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PRIFYSGOL GLYNDŴR WRECSAM
GLYNDŴR UNIVERSITY WREXHAM



Supporting Students with Learning Differences

Dyscalculia

- A condition that affects the ability to acquire arithmetical skills. Dyscalculic learners may have difficulty understanding simple number concepts, lack an intuitive grasp of numbers, and have problems learning number facts and procedures

Difficulties may include:

- Dealing with exchange of money: handling a bank account, giving and receiving change, and tipping.
- Learning abstract concepts of time and direction/schedules, telling and keeping track of time, and the sequence of past and future events
- Acquiring spatial orientation/space organisation/direction, easily disoriented (including left/right orientation), trouble reading maps, and grappling with mechanical processes.
- Learning musical concepts, following directions in sports that demand sequencing or rules, and keeping track of scores and players during games such as cards and board games.
- Following sequential directions - sequencing (including reading numbers out of sequence, substitutions, reversals, omissions and doing operations backwards), organising detailed information, remembering specific facts and formulas for completing their mathematical calculations.
- Dyscalculia can cause difficulties in counting and calculating and or conceptualising figures.

As with dyslexia, dyscalculia is identified when a person experiences most of the items on the list of indicator all the time. Because there is no national or international agreement as to the definition of dyscalculia, it is not known how many people experience it, but the figure of 4% of the population seems widely accepted. There is a lot of overlap between dyslexia and dyscalculia, because they both involve short-term memory, sequencing and dealing with symbols. But some dyslexic people are very good at Maths, because they can often use three dimensional thinking to see the structure of a problem in a way which linear thinkers cannot.

How can I help a dyscalculic student?

- Try to find out where the student is, conceptually, until you reach their level of understanding. Start the learning process gradually, controlled by their pace, with carefully graded examples.
- Avoid correcting trivial copying mistakes and calculating errors
 - If a student has informed you that they have dyscalculia then supervise drug calculations before confidence is established both with the student and yourself.
- Students deserve explanation and justification - it inspires mathematical thinking.
- Use calculators - they are a useful tool. It helps to focus all energy on the concept you are trying to put over, not on some complicated and unnecessary calculation procedure.
- Root new techniques in visual, concrete, intuitive scenarios whenever you can.
- Build on student's strengths. This type of thinker often excels at creative, divergent, right-brain thinking. Give them 'open' questions- students are likely to enjoy them and they help greatly with the concept anyway
- Look at how non-dyscalculic, mathematically-intuitive thinkers tackle things, and gently encourage thinking in this way, where you can.

Dyslexia

- **Dyslexia** is a learning differences that impairs a person's ability to read

Difficulties may include:

- Discrepancy between general abilities and reading/writing skills
- Variation in performance - good day/bad day
- Poor short term memory
 - Difficulty retaining auditory (eg. handover) or printed information
 - May misplace items, forget names/telephone numbers, instructions
- Short concentration span
- Difficulty in taking part in discussion
 - It takes longer to process information
 - May lack general knowledge due to lack of reading ability
- Co-ordination difficulties
- Poor organisational skills
 - May have difficulty remembering and managing time, organising workloads and materials .
- Poor sequencing skills
 - Difficulty structuring essays/care plans and nursing notes; may repeat information
 - Difficulty with alphabet order, months of year, seasons, tables, lists of instructions
- Reading
 - Will require anything that needs to be read in advance
 - Because of retention problems, may read more slowly
 - May also have difficulty tracking text due to moving/glaring print - may lose place
 - Difficulty decoding unfamiliar words, with comprehension and therefore summarising
- Writing
 - Poor spelling, grammar, punctuation and handwriting
 - Word finding problems can interrupt flow of ideas
 - Simultaneous handling of sequential expression of ideas, word retrieval, grammar, spelling and typing/handwriting difficult
 - Written work may not adequately reflect understanding and ideas
 - Taking quick notes at hand-over may be difficult
 - May not be able to read own notes afterwards, and reverse letters and numbers
- Pronunciation/articulation and word retrieval difficulties – may stumble over medical terminology.
- Low confidence/self esteem; frustration; anxiety; embarrassment
- Tiredness due to the need to concentrate more

Not all dyslexic students are the same; each individual may present a different combination of the above indicators.

