Adult Literacy and Numeracy

Tutor manual

From Research to Practice

Part Two

Edited by Iona Johnson

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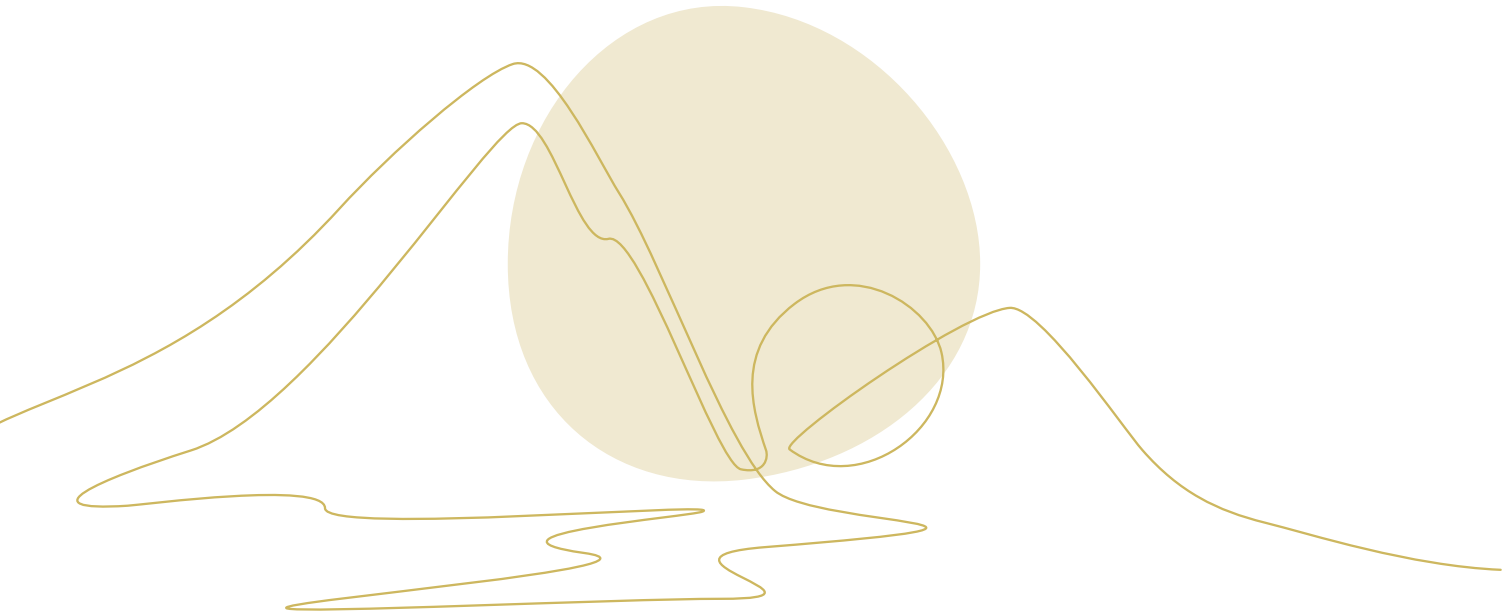
Part Two

Diversity and Inclusion

Contents



Safe practice framework

Part Two overview

This section of the manual provides more detailed information about specific challenges you might encounter in adult learners. It addresses two specific learning disabilities – dyslexia and developmental language disorder – which can make literacy skill development difficult. Understanding these two learning difficulties will help you identify what might be happening with some learners and will give you clear ideas about how to work with them.

The final chapter then discusses trauma and how some learners might navigate this. While there are a range of ways that people experience trauma, learners who have specific learning disabilities are likely to have trauma related to learning which may manifest as they begin to engage in tutoring. Understanding how to recognise the signs that someone may be feeling 'triggered' and knowing how to work with this is important. Tutoring involves not only being able to build rapport with learners but also creating a safe learning environment. This chapter provides information on how to go about this.

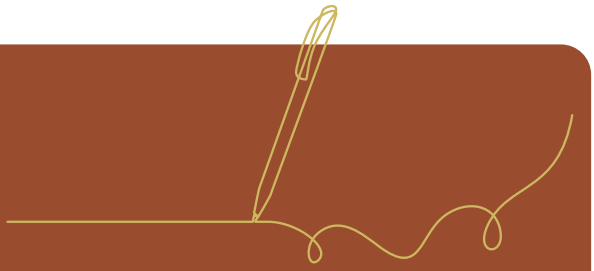
Legend

Titles for templates are highlighted throughout Parts One and Two.

Highlight boxes provide detail of evidence-based teaching approaches.

Darker highlight boxes provide specific advice to tutors and examples to use.

Main points



- Adult learners may have vulnerabilities that a tutor will need to be aware of and navigate sensitively.
- Anxiety about learning is common, and trauma can also be encountered in adult learners.
- Tutors need to manage the tutoring relationship so that learners feel respected and safe. This will support learners to engage in learning.
- Learners might ask about your life. It will be helpful to think about what you are willing to share and what you want to remain private. Be friendly but not friends!
- The focus and boundaries of the working relationship should be clear and maintained to enable work that can be long term.
- The role of a tutor is not to counsel learners – a referral to other professional supports may be necessary at times.
- While it is rewarding to see a learner progress and achieve their goals, managing your own emotions during the process ensures that the focus is always on the learner and does not shift into getting your own emotional needs met.

What is a 'safe practice' framework?

A safe practice framework is a set of attitudes and behaviours that give both a tutor and adult learner the greatest chance of staying legally, professionally, emotionally, psychologically and physically safe. This also ensures that the focus of the tutor–learner relationship is maintained on literacy and/or numeracy tutoring.

Many of the adult learners who come into tutoring have vulnerabilities that go beyond the challenges of reading and writing. They may have specific learning difficulties and trauma associated with these. They may have experienced socio-economic disadvantage, with less opportunities to succeed in education, resulting in low confidence in their ability to learn. They may have had more difficult lives and experienced childhood trauma. They may belong to other marginalised groups – with an Aboriginal or a different cultural background. They may be living with disability, neurodiversity, or gender or sexual diversity. Working with these learners includes making sure they are treated respectfully and that tutors create a safe learning environment for them. This includes considering confidentiality and the boundaries of the tutor–learner relationship.

When a learner appears to need supports that go beyond the scope of the tutoring relationship, it may be necessary to suggest they seek advice from an appropriate specialist service provider.

Confidentiality

If you are working within an organisational context, there will be clear policies and guidelines to follow. Generally, it is not ethical to share learner information without their consent. This includes sharing information in casual conversations in the community. Some adult learners may not want other people to know they are working with a tutor. Adult learners can reasonably expect that their personal information, including the fact of engaging with the service, is kept private. It is also not ethical to share information about other learners with other learners, tutors, friends, service providers or other members of the community without the consent of the learner. Even when referring a learner to another service, their consent is required.

However, there are some limits to confidentiality.

We all have moral and legal responsibilities and duty to disclose certain information. If the learner is at risk of harm from themself or others, or when a learner is at risk of harming someone else, you may need to take further action.

