Adapting Teaching for Neurodiversity
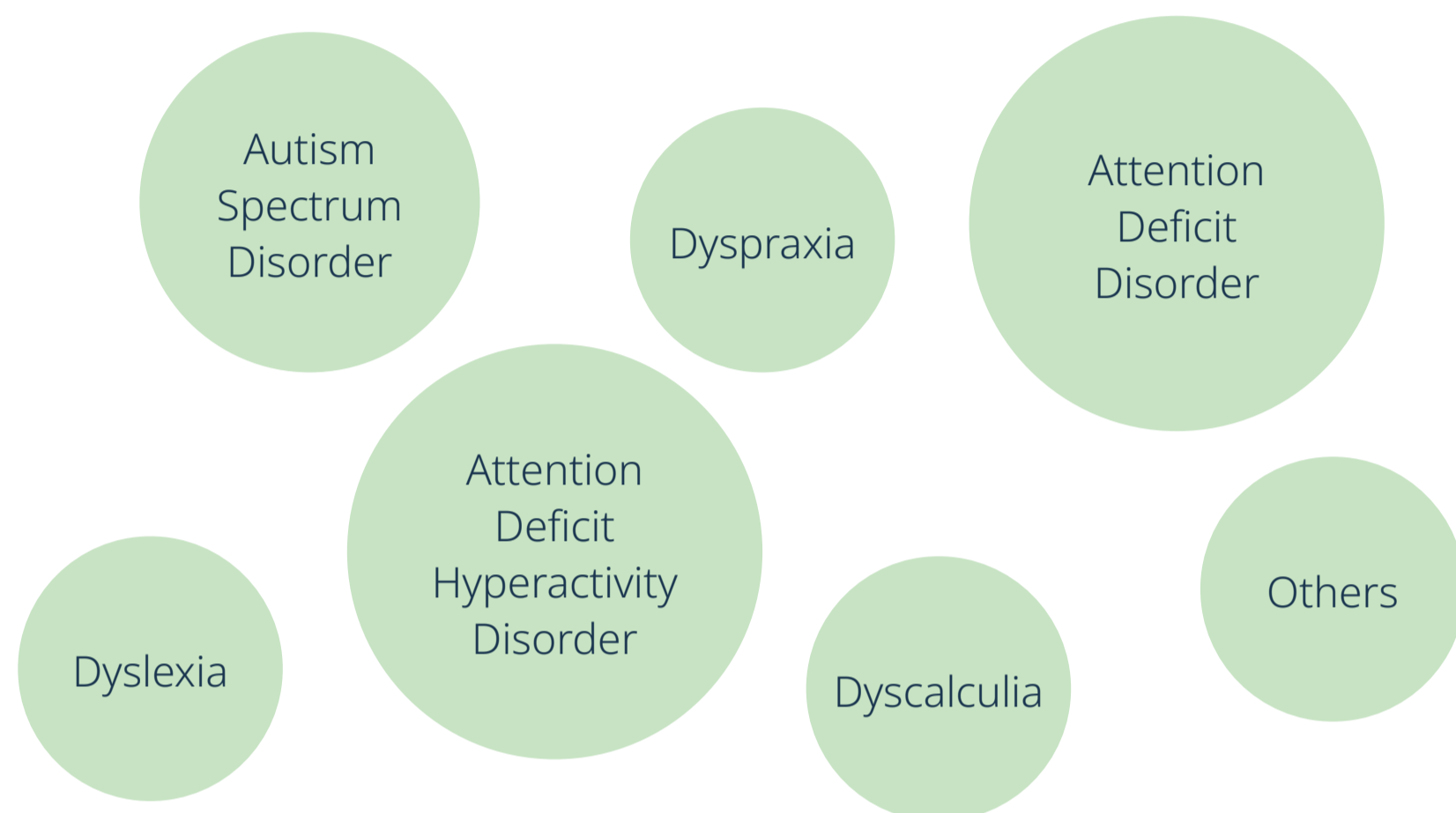
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Background

Neurodiversity as a term refers to the different ways that individuals experience and interact with the world around them.