Documentation in Practice

- A student may confide in you that they are experiencing issues with their assignment - Students are encouraged to take up tutor support to assist in their assignments and handing them in on time.
- Make expectations in working practice very clear
- Include oral assessment, to cover a wider range of all students' abilities
- Allow slight extensions for care planning and writing in the notes because dyslexic students can take a little longer to read/write
- Assess work using your own clinical judgements as you will know your own clinical priorities/challenges and whether the student is achieving them.
- Correct selected spellings only (eg medical vocabulary)
- Write comments legibly. Many dyslexic students struggle to read handwriting
- Correct by talking to the student along with written comments if provided e.g. attitude scales within the portfolio. This will contribute to the long-term effectiveness of your feedback
- Ask for a skeleton care plan (or a draft) first, if time permits
- Dyslexic students often find group work tasks more difficult in general and you may need to take some time explaining the purpose and procedure of the task before hand e.g. ward rounds

Dyspraxia

- Dyspraxia arises from an immaturity of the brain which results in impairment of the organisation of movement, often accompanied by problems with language, perception and thought. There are many overlaps with dyslexia. Difficulties may include:
- **Physical co-ordination**
 - Poor awareness of the space around and poor perception of heights and distances. In childhood may sit and walk awkwardly and bump into/trip over things
 - Difficulty handling delicate precision equipment. E.g. ampoules
- **Laterality difficulties**
 - May find it hard to tell right from left within childhood
- **Language**
 - May find it hard to pronounce some words or have a speech impediment
 - May find it difficult to express themselves easily
- **Handwriting**
 - Tend to write/copy laboriously, slowly, untidily and illegibly
- **Concentration**
 - Take a long time to finish a task; struggle to do more than one thing at a time
- **Short term memory and sequencing**
 - May find it hard to make sense of information in written or auditory form
 - Note taking from ward rounds can prove difficult
 - May not follow instructions easily
 - May keep forgetting/losing things
 - May have spelling difficulties
- **Organisation and thought**
 - Little sense of direction, time or weight
 - Difficulty organising self and work; constantly misses appointments and deadlines
- **Sensitivity to noise, touch, light and taste**
- **Social interaction**
 - Difficulty relating to others, especially in groups and interpreting social cues
 - May have low self esteem and emotional problems resulting from their difficulties
 - Exams and new projects can be particularly stressful
- **Group work may be difficult.**

How can I support a dyspraxic student?

- Get to know your student's particular needs in advance
- Be prepared to meet the student before the placement starts to discuss needs
- Be understanding, encouraging and supportive
- Be patient with clumsy behaviour or difficulty speaking, especially in front of others. This are difficulties that everyone can experience.
- Present material in structured, holistic way
- Explain the structure of the day i.e. break the shift down into what tasks need undertaking and when. Provide a written outline if possible
- Break processes down into smaller, logical steps
- Support and reinforce spoken information with handouts and visual aids if possible
- Provide glossaries of terms and acronyms
- Invite feedback to check understanding
- Suggest strategies to compensate for poor memory and organisational skills - eg mnemonics, work timetables
- Give clear, precise instructions about arrangements, tasks you request to be undertaken.
- Allow use of sound recorders – Note: If confidentiality is an issue then this is not possible.
- Make sure equipment can be used safely - secure where possible to avoid knocking over/spillage
i.e. a tidy drugs trolley and clinic.

If require support then please contact your link tutor or practice educator will be able to support and assist you in practice. Alternatively you could contact the department below

- who will be able to offer advise.
- **Bangor University Dyslexia support:** www.dyslexia.bangor.ac.uk
General Enquiries and Assessment Enquiries
01248 382 203 (General Office)
or dyslex-admin@bangor.ac.uk
- Teaching Service
01248 383 618
or m.jones@bangor.ac.uk
- Fax: 01248 383 614
- **Glyndŵr University Disability Support**
www.glyndwr.ac.uk/en/Ourstudentsupport/Disabilitysupport/
Tel: 01978 293439
email: disability@glyndwr.ac.uk

If you wish to know more about these learning differences then please follow the links below

- British Dyslexia Association - www.bdadyslexia.org.uk
- Dyslexia Action www.dyslexiaaction.org.uk
- Link to NHS Choice Video - While at University, Daniel was diagnosed with dyslexia, a condition that makes it difficult to process written information. He and an expert discuss symptoms, causes and treatment options www.nhs.uk/conditions/Dyslexia/Pages/Introduction.aspx
- Being Dyslexic - www.beingdyslexic.co.uk
- Dyspraxia Foundation - www.dyspraxiafoundation.org.uk