These limits, responsibilities and duties are set out in both federal and state legislation, including the *Family Violence Act 2004*. The legislation means that an adult who knows, believes or suspects on reasonable grounds that a child is suffering, has suffered or is likely to suffer abuse or neglect has a responsibility to take steps to prevent the occurrence or further occurrence of the abuse or neglect. Each state has a reporting system for these situations. In the context of your tutoring work within a program, any concerns you have as a tutor should be relayed to your manager who will provide advice on what to do.

Boundaries

The relationship you establish with a learner will be focused on facilitating their learning and should remain focused on this. It will be important to talk about both your expectations and your learner's expectations as you set up the learning relationship. You will need to talk about meeting arrangements for face-to-face, remote or hybrid tutoring, how you might provide feedback and support ongoing practice. This includes discussing how communication will happen and how you might negotiate communication outside tutoring sessions.

As a general rule, social relationships should not be established with learners. The focus of the relationship is on the learner building their learning skills. As soon as it becomes about social connection, the tutor invests in having their social needs met, which compromises the learning relationship. This includes not connecting via social media with learners. You might need to check your social media privacy settings to ensure your information stays private.

Tutoring involves defining and maintaining professional boundaries:

- Define the relationship – it is focused on learning not socialising.
- Manage moments of vulnerability – stay respectful and validate the learner's experience, before bringing focus back to learning.
- 'Friendly' is not the same as 'friend'.
- Manage disclosure of personal stories – bring the focus back to tutoring or find an element within the story that leads back to tutoring.
- If a learner is writing a personal story within the tutoring context, focus questions on positive aspects of the story, their strengths and what they learnt from the experience.
- Focus on the aims of your role in your interactions.

- Maintain the boundary of your role – if the learner requires help for issues beyond learning, refer for professional support via the Literacy Coordinator/Adult Literacy Service Officer.
- Control the interactions – learning can only happen when you and the learner are in a calm emotional state. There may be times when a session will need to be deferred because this is not possible.

Sometimes learners will ask you questions about your personal life, often unexpectedly, and perhaps in the middle of a comfortable interaction. Think about how you would maintain your own privacy and reply to questions about:

- your marital status
- your family/children
- where you live
- someone you might know
- something you have been involved in.

To summarise, tutors need to maintain the boundaries of their role so they can:

- help learners set literacy and numeracy goals
- assess their learner's needs and develop a learning plan that will enable them to meet their goals
- plan learning sessions that support your learner to achieve those goals
- maintain a focus on learning
- maintain professional boundaries and confidentiality.

Remember...

A tutoring role does not include:

- counselling
- case-managing
- providing support for other needs outside the tutoring session
- becoming their friend or family substitute.

Conclusion

Tutoring is rewarding work, and it is so exciting to see a learner build skills, gain confidence and achieve the goals they set for themselves. As learners start to achieve more than they ever thought possible for themselves, they start to dream bigger, set new goals and create new options in their lives.

The approaches recommended in this manual are designed to enable effective tutoring instruction with learners, maximising a learner's chances of successful learning. Tutoring provides such a precious window of opportunity to make a meaningful and significant difference to someone's life. Working with people involves managing their learning needs within the scope of your tutoring role. Understanding learners' challenges and meeting these needs with a focus on empowerment, building learner agency and competency, is powerful work. Developing your own understanding and skills for this work will enable you to build an effective practice as a tutor. We are aiming to facilitate successful learning journeys and better life outcomes for the people who seek literacy and numeracy help through tutoring.

Stop and think

How does this confirm, clarify or challenge what you already know?

Resources

Further reading

A useful guide to supporting learners who are writing their story:

When I tell my story I'm in charge: Ethical and effective storytelling in advocacy
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2689990

Chapter 8

Dyslexia

Main points

- Dyslexia is a neurological difference that can make learning to read and write difficult.
- People with dyslexia often find processing sounds difficult.
- People with dyslexia may have experienced challenges in education that mean they end up feeling inadequate or not smart enough. It is therefore even more important to recognise the strengths they have developed.
- Research-based instruction as described in this manual is important when working with these learners.
- Strategies for working with people with dyslexia to develop phonemic awareness and learn spelling strategies are the same as strategies for working with all learners, but it might take more time and repetition to build skills.
- It can be helpful to support these learners to organise their study as this can also be a challenge.
- Recognising indicators of dyslexia in your learner is helpful for you to understand difficulties they may have learning, but diagnosis can only be done by a qualified psychologist.

Introduction

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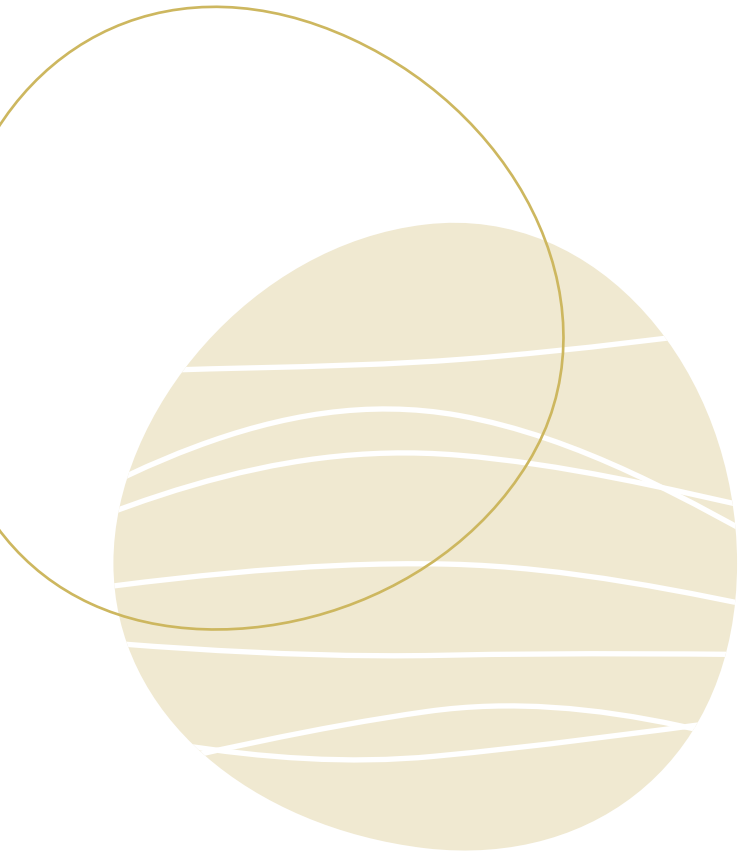
In this chapter, we will provide an overview of what dyslexia is, how it can be recognised, and how dyslexic learners can be supported in their literacy development.

We will see the positive side of dyslexia and explore how it can be viewed as a strength.

When considering dyslexia, it is good to be mindful of generalisations. There is no such thing as 'the dyslexic learner'. Each dyslexic learner is an individual, with their unique set of strengths and areas for development. Broadbrush assumptions that dyslexics have difficulty with reading and writing, or that they have 'superpowers', are not helpful. However, there are specific features that are indicators of dyslexia, that dyslexic learners will exhibit to a greater or lesser extent. A good understanding of dyslexia, and how dyslexic learners learn best, is needed to provide the support they need.

