry or agitated when they don't understand what is being asked of them.
- Lack confidence when speaking in a group when they're not able to plan their response.
- Struggle with the passive tense.
- May have poor grammar: misuse prepositions, have inaccurate verb tense.
- Poor reading comprehension especially when language is complex.

Strategies:

- Provide instructions more slowly and chunk up into steps wherever possible.
- Allow additional time to consider/processing before responding.
- Avoid jargon where possible (if not necessary) and explain what the jargon means if it is necessary to use.
- Be specific rather than use approximations. Avoid 'You could', or 'possibly in about...' for example.
- Avoid the passive tense. Turn the sentence around to the active tense if possible.
- Ask students to repeat/Check for understanding. The explain differently if they have not understood.

Auditory processing challenges

Often occurs in conjunction with ADHD and poor attention and communication difficulties.

Behaviours and typical traits to look for:

- Find it hard to follow multi-step or complex directions.
- Difficulty with multi-tasking in auditory situations such as listening and taking notes.
- Difficulty keeping up with rapid or accented speech.
- May feel frustrated or not engage with long or fast-moving conversations, or teacher talk.
- Difficulty learning a foreign language or technical information where language is novel or unfamiliar.
- Social issues and difficulty "reading" people at times.

- Have difficulty with pragmatic communication issues.
- Zone out. Often appear to lose concentration/attention.
- Become easily frustrated when wanting to find out information.
- Appears to understand but then will have misunderstood.
- Fills in 'blanks' in conversations incorrectly

Strategies:

- Step by step instructions, not delivered all at once.
- Provide written or visual cues and information wherever possible to support oral information delivery.
- Simplify rather than reword unless specifically asked to reword.
- Ask student to repeat what they have heard in their own words to check for understanding.
- Encourage student to identify when they stop comprehending, lose track or when they have forgotten and get them to seek the information in the way they best comprehend it.
- Note taking and listening at the same time is not effective.
- Chunk all oral information.
- Provide extra time for absorbing any oral information.

Stammer and stroke, head injuries

Are likely to be easily identified and identifiable

Strategies:

- Give the person time to speak.
- Keep natural eye contact.
- Try to avoid finishing off words and sentences.
- Avoid giving simplistic advice such as "take your time", "take a deep breath", "don't worry about it".
- Hearing and understanding of a person who stammers is necessarily impaired, so you do not need to change the way in which you are speaking.

Students with communication difficulties following stroke or head injury

Strategies:

- Try to reduce background noise and distractions.
- Make sure you have the student's attention before speaking to them.
- Avoid sudden topic change.
- Allow the student time to talk.
- Try to avoid using long or complex sentences; it may be helpful to break things up into shorter, more manageable phrases.
- Pick up on student's use of non-verbal communication. It sometimes helps to use natural gesture when you speak.

- It may be helpful to offer a pen and paper so the student can write or draw to assist communication.
- It does not usually help to raise your voice but slowing down a bit may help.
- Remember that the person may lack confidence in their ability to communicate and is likely to experience more difficulty if anxious.

ASD and Asperger's Syndrome

According to the National Autistic Society, 'Autism is a lifelong, developmental disability that affects how a person communicates with and relates to other people, and how they experience the world around them'. ASD and Asperger Syndrome are diagnosed by a consultant psychiatric specialist. People with this diagnosis have long term **difficulties with social interaction**, often with **restricted and repetitive patterns of behaviour, activities or interests** that impact their lives. No two people with ASD or Asperger are alike. Their capacity to communicate ranges from little or no verbal communication those with 'high functioning Asperger Syndrome' who may have high intelligence but experience barriers to learning. It is common for people with ASD or Asperger Syndrome to experience anxiety.

Typical traits and identifiable behaviours:

- Finds unfamiliarity challenging
- Poor social communication
- Poor 'Theory of Mind' (ToM)
- Difficulty with abstract or symbolic language
- Difficulty recognising false belief
- Sensory over-sensitivity or under-sensitivity
- Highly focused interests
- Repetitive behaviour
- Disruptive behaviour
- Find unfamiliarity challenging - they may not be able to picture a new situation or to anticipate based on prior experience. This can lead to anxiety

Strategies:

People with ASC or Asperger Syndrome benefit from knowing what to expect.

- Preliminary visit designed to learn layout, point of contact, timings etc.
- Outline things such as lesson structure, shape of course, breaks.
- Having a standard class structure/routine can allay anxiety. Where possible, stick with the expected format – explain differences. Of course, this is not possible and may be impossible in some courses.
- Give advance warning of exams, trips etc.
- Clarify expectations /boundaries at the start of the course and whenever misunderstandings arise.
- In group work, define tasks /roles. A student with ASC may not volunteer to take on a role or be able to find their own group to join; extra guidance and classroom management may help.

- Many students find it beneficial to receive handouts in advance of the class. These materials can also act as reinforcement.
- Depending on the environment and organisation of the class, providing a buddy or peer initially may be helpful in talking through expectations

Poor social communication

- Limited or no eye contact.
- Limited verbal communication.
- High levels of understanding and clear coherent speech, but difficulties reading social signals.
- Not able to consistently read non-verbal or body language
- Confused, agitated or upset if the tone of what is being said is different from the content as is the case with irony, sarcasm and some humour.
- Developing friendships and getting to know their peers can be difficult. This can also impact the way a student participates in class, as social conventions or non-spoken rules of turn-taking, for example, may not be understood.
- Discrepancy in succeeding in different modes of communication. For example, face-to-face communication is considerably more difficult than written or communication with 'technology'.