Autism Spectrum Disorder · Dyspraxia · Attention Deficit Disorder · Attention Deficit Hyperactivity Disorder · Dyslexia · Dyscalculia · Others

Adapting for neurodiversity is essential to the success of our learners who often feel excluded int traditional ways of teaching. This importance has been recently highlighted by the **UK Medical Schools Council's (MSC) Active Inclusion Framework**[1,2] published to support medical schools in making their environments more inclusive.

Adapting teaching needs to happen across all educational environments – including the virtual ones. With the dramatic shift towards online learning following the COVID pandemic, technology has been thrust to the forefront of education – and it brings with it profound challenges and opportunities to create an inclusive learning environment for neurodiverse learners.

Conclusion

Health professions education can no longer ignore or shun neurodiverse learners. Each institution and each teacher must address the prejudice and stigma in a systematic manner and in line with the UK MSC recommendations.

- Use technology more, and use it beyond moodle. Integrate highly intelligent and adaptive platforms into your practice and use all features they may offer.

- Consult your neurodiverse learners; amplify their voices and gather feedback on their preferred learning strategies and support systems.

- Get involved in research on neurodiversity and learning. Knowledge is still lacking and we especially need qualitative research to understand our learners' perspectives.
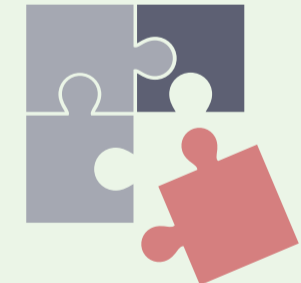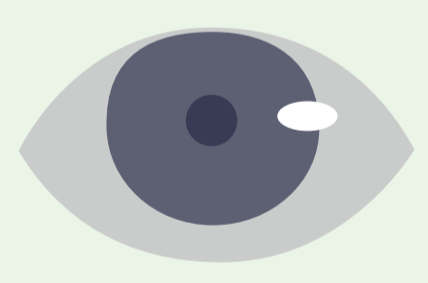
Challenges

Neurodiverse learners live, learn and work in a neurotypical world created by neurotypical people. Without systematic consideration with regards to planning, allocation of resources, environmental design and of course, the approach to teaching, neurodiverse learners may have to overcome not only the learning challenges that all students face but also the challenges of adapting to a world not designed for them!

Technical challenges	Study and teaching styles	Psychological disorders	Social stigma[10]	Career choice
• Shorter attention spans[3] • Lower working memory capacity[4,5,6] • Struggle with reflective practice and metacognitive processes	• Lecturers may be judgemental, inflexible or unsupportive • Low awareness leads to dismissal of differences and no effort to adapt	• Anxiety, depression, OCD is common [7,8,9] and support is rarely accessible	The idea that neurodiversity is "abnormal" leads to: • Low rates of disclosure • Low adoption of supportive facilities and policies • Internalised self-limited beliefs	• Belief that certain differences are inappropriate for some careers

Opportunities

It's time to de-medicalise neurocognitive differences and promote respect and inclusivity, especially in learning environments[11]. The greatest opportunity lies in tapping into the advantages that neurodiversity can have[12] and not only on the disadvantages. In other words, its advantages should receive the same emphasis as its disadvantages.

Adaptive learning	Flipped classroom	Learning in chunks	Visual aids	Private settings	Personalised approach
• Teaching can be tailored to learner • Added support through asynchronous learning • Learners learn at their own pace	• More time to review material • Better and easier implementation of flipped classroom	• Allows allocation of smaller parts to be reviewed • Lower the needed working memory load	• Seamless integration of multimedia • Better coding of information to be learned	• Quieter examination settings from the comfort of one's home • Quieter settings also more suitable for self-directed learning	• Structured learning platforms allow for visualisation of student progress and difficulties • Allows for tailored feedback and mentoring

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