A ‘dyslexic learner’ or a ‘learner with dyslexia’?

People have different preferences when it comes to language. Some people prefer ‘person-first’ language (a learner with dyslexia), while others prefer ‘identity-first’ language (a dyslexic learner). In this manual we have opted for identity-first language, as, in our experience, this is the most preferred option. However, it’s always best to ask learners what they prefer, and to be mindful of the fact that people have their own preferences.



What is dyslexia?

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There is no universally accepted definition of dyslexia, but it may be best described as a **learning difference**. Dyslexic learners have strengths in many areas and can experience difficulty with reading and spelling, due to challenges with phonological processing. They have good thinking skills and average or high intelligence, but have a specific, isolated weakness in the phonology component of the language system, which may hamper them in their reading and spelling development (Shaywitz, 2020).

Dyslexia is sometimes described as an 'unexpected reading difficulty' (Shaywitz, 2020). Tutors often have the feeling that something doesn't make sense. We expect intelligent people to be able to read and spell well. With dyslexic learners, the picture may be different. They can be slow readers and fast thinkers in one. You know that a learner is intelligent, and yet they may struggle with reading and spelling. They can be really good at what is hard for most people, and yet struggle with what comes easy to most. Often, there is a mismatch between how dyslexic learners express themselves verbally and their written communication. When you explain something, they understand, but when they must read information, it may be hard for them to get at the meaning.

However, every dyslexic learner is different with their own pattern of strengths and challenges. When you are working with adult dyslexic learners, you may well find that they can read perfectly well. In adults, what we often see is that they read less fluently and that they struggle with spelling. The good news is that, with the right support, these learners can overcome any literacy challenges they might have and excel in their chosen field. In this chapter on dyslexia, we will discuss how tutors can make all the difference in supporting their learners to succeed. All they need is to be well-informed about what dyslexia is and have a good understanding of effective, evidence-based teaching approaches.

Dyslexia occurs on a continuum, and learners can sit anywhere on this continuum. This means there are different degrees of dyslexia (Rose, 2009). The prevalence of dyslexia has been estimated at between 5% and 20% of the population, but most studies indicate prevalence rates below 10% (Clemens & Vaughn, 2023). There are a number of reasons why there is no definitive answer as to how many people are dyslexic. With no clear cut-off points on the dyslexia continuum, different measures are used to define a person as dyslexic. Also, a range of methods is used to identify dyslexia, with different degrees of reliability (Elliott, 2020; Mather et al., 2020; Sadusky et al., 2021). Some learners with different types of literacy challenges can be misidentified as being dyslexic, while, on the other hand, many dyslexic learners remain unidentified.

Despite this lack of a consensus there is an abundance of research evidence on effective teaching approaches, which are described in this manual. As a tutor, you can make a critical difference in the life of a dyslexic adult.

Common myths

Before we dig deeper into the causes and characteristics of dyslexia, let's have a look at some misconceptions around dyslexia, which many people still hold (Clemens & Vaughn, 2023; Hudson et al., 2007; Peltier et al., 2022; Serry & Hammond, 2015; van Lamoen, 2013). Despite what some people think, we know that:

- dyslexia is not caused by poor schooling or lack of motivation
- dyslexia occurs equally in boys and girls
- dyslexic people are not 'slow learners' or 'slow thinkers'
- letter reversals are not a typical sign of dyslexia
- dyslexia is not caused by visual stress; it is not a visual processing disorder
- people don't 'grow out of' dyslexia; dyslexia is genetic. People are born with dyslexia and it is part of their genetic make-up; it often runs in families, and it isn't something that needs to be 'cured'.

The neurological basis of dyslexia

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Over the past few decades, much research has been conducted into the causes of dyslexia. What we have learnt is that the roots of dyslexia lie in the brain (Hudson et al., 2007; Shaywitz, 2020; Wolf et al., 2016). The term 'neurodiversity' was coined as an umbrella term for neurological differences such as dyslexia, dyscalculia, ADHD and autism. This means that neurodivergent people process information differently from neurotypical people. This is to do with variations in brain function and structure. These variations can have an impact on a range of cognitive areas, including literacy and numeracy learning, attention, organisation, communication and social interaction. They can also bring distinct strengths, particularly in creativity, problem-solving, art, visualisation, comprehension and 'thinking outside the box'.

So how does this relate to dyslexia and literacy learning? Skilled readers use three main areas of the brain for reading, which are all in the left hemisphere of the brain. This is the 'automatic' or 'fast' route to reading (Shaywitz, 2020). Because of the way their brains work, dyslexic learners do not activate these brain areas as they read, or they activate them to a lesser extent. Instead, they use different areas of the brain for reading, which are not as effective. So, they use a 'manual' or 'slow' route to reading. This is why reading can be slow and effortful.

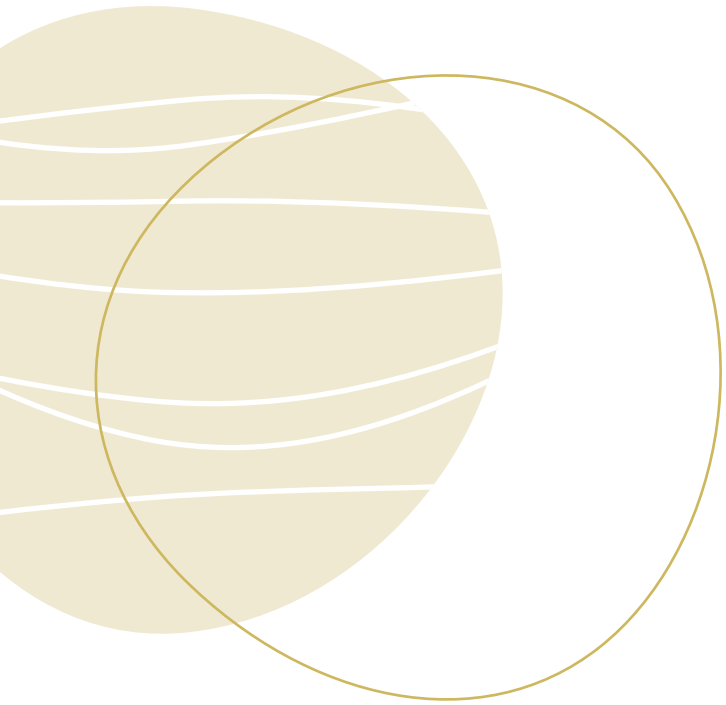
The good thing is that the brain can be 'rewired', thanks to the brain's 'plasticity'. Brain imaging studies have shown how dyslexic learners start activating the effective neural pathways when they receive systematic and direct instruction in phonological awareness and decoding (Olivo et al., 2024).

The positive side of dyslexia

The word ‘dyslexia’ is derived from Greek, meaning ‘difficulty with words’. Traditionally, dyslexia has been described in terms of a disability, disorder, difficulty, impairment or condition. These terms can have negative connotations. This deficit model reflects a one-sided view. A narrow focus on just the limitations is not helpful for learners in recognising the benefits and opportunities that dyslexia can bring.

It’s time to shift our mindset and focus on the positive. We need to show learners that dyslexia is a good thing, as it means that they are intelligent, that they have strengths and abilities, and that they can learn. Of course, it can bring challenges, but all learners have diverse needs, and it’s a matter of catering for and addressing those needs.

A strengths-based approach, where learners are encouraged to harness their strengths to support their areas for development, fosters self-determination and learner agency. We will discuss this further in the next section.



Implications for practice

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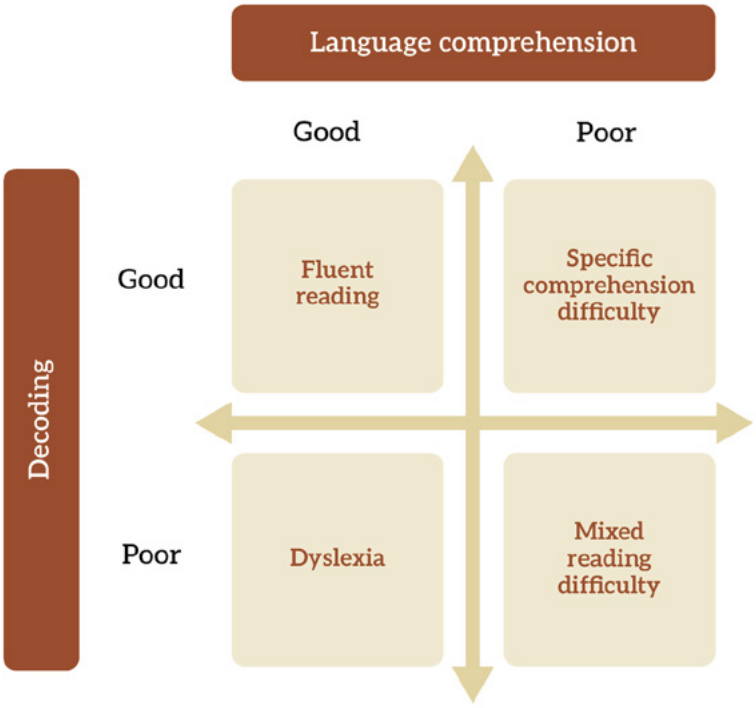
How to recognise dyslexia

Early identification in childhood is key, before learners fall behind, as measures can then be taken to prevent or address any literacy challenges. However, it's never too late. Even if dyslexia is identified in adulthood, there is much that tutors can do to ensure learners can achieve their potential.

Reading is a complex task involving a range of cognitive and linguistic processes. There are many reasons why some adults have reading difficulties, and only a small proportion of these people are dyslexic. The simple view of reading, which is described in Chapter 3: Reading in Part One, provides a useful model for distinguishing different types of reading difficulty (Hoover & Gough, 1990). The model classifies reading as the product of decoding and language comprehension and distinguishes four reading profiles: the fluent reader, those with good decoding and poor language comprehension (the Specific Comprehension Difficulty group), those with poor decoding and good language comprehension (the Dyslexic group), and those with poor decoding and poor language comprehension (the Mixed Reading Difficulty Group). These are depicted in the following Figure.



The simple view of reading (Gough & Tunmer, 1986)

The simple view of reading serves as a useful reference for differential intervention methods, as the three types of learners with reading difficulties identified in the model all need different programs. This is why a thorough literacy assessment is needed.

Of course, all literacy learners need support, not just those who are dyslexic. Elliott (2020) argues that having a dyslexia category can cause social inequity and injustice if it means that more resources are allocated to learners who have been identified as dyslexic. This is an important reminder of the need for equitable support. As tutors, we need to target our instruction to our learners' specific areas of need. We can only do so if we have a good understanding of dyslexia, as it will help us provide targeted support. At the same time, we need to build our knowledge and expertise in teaching literacy strategies that will support all literacy learners.

Generally, dyslexia can be identified through a range of clinical tests conducted by an educational psychologist. The term 'diagnosis' may not be helpful, as it is associated with a medical condition. These tests are costly and out of the reach of many dyslexic learners. However, there is lots a tutor can do to gain more information about a learner, identify the likelihood of a learner being dyslexic, and put support in place.

- **Using a dyslexia checklist**: A checklist cannot tell you if someone is dyslexic. It can, however, help you identify the likelihood of a learner being dyslexic.
- **Using a dyslexia screening tool**: These provide more in-depth information than a checklist, but again can only provide an indication of dyslexia, not a conclusive identification.
- **Administering relevant assessments**: This can include assessments for phonological awareness, decoding and reading comprehension.
- **Learning to recognise the signs of dyslexia and looking for patterns**: With dyslexic learners we often see a distinctive pattern of strengths and challenges, but of course the pattern can differ from learner to learner. The difficulties with reading and spelling are often glaring, but the strengths may not be so obvious at first sight and can be overlooked. The table on the following page provides an overview of the signs to look for.

Possible strengths	Possible challenges
Critical thinking; coming up with new ideas and creative solutions	Phonological and phonemic awareness
Reasoning and understanding	Decoding
Vocabulary	Spelling
Visualisation	Handwriting
Problem-solving	Reading fluently
Verbal communication skills	Verbal memory and retrieval; rote memorisation; verbal processing speed
Creativity	Notetaking
Seeing the big picture; recognising patterns and seeing how things are connected; holistic processing of information	Organisational skills; time management; concentration

Resources

Dyslexia checklists

Some commonly used checklists include those developed by:

Dyslexia Scotland
https://dyslexiascotland.org.uk/wp-content/uploads/2022/06/ChecklistIndicators.pdf

Professor Emeritus Ian Smythe and Professor John Everatt
https://www.dyslexicadvantage.org/dyslexia-test/

Resources

Dyslexia screening tools

Note that dyslexia can only be diagnosed by a psychologist. Three widely used screening tests are the:

Dyslexia Adult Screening Test (DAST)

QuickScreen Dyslexia Test
https://qsdyslexiatest.com

Shaywitz DyslexiaScreen

Meeting dyslexic learners' social and emotional needs

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When working with dyslexic adults, building rapport and a relationship of trust and mutual respect is vital, as they have often experienced failure in the past (Dymock & Nicholson, 2012; Livingston et al., 2018; McNulty, 2003; Riddick, 2010; Wissell et al., 2021). Having a tutor who understands what it's like will help enormously. This is why meeting their social and emotional needs comes first. For them to be able to open their hearts and minds to the learning, they need to feel included, respected and valued.

Building this relationship starts with 'knowing your learner'. Finding out about their background, interests, experience, strengths, aspirations and cultural identity will help you find ways of engaging your learner. Sadly, the stories of many dyslexic adults about their school days are very similar. Their learning journey has often not been a positive one. Often, they didn't understand why they were struggling with reading and writing, while others seemed to pick it up quickly.

Imagine you are in this situation. You are puzzled why things are hard for you and you start to doubt yourself and think you are 'dumb'. You feel a failure and you lose confidence. People might think you are lazy or just not working hard enough, but they don't realise you are working extra hard just to try and keep up. You might feel 'different' and an outsider. You do your best to try and hide your difficulties because you feel embarrassed, and you don't want to stand out.