Strategies:

- Address learners by name.
- Check for understanding. In doing so, try to use open-ended questions.
- Avoid multi-layered questions.
- Avoid jargon. If jargon is used, ensure learners are clear about meaning.
- Decision-making can be challenging when there are not clear parameters or when there is too much choice. Offer clear choices. Limit choices.
- Visual aids are helpful when clarifying meaning. This can be something as simple as clip art, stick-figure diagrams or a photographic example.
- It is best to be clear and direct about class structure and expectations. It may also be good practice to agree a class contract.
- Autism can lead people to behave in a way that is unusual and on occasion considered inappropriate in the context. The learner probably is not aware of this and should be spoken to discretely as soon as possible.
- Eye contact may be very difficult for some learners. No eye contact is not an indication that that person is not listening. Check with the learner about what kind of eye contact is comfortable.
- Deliver information in a variety of forms including electronic, written and so on.

Poor Theory of Mind

Typical traits and identifiable behaviours:

- Limited or an apparent lack of 'Theory of Mind'(ToM), that is being able to infer the full range of mental states (beliefs, desires, intentions, imagination, emotions)

that cause action. Theory of Mind enables someone to reflect on the contents of one's own and other's minds. This is not a lack of empathy.

Strategies:

- Visual aids are helpful when clarifying meaning. This can be something as simple as clip art, stick-figure diagrams or a photographic example.
- It is best to be clear and direct about class structure and expectations. It may also be good practice to agree a class contract.
- Autism can lead people to behave in a way that is unusual and on occasion considered inappropriate in the context. The learner probably is not aware of this and should be spoken to discretely as soon as possible

Difficulties with abstract language

Typical traits and identifiable behaviours:

- Understanding what is said literally rather than metaphorically. Phrases such as *"the cat being let out of the bag"* may not be understood.
- May not find all jokes funny.

Strategies:

- Whenever appropriate, take time to explain the connection between the metaphor and its interpretation.
- Ask students, with or without this difficulty, to explain/interpret jokes or metaphors. It may not be limited to the students with ASD and, in fact, those with ASD may understand the abstract language better as they have previously learnt/memorised it.
- Some courses will be theory heavy. It is worth considering when this can be clarified or reiterated in concrete terms.
- Check for understanding if abstract language is used.

Sensory over-sensitivity or under-sensitivity

Many with ASD can experience some kind of over or under sensitivity such as smell, colour, light, sound, touch and so on. It is important not to underestimate the impact of sensory overload or under-load and some learners may shut down when they can no longer cope.

Typical traits and identifiable behaviours:

Notice unusual responses to:

- Banging doors, loud sudden noises, humming, music and machinery noises such as hand dryers
- Being held or touched or people being too close
- Smells such as perfumes and food or cooking
- Lighting especially fluorescent or bright coloured lights
- colours

Strategies:

- It might be appropriate for a student to wear headphones or listen to their own calming music during some practical activities when there are sounds that cause distress.
- Some students benefit from agreeing that they will take 'time out' and make their apologies and leave the room if they feel over anxious or are experiencing sensory overload.

Highly focused interests and repetitive behaviours

Typical traits and identifiable behaviours:

- Intense and highly focused interests
- May find it hard to follow a whole process through, getting stuck and then fail to keep up

Strategies:

- Autistic people often report that the pursuit of such interests is fundamental to their wellbeing and happiness, and many channel their interest into studying, paid work, volunteering, or other meaningful occupation. The interest can provide structure, order and predictability and help people cope with the uncertainties of daily life.
- Explain to learners the next step if they are stuck
- Create a step-by-step plan that can be ticked off as the learner proceeds.
- Build in 'negotiated' rewards for all students once a step is completed.

Disruptive behaviour

Typical traits and identifiable behaviours:

- Disruptive talking and repetitive behaviours. (These can be a sign of anxiety as well as lack of focus or not following what is happening in class. It may indicate a lack of understanding of what to do)
- Always be clear about the behaviour that is problematic in the class, perhaps refer back to the class contract, describe the behaviour that you need in class – seek agreement that the student will – wait for their turn, share leaflets, talk about other interest etc. at break or after class.

Strategies:

- Check that the learner knows what to do.
- Check if they have any concerns.
- Be direct about expectations for the whole group and of individuals where necessary.
- Formalise the turn-taking (through game-playing, for example)
- Agree an individualised plan for behaviour directly with the student.

Mental health challenges

Typical traits and identifiable behaviours:

- An individual on a mental health spectrum may have particular issues with trusting others, for example – and may be especially concerned with confidentiality.
- They may also have poor concentration or memory impairment, or they may seem lethargic, or have difficulty keeping appointments.

Strategies:

- Establish ground rules. This goes for all students but spell out the rules more clearly than usual.
- Communicate clearly and directly.
- Provide a safe environment for the individual to talk without being interrupted.
- Allow plenty of time for the individual to make decisions.
- Let the person set and modify their own goals as much as possible.
- Be clear about your own boundaries. This includes the time you have available to talk, and the limits to the support you personally are able to provide.
- If personal issues come up in conversation with a student, listen sympathetically without probing or trying to find a resolution. A helpful phrase to show empathy but without becoming overly involved is: “That sounds difficult for you.”
- If you are concerned about a student and feel they need support, discuss this with them and suggest referral to the Access and Inclusion team