Research about memory, literacy and language in children and young people

What is a Learning Disability?

There are lots of terms used and many can be controversial or confusing. Learning disability is the most commonly used term, but the term intellectual disability can also be used.

Learning disabilities:

1. Begin in childhood

2. Cause difficulties with thinking and reasoning

3. Cause difficulties with daily life, often known as 'adaptive functioning'.

Different levels of Learning Disabilities:

- **Mild** = Some difficulties in all areas of education and social/daily living skills, but may live independently with minimum levels of support (85% of individuals with learning disabilities)

- **Moderate** = Independent living may be achieved with moderate levels of support (10%)

- **Severe** = Major delays in development; require daily assistance with self-care activities and safety supervision (3.5%)

- **Profound** = Often congenital syndromes, requiring 24-hour care (1.5%).

What causes Learning Disabilities?

There are many contributing risk factors:

- Environmental factors (e.g. pre/post-natal exposure to toxins such as lead or alcohol, nutritional deficiencies, traumatic brain injury, radiation, maternal infections)

- Pre-/post-natal complications (e.g., hypoxaemia)

- Genetic factors (thought to be present in 25-50% of cases, increasing proportionally with severity)

- But - at least half of cases of learning disability have unknown causes.

Prevalence:

- Learning disability has been described as 'the most common developmental disorder and the most handicapping of the disorders beginning in childhood' (Harris, 2006)

- Prevalence ranges between 1% and 3% globally (Harris, 2006)

- Children with learning disabilities often also have other disabilities

- Despite the prevalence there is a lack of research in this area.

What can I do to help:

As individuals with learning disabilities face a range of different difficulties, try to work with the student's individual strengths and weaknesses. Using a range of strategies is recommended, as it is difficult to predict which ones will work.

Here are some specific ideas we have:

1. 'Working Memory' strategies

- Use prompt cards with key vocabulary and/or key information
- Keep instructions short and simple
- Give step by step instructions, in the order in which things are going to happen
- Break down information into small chunks
- Use picture icons to support verbal and written instructions e.g. Widgit symbols
- Use supportive visual information and/or visual aids to reduce cognitive demands e.g. narrative frameworks, task plans
- Try peer buddies to support weaker students.

Consider whether apparent attentional difficulties could reflect information overload. Remember that information load is ALWAYS higher for unfamiliar materials and concepts.

2. 'Language and Literacy' strategies

- Prepare students for new topics by providing key vocabulary information and homework
- Use posters to display key vocabulary with a visual image of meaning
- Differentiate questioning by offering forced alternatives e.g. "Is it going to float or sink?"
- Use games such as 'word bingo' to consolidate vocabulary knowledge
- Check student understanding in different ways such as pictorially, verbally, written
- Provide correctly formulated sentences after important errors to help with grammar
- Scaffold students' verbal and written expression with specific suggestions, e.g. about structure
- Use technology to support and practise language and literacy skills.

3. Develop self-confidence, motivation and self-esteem

- Set achievable targets
- Focus on smaller steps towards larger achievements
- Give praise for attempting as well as completing tasks
- Allow plenty of time for responding to questions and task completion. Children with learning disabilities can often be much slower to take in information and respond.

How to contact us:

Feel free to contact the researchers if you have any questions about the study, or would like to help with research into this important topic.

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