If this happens, some learners withdraw into themselves. They try and keep under the radar, and become disengaged. Others react by doing the opposite. They play up and act the clown in an attempt to hide how they really feel. Some may become so frustrated they lash out and become aggressive.

Dyslexia is often hidden. Nosek (1997) identified three types of dyslexic:

- closet dyslexics: those who try and hide their dyslexia
- confused dyslexics: those who don't know they are dyslexic and don't understand why they are struggling with literacy
- candid dyslexics: those who don't feel embarrassed and openly disclose their dyslexia.

Tanner (2009) interviewed 70 adult dyslexics who were enrolled in a TAFE course designed to support them in understanding dyslexia. She applied Nosek's categories in the interviews and found that the vast majority of learners, 86% of those interviewed, were 'closet' or 'confused' dyslexics. Only 5 out of 70 learners were 'candid' dyslexics. Tanner described the 'conundrum of failure' that dyslexics can be faced with (Tanner, 2009).

Thankfully, the downward spiral of feelings of self-worth and failure can be avoided. Tutors can play a crucial role in this. If we 'normalise' dyslexia and discuss it with learners, we can change the mindset and view it as a positive and a learning difference, just like the myriad other learning differences that learners might have. Show your learners that you care, believe in their ability, and have high expectations. Give them constructive feedback and let them experience success. This will help build a safe space for them to learn, build self-esteem and resilience, and foster motivation.

Informing learners

While tutors are not in a position to diagnose dyslexia, talking with learners about indicators of dyslexia may create new understanding. It could help them solve the mystery of why they have been struggling with things that seemed to be so easy for others (Glazzard, 2010). It could help them put all the pieces together and make sense of how and why they learn differently.

Knowledge is power. Informing a learner of what dyslexia is, how it can impact people, and what support can be useful could help them understand more about themselves, make them aware of their strengths and challenges, and make them feel good about themselves. It is helpful to understand that learning difficulties are nothing to be ashamed of.

Meeting dyslexic learners' learning needs

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Whole-organisation approaches

Whole-organisation, learner-centred approaches are needed to provide the best possible support for dyslexic learners. One example is the Response to Intervention model, a three-tiered framework for early intervention, targeted support and inclusion, which includes evidence-based classroom instruction, small-group tutoring and more intensive one-to-one tutoring (Fuchs & Fuchs, 2006; Tunmer & Greaney, 2008). A whole-organisation initiative that is proving effective in creating dyslexia-friendly schools and tertiary training providers is the Dyslexia-Friendly Quality Mark, which is currently available in the United Kingdom and New Zealand (Beckwith, 2021).[1]

Universal Design for Learning (UDL) is a framework designed to help create more flexible and inclusive learning opportunities to meet the diverse needs of all learners.[2] It is best implemented across organisations and educational institutions. The framework is based on scientific evidence about how people learn. We all learn in different ways. This diversity in learning is evident in three ways:

1. how we engage with the learning and the materials
2. how we make sense of information
3. how we interact with the learning materials and show what we know.

These three dimensions form the basis of the three UDL principles – engagement, representation and action/expression – that apply to both classroom and one-to-one teaching. The purpose of UDL is to anticipate barriers to learning before they arise. When planning your teaching you reflect on the learning outcomes, identify what could get in the way of learning, and remove these barriers by putting flexible options and supports in place for engaging with the content, providing learning materials in a range of formats, giving learners options for how they work with the materials, and offering a range of assessment methods.

[1] In the UK, the Dyslexia-Friendly Quality Mark is offered by the British Dyslexia Association. In New Zealand it is offered by Ako Aotearoa.
[2] For more information on UDL visit https://www.cast.org

Resources

Free eLearning courses on UDL are offered by:

National Disability Coordination Officer (NDCO) Program and the Australian Disability Clearinghouse on Education and Training (ADCET)
https://disabilityawareness.com.au/courses/universal-design-for-learning-in-tertiary-education/

Ako Aotearoa
https://ako.ac.nz/professional-learning/in-house-workshop/teaching-practicestrategies/universal-design-for-learning-udl-educator-pathway

An effective teaching approach

When it comes to meeting the learning needs of dyslexic learners, two approaches are effective. Firstly, for learners engaging in one-to-one tutoring, skills and strategies are taught to support learners in improving their literacy and organisational skills, including teaching phonological awareness, decoding, spelling and writing skills. Secondly, for learners in formal learning situations, supports, accommodations and options can be put in place to ensure learners can achieve the learning goals. This can include providing a quiet space to work without distractions, extra time, assistive technologies, recorded learning materials, etc.[3] The UDL framework is designed as a tool for putting these flexible pathways to learning in place.

[3] *Understanding dyslexia: Unlocking potential in dyslexic students* is a free guide for Australian tutors that includes tips on creating inclusive learning environments: https://www.texthelp.com/resources/inclusive-education/supporting-dyslexia-guide/

Some dyslexic learners may find it hard to organise their work, remember instructions, and take notes. They will find it helpful if structure is provided and predictable routines are used. Knowing what to expect and when will help. Organisational tools and apps can be used to organise work and help with time management. Instructions can be given on a chart, mind map or clip, so they can always be referred to. Tutors can include support for learners to work out which strategies help them. A tutor may also be able to coach a learner who is engaging in more formal learning to encourage notetaking and to prompt a learner to ask for handouts or PowerPoints prior to the lesson. Strategies for notetaking can be taught, such as highlighting, using bullet points, colour coding, and using graphic organisers. There is also assistive hardware and software available for taking notes.

Resources

For examples of assistive technology and apps, see the:
Assistive Technology Resource Collection
https://ako.ac.nz/knowledge-centre/basic-assistive-technology-tools-to-support-study

Wheel of Android Apps
https://ako-aotearoa.iqualify.com/assets/fp-resources/yxy1ACweSuiKqo4z6kbe

Wheel of iPad Apps developed by CALL Scotland
https://ako-aotearoa.iqualify.com/assets/fp-resources/zGZ3YrDJSvWhEtmxIpmj

'Overlearning' can help with retention and making skills automatic. Dyslexic learners may need lots of practice and revision, as they may find it harder to make skills automatic and because their working memory may not be optimal. Practising skills and strategies across a range of contexts will help reinforce them. A recap of content at regular intervals will help consolidate the learning. For any topic you are teaching, a good strategy is to 'say what you are going to say, then say it, and then say what you said'.

Focus on the strengths

Dyslexic learners have many strengths they can draw on. Using a strengths-based approach to teaching will help identify, nurture and utilise their strengths. For example, dyslexics tend to process information holistically, rather than sequentially. This is a strength they can build on. Showing them the 'big picture', the patterns and how things are connected, will help them tap into their strengths.

A focus on their strengths will also help learners develop a positive belief in themselves. Learners are often unaware of what their strengths are, so it's important to point these out to them. Show them what they are good at. They could be great at sports, drawing, talking, drama, computer science, music, design, engineering, cooking, etc. Recording their strengths on their learning plan will help them find ways of using their strengths to help improve their areas for development. Also, giving constructive, explicit feedback about their work ensures learners know what they are doing well and what they need to improve on. Celebrating achievements and successes also helps to boost self-esteem and build confidence.

The importance of the learner voice

Involving learners in the teaching and learning process encourages learners to have a voice. Tell them what you are trying to do. When you begin working with them and are developing their learning plan, ask them how they learn best, what the roadblocks are in their learning and find out what their learning focus is as well as their interests. As you work with them, ask them for feedback on how things are going.

Having learners as partners in the learning process will also help develop their learner agency. It can support them in taking control of their own learning, develop their metacognition, make them think of how they learn best, and develop strategies for self-advocacy.

8

Foster learner agency

In a learner-centred approach, the learner is at the heart of the learning experience, and their goals should focus the learning. They are encouraged to take responsibility for their own learning and to be active participants in the learning process. They should have opportunities to make choices when it comes to selecting topics, and as their metacognitive thinking develops, they will be able to make choices about learning strategies. Tutors can facilitate this process by fostering learner agency, which will help make learners more independent and autonomous, as discussed in Chapter 2 in Part One.

The learner's goals must inform instruction, which helps engage them in the learning process, make their learning more enjoyable and effective, and foster lifelong learning skills. Learners can be supported in developing a positive learner identity, and in learning metacognitive strategies: reflecting on their own learning abilities and strategies, monitoring and evaluating their learning and taking control by setting goals and adjusting strategies when needed. Through this process of developing agency, they will learn to know what to do when learning breaks down and reflect on what works well for them and what doesn't.[4]

[4] The free Developing Learner Agency Educator Pathway eLearning course provides a step-by-step guide to supporting learners in developing learner agency: https://ako.ac.nz/professional-learning/in-house-workshop/teaching-practicestrategies/developing-learner-agency-educator-pathway

Instructional strategies

Literacy strategies

Learning to speak comes naturally to us. It is built into our genes. Children learn to speak merely by being exposed to spoken language. Reading is different. It is a complex task. We don't learn to read simply by being exposed to the written word. It is not a natural process. Reading is a code, which needs to be taught (Wolf et al., 2016). The written symbols are a code for the speech sounds. When we are reading, we are converting print to speech. We are reading the letters and words on the page or screen and translating them into spoken language. This is the decoding process. Spelling is the opposite. That is why spelling is sometimes called 'encoding'. When we are spelling, we convert spoken language into written language.

The reading process

So how do we learn to read? It starts by developing phonological awareness. This develops in the early years of our lives, and it plays a critical role in learning to read and spell. It's an awareness that spoken words are made up of parts, syllables, onsets and rimes, and phonemes. The next stage in learning to read is when we start making the links between the speech sounds, or phonemes, and letters. We start to realise that the written symbols, the letters, represent speech sounds. This is called the 'alphabetic principle'. We can decode words by sounding them out, and spell words by using our knowledge of the letter–sound relationships.

Gradually, we develop a reading vocabulary. We store letter patterns and words in our brain. Over time, we have been exposed to words so many times that we don't need to sound them out anymore. We recognise them instantly and have developed automaticity. We know what they mean, how they are spelled, and what they sound like.

For dyslexic learners, the barrier is at the phonological level. They may not have fully developed their phonological awareness, or their awareness of the letter–sound relationships. Their higher-order thinking processes, such as reasoning, vocabulary, comprehension and conceptual understanding are intact, but, for many, they can't access or fully utilise these thinking processes, because they struggle to decode the words. They have to rely on context to get to the meaning of the word, which is not a reliable strategy.

Adult dyslexic learners may have learnt to read and write, despite these challenges. Sometimes they don't read as fluently, or spelling can continue to be challenging.

Even for adult dyslexic learners who struggle with literacy, they can learn to read and write or improve their reading and writing skills. Teaching phonological awareness and phonics will strengthen the neural pathways, help them develop their literacy skills and overcome the barriers. In this manual there are dedicated sections on how to teach phonological awareness, decoding and spelling.

Assessment as the basis of instruction

Assessment is key in informing our instruction. It helps us to target the teaching to the specific areas of need. It also helps to identify the learner's strengths (Dymock & Nicholson, 2012; Hudson et al., 2007; Tertiary Education Commission, 2010).[5]

Systematic, structured, explicit literacy instruction

Systematic, structured, explicit instruction in the sound structure of language and in phonics is critical for dyslexic learners who struggle with literacy. It can empower them and give them strategies for sounding out words, instead of having to memorise them or relying on context (Henry, 2010; Moats, 2020; Pressley, 2014; Snow, 2020; Tunmer & Greaney, 2008; Vorhaus et al., 2011).

It is good to keep in mind that teaching phonological awareness is distinct from teaching phonics, and of course, if a learner's assessment indicates phonological awareness and decoding difficulties, then we need to teach both.

Phonological awareness is **aural**, it is not written. It is about hearing the sounds and sound units within words, not about reading or writing them. Learners need to develop a conscious awareness of the phonological building blocks of spoken words: the syllables, onsets and rimes, and phonemes. When working with adult learners it may seem 'childish' to focus just on the spoken word, to ask them to, for example, break words down into syllables, find a word that rhymes or identify the first sound in a word. This is why it is important to explain to learners why this 'sound work' is so valuable, and how it will help them in their reading and spelling. Incorporating some regular, brief phonological awareness activities into your teaching will be of great benefit to your learners who struggle with reading and spelling.

[5] *Starting points assessment guide* provides a suggested approach for assessing phonological awareness and decoding: https://ako.ac.nz/knowledge-centre/learning-progressions-for-adult-literacy/starting-points-assessment-guide

Phonics and phonemic awareness development have a close relationship. Phonemic awareness supports the development of phonic knowledge. Phonics teaches the relationships between the letters of written language and the sounds of spoken language. When letters are taught in connection with sounds, phonic knowledge is built alongside phonemic awareness. Once a learner can hear sounds without needing the scaffolding of letters, they have fully developed their phonemic awareness. These letter–sound relationships need to be taught explicitly and systematically, i.e. in a logical sequence and with clear explanation, modelling and demonstrating. Learners will need ample practice at each step of the sequence before moving on to the next step.

Teaching in context

Teaching basic skills, such as phonological awareness, decoding and spelling, needs to be done in focused exercises but should then be applied to the learner's context or learning goal (Pressley, 2014). For low-level learners, these activities may take most of the session. For higher-level learners, the application of these skills may become more important, particularly if your learner is undertaking other formal study. For example, if your learner is a builder and you are reading a text on passive houses, you could do some pre-reading activities, such as activate their background knowledge, predict what the text might be about, and have a look at some of the technical words in the text and explore their meaning and spelling. After reading the text you could remove the text and do some oral activities with some of the words from the text, such as finding the syllables, the first or last sound, or a word that rhymes. You could also follow up with some decoding and spelling activities and write a summary or critique of the text together. Wrapping these literacy skills around any teaching activity will help consolidate the learning, ensure regular practice, and keep things interesting!

For learners with high literacy needs it may not be possible to use authentic reading material. However, the literacy skills can still be applied to their learning goals or interests. For example, if your learner has an interest in dogs, you could watch a video clip on dogs together and then discuss what the clip was about. You can then take some words from the clip or your discussion to use in phonological awareness or phonics activities. You could write some simple sentences together, using some of the words you've come across, or use word cards to form sentences.

Applying new skills and knowledge to the learner's context and making connections to learners' lives and experiences is essential for them to be able to build the bridge between the new learning and what they already know. Adult learners have a wealth of life experience and knowledge. If they can see the relevance of what they are learning and relate it to their world, it helps them internalise the new knowledge.

Reading mileage

Practice helps to hone skills. Dyslexic learners need lots of reading practice to develop their skills and become fluent readers. The more they read, the more they develop the neural pathways for reading. Dyslexic learners need more exposure to a written word for them to be able to read it fluently.

Reading mileage is also important for building vocabulary (Nicholson & Dymock, 2010; Pressley, 2014; Tunmer & Greaney, 2008). We need to hear or read a word 10-15 times before it becomes part of our vocabulary. Written texts have many more interesting and complicated words than spoken language. Children learn new words mainly through oral language, but from the age of 10, we grow our vocabulary mainly through reading (Nicholson & Dymock, 2010). This is why regular reading practice is so important.

A multisensory approach

We have seen that dyslexic people have many strengths. Using multisensory teaching strategies when teaching literacy, whereby you engage all the senses, helps learners employ their strengths. When teaching the letter–sound relationships, you can activate multiple sensory pathways when teaching the letters and letter patterns. For example, have learners say the sound as they see the letter, think about the shape of their mouth in saying the sound, trace the letter with their finger, tap out the sounds within words, listen to sounds and identify corresponding letter tiles.

Words need to be spoken and heard, read and written. If we look at words from lots of different angles, we make the words 'come alive'. It helps foster an interest in words, and teaches learners strategies for using their senses to explore words. For example, a word like 'hypothermia' may be hard to decode or spell. Viewing this word from different angles will give learners strategies for 'unpacking' the word. You could discuss the origin of the word, what the two meaningful parts are and what they mean, how many syllables there are, and what the first sound is of the word. You could also use letter tiles and explore the sequence of sounds in the word.

A multimedia approach

You can also present information in different ways to stimulate the visual, auditory and kinaesthetic-tactile pathways. This will help make the learning 'stick'. It will also ensure, as per the UDL principles, that learners have options and choices in how they navigate the learning materials. For example, when teaching report writing, you can do a brainstorm with learners to activate their background knowledge, provide a factsheet, discuss the factsheet and the vocabulary used, draw a mind map of how to plan for writing a report, watch a clip, demonstrate report writing, do a problem-solving activity, listen to a podcast on incident and accident reports, use online tools and apps, or provide a writing frame.

The good thing is that teaching literacy through multimedia approaches is not just effective for dyslexic learners, it is useful for all learners.

Stop and think

After reading about dyslexia, what tutoring strategies would you use for a learner who may have these indications?

Resources to support learners to organise their time can be found in Part Three.

Resources

In Australia, resources and information on dyslexia and adult literacy are available on the websites of:

Australian Disability Clearinghouse on Education and Training
https://www.adcet.edu.au

Australian Dyslexia Association
https://dyslexiaassociation.org.au

Auspeld
https://auspeld.org.au

Dyslexia-SPELD Foundation (DSF)
DSF - Home

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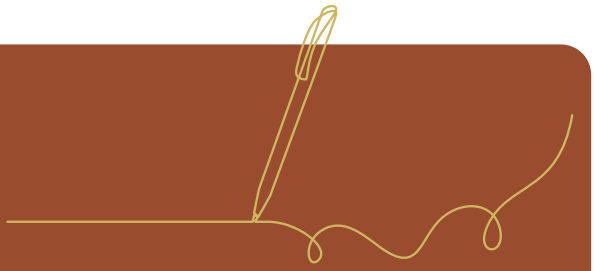
Chapter 9

Developmental language disorder

9

Main points



- Developmental language disorder (DLD) is a common and lifelong neurodevelopmental condition.
- DLD is also under identified, which means there are many adults living with the experiences and challenges associated with the condition.
- DLD can co-occur with other specific learning disabilities that affect literacy, such as dyslexia.
- A focus for tutoring learners with DLD is to build vocabulary to support development of communication skills.
- The long-term impacts of DLD are well-documented, particularly those associated with literacy and educational attainment; however, effective support strategies for adults have not been thoroughly investigated.
- Access to specialised support and improving higher-level language skills are associated with positive outcomes for adults with DLD.
- Many of the strategies for adolescents are transferable to adults with DLD.
- Specialised supports should focus on everyday activities, such as job applications, scheduling and making lists, managing finances and reading for leisure.

Definition

9

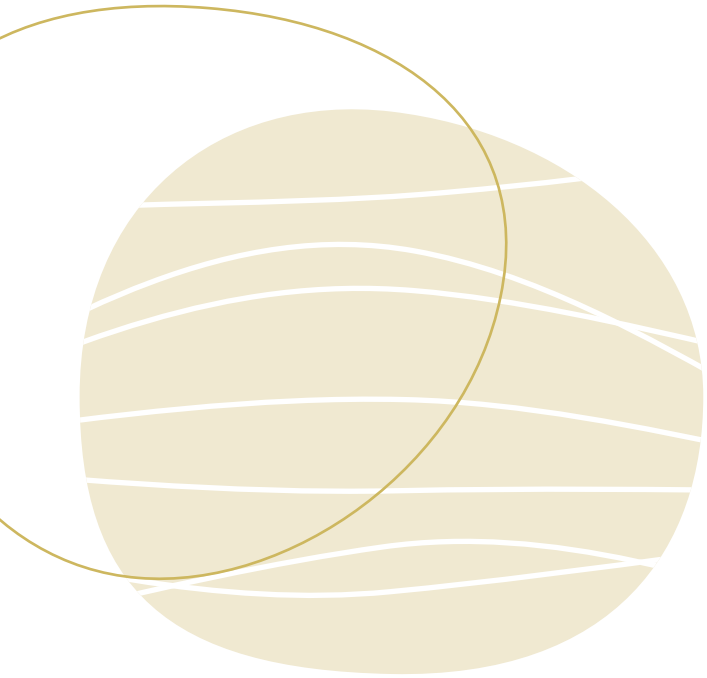
Developmental language disorder (DLD) is a neurodevelopmental condition where individuals experience a slower pace of language development and difficulties producing and/or understanding language in the absence of other biomedical factors (Bishop et al., 2017). That is, DLD refers to language learning difficulties that are of an unknown origin, unlike language difficulties that are explained by other neurodevelopmental conditions such as autism, intellectual disability or sensorineural hearing loss.

DLD is recognised by the *Diagnosticians Statistical Manual-5th Edition* (American Psychological Association, 2013) and *International Classification of Diseases-11th Edition* (World Health Organization, 2019). An international consensus effort established common language and guidelines for identifying and assessing DLD (Bishop et al., 2017). Across these classification systems and guidelines, four criteria are outlined for diagnosing DLD through a multidisciplinary approach:

- **Persistence**: difficulties are present in the acquisition, understanding and production of language across modalities (i.e. spoken, written, sign language and other), and these difficulties are unlikely to resolve spontaneously.
- **Function**: language abilities are substantially and quantifiably below what would be expected for an individual's age, and these difficulties create obstacles to communication, learning and participation in everyday life.
- **Exclusion**: language difficulties are not attributable or associated with another known biomedical condition, like autism, intellectual disability or acquired brain injury.
- **Early onset**: the onset of symptoms is in the early developmental period, and neurobiological (e.g. male sex) and environmental (e.g. social deprivation) risk factors do not rule out a diagnosis.

Although DLD can be diagnosed as early as four years old (Sansavini et al., 2021), it persists into adulthood and is considered a lifelong condition. At present, there are no agreed-upon methods for identifying DLD in adulthood (McGregor et al., 2017). However, a combination of tasks that includes an auditory comprehension test, a vocabulary test, and a spelling test can be used to reliably identify adults with DLD by a speech pathologist (Fidler et al., 2011). The recommended inclusion of auditory comprehension (e.g. following instructions) and a spelling test for adults highlights the broader impact of DLD beyond speaking and listening to reading and writing beyond the schooling years.

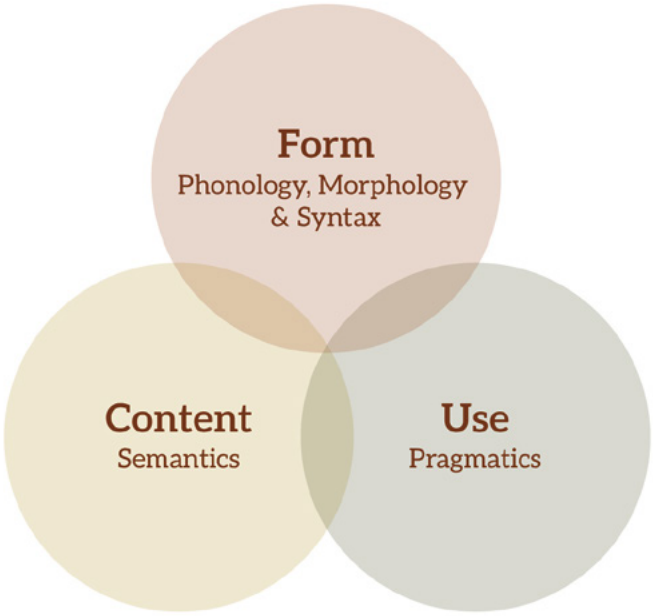
In the context of adult literacy tutoring, pursuing a diagnosis may be recommended if a learner has profound difficulties with everyday functioning and may benefit from additional supports. In this situation, a referral to explore diagnostic options may be useful. However, this chapter will focus on what can be done to support language comprehension within a literacy tutoring context. This does not include diagnostic testing but does involve assessment of literacy skills and gaps.



Background information

Language comprises three distinct yet overlapping components (Bloom & Lahey, 1978; see Figure below):

1. Form, which refers to the way language is expressed through speech, writing, signs or another form of expression. Language form includes:
   - phonology: the set of rules that govern sounds and how they are combined in a language
   - morphology: the set of rules that govern how words and morphemes are combined in a language
   - syntax: the set of rules that govern how words are combined to create meaning in a language.
2. Content, which refers to what is expressed through language. Language content includes:
   - semantics: how words and phrases relate to one another to create meaning in a language.
3. Use, which refers to why language is expressed through form and content. Language use includes:
   - pragmatics: how and why language use differs across contexts.



The Bloom & Lahey (1978) taxonomy

From childhood into adolescence and adulthood, all components (form, content, use) and elements (phonology, morphology, syntax, semantics, pragmatics) of language in Bloom and Lahey's taxonomy may be affected for those with DLD. As discussed in other chapters, the reading rope (Scarborough, 2001) and the simple view of reading (Hoover & Gough, 1990) suggest what information processing is required for successful reading. It is likely that all learners with DLD will experience some difficulty with skills outlined in the language comprehension strand due to deficits in vocabulary, language structure (phonology, morphology, syntax, semantics), as well as the higher-level language skills, such as background knowledge, verbal reasoning, and literacy knowledge. Therefore, even if individuals with DLD have intact word recognition skills (phonological awareness, decoding, sight recognition), they will experience challenges in understanding texts or reading for meaning due to language comprehension difficulties. Some individuals with DLD will also experience breakdown in word recognition skills, which presents even greater barriers to literacy success.

For instance, a learner with DLD may:

1. be able to decode fluently but struggle to independently answer written comprehension questions due to difficulty with language comprehension
2. be able to answer simple comprehension questions but struggle with reading aloud due to difficulty with automatic word recognition
3. be able to converse with relative ease but have trouble engaging with text due to difficulty with the strategic knowledge required for reading and writing
4. experience difficulties in all areas outlined above.

Children with DLD show growth in their language abilities over time as typically developing children do, but they are unlikely to catch up to their peers as this would require accelerated language development (Norbury, 2019). The developmental gap becomes obvious in adolescence and early adulthood when there are increased demands for social, academic and vocational participation (Clegg et al., 2005; Conti-Ramsden et al., 2018; Whitehouse et al., 2009a, 2009b).

Young people with DLD have expressed feelings of inadequacy and feelings of being misjudged and misunderstood. They stress the importance of feeling safe, and the significance of social and communicative contexts (Ekström et al., 2023). We will explore the broader impact of DLD in adults' lives in the following section. This quote from an adult with lived experience of DLD captures the perceptions towards communication, socialisation and education that may resonate with many learners:

> Even with half a decade of treatment and "passing" for a person without a disability, DLD continues to impact my everyday life. I still ask "what?" in conversations despite actually hearing what the person said, just to buy myself some more processing time. I still occasionally feign comprehension of jokes and idioms, especially if they include abstract language, in order to not stand out among a group of friends. I still receive blank stares and confused looks from people when I finish talking. DLD is not a language disorder that can be "fixed" or cured after a certain prescribed amount of time but rather a life-long condition that a person has to learn to work with. (Orrego et al., 2023, p. 9).

In sum, an individual's profile may change over time as their communication skills continue to develop, but personal accounts of the condition show that as learners get older, adults with DLD face challenges in familial, social, emotional and academic domains (Ekström et al., 2023; Orrego et al., 2023).

Research summary

Studies have found that in English-speaking countries, around 7% of children are affected by DLD, which equates to about 2 in every mainstream classroom of 30 children (Calder et al., 2022; Norbury et al., 2016; Tomblin et al., 1997). Individuals with DLD have historically been under-identified and underserved (Skeat et al., 2010; Zhang & Tomblin, 2000). Further, although prevalence estimates indicate that males and females are just as likely to have DLD as one another, males are more likely than females to be referred for support services (Lindsay & Strand, 2016; Morgan et al., 2017). Lastly, even though there have been widespread international advocacy efