

Dyslexia, Dyscalculia and Dyspraxia in FE - Awareness Training



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What is DYSLEXIA?

dys = difficult, impaired

lexis = words, language

- 10% of the UK population are thought to be dyslexic, 4% seriously
- Dyslexia is a hidden disability
- Dyslexia is genetic and heritable
- Many young people do not know that they are dyslexic



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Weaknesses associated with dyslexia

- Visual Deficit: difficulty processing visual information effectively; visual disturbances
- Phonological Deficit: difficulty processing sounds effectively; auditory disturbances
- Memory: short term, working, long term
- Speed of processing
- Gross or fine motor control
- Focus and attention deficits

Rose Review 2009

Report on Identifying and Teaching Children and Young People with Dyslexia and literacy Difficulties:

‘Dyslexia 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 verbal processing speed.**

Dyslexia occurs across **a range of intellectual abilities.**

It is best thought of as **a continuum, not a distinct category,** and there are no clear cut-off points.

Rose Definition cont'd

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 dyslexic difficulties can be gained by examining how the individual responds or has responded to well founded intervention.'

What this means in practice for students in FE and individuals in the workplace

- Speed of processing reduced
- Short term and working memory overload
- Difficulty retrieving facts under pressure
- Difficulty acquiring automaticity
- Difficulty dealing with several instructions at once
- Wrong place, wrong time, reading timetables, getting work in on time
- Disorganised & forgetful

What this means in practice

- Literacy skills lag behind overall performance & underlying ability
- Misreading affects comprehension
- Planning & writing essays difficult
- Poor, sometimes bizarre spellings (e.g. 'sufficient' as 'cerficant'; 'simmerly' as 'similarly')
- Difficulty concentrating, easily distracted
- Low confidence & self esteem
- Embarrassed /tired / disillusioned

Defining Dyscalculia

- 'Dyscalculia is 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.
Even if they produce the correct answer or use a correct method, they may do so mechanically and without confidence' (DfES, 2001)
- A congenital condition: its effects on the learning of numerical skills can be very profound (Butterworth)
- Dysfunction in the reception, comprehension or production of quantitative and spatial information (Sharma)

Dyscalculia

- Difficulty understanding simple number concepts.
- Results in problems learning number facts and procedures.
- Affects the ability to acquire arithmetical skills.
- Thought to affect between 3% and 6% of the population.
- Should **not** be confused with problems connected with the **language** of maths.

Remember...

- Dyscalculia is relatively rare
- Difficulty with maths because you are dyslexic is quite common & is also affected by the understanding of the language of maths, teaching approach & initial confusion/ anxiety/ failure - creates further difficulties
- Many dyslexics are inherently good at maths, but will have problems in some areas e.g. tables, fractions, decimals

What this means in practice for students in FE and individuals in the workplace.

- Numeric skills lag behind overall performance & underlying ability
- Misreading affects comprehension of number
- Telling the time, wrong place, wrong time, reading timetables, getting work in on time
- Inability to record numbers correctly (orientation / sequencing digits) e.g. telephone nos., data etc.
- Calculating amounts and dealing with money, value
- Getting around – reading maps
- Interpreting information in diagrams or graphs



What this means in practice

- Temporal orientation: handing in work on time.
- Poor memory:
 - Remembering and recalling numeric data
 - Arrangements
 - Instructions
- Processing speed for information concerned with number
- Aspects of tasks / learning e.g. remembering dates, reading temperature
- Embarrassed /tired / disillusioned
- Low confidence & self esteem



What is dyspraxia?

Dys = difficulty; impairment

Praxis = acting; doing

- Also known as Developmental Co-ordination Disorder.
- Affects the planning of what to do and how to do it.
- Affects around 10% of the population, 2% severely.
- Males are 4 times more likely to be affected than women.



See www.dyspraxiafoundation.org.uk

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Praxis (movement)

- We receive information about the environment from our senses: I can see my cup of tea; it is on the table.
- It is then presented & movement decisions made & prioritised: I must reach out & pick up the handle.
- Task must be carried out in a smooth sequence: The cup is picked up without spilling the tea and the tea sipped.
- Feedback is received about the environment from our senses: The tea is too hot to drink, so the cup needs to be put down.



Praxis (movement)

Made up of 3 components:

1. **Ideation** : The ability to know what to do
2. **Motor planning**: The ability to plan and structure a purposeful, adaptive response – i.e. how to do it
3. **Execution**: The doing it - i.e. the ability to carry out a planned sequence of actions to perform a task.

Dyspraxic students in FE may experience problems with:

- accuracy (e.g. copying; proofreading);
- **organising their workload;**
- multi-tasking;
- **memory and concentration;**
- dealing with other people;
- **coping with new situations;**
- IT and other equipment.

You may also notice....

- Language – articulation / literal understanding
- Movement: gross/ fine e.g. sport/ handwriting
- Sequencing & organising thought
- Social and emotional issues
- Poor sense of direction / orientation
- Disorganised; forgets details

General support strategies for dyscalculia

- Make jottings– do not rely on working memory
- Encourage articulation of processes
- Make good use of cue cards to remind of processes
- Use colour where possible e.g. Sign/decimal point
- Allow extra time for processing
- See handout for more specific strategies

General Strategies for Dyspraxia

- There is no cure for Dyspraxia, but over time some of the symptoms are likely to lessen
- Remember that practical lessons are likely to cause problems for older pupils
- Organisation will often remain a difficulty

General Strategies for Dyspraxia

- Make good use of assistive technology, but remember that training must be given
- Consider Access Arrangements
- Awareness training is often very helpful
- See handout for more specific suggestions

Good use of Assistive Technology

- Consider readability and using simplified texts (see e.g. www.readabilityformulas.com)
- Use text-to-speech software (e.g. Natural Readers, ClaroRead, TextHelp Read & Write).
- Voice-to-text software (e.g. Dragon Naturally Speaking)



For further information

- BDA Web site: www.bdadyslexia.org.uk
- BDA technology group: bdatech.org
- Helpline tel. no: **0845 251 9002**
- Helpline email: helpline@bdadyslexia.org.uk
- Training tel. no: **0845 251 9004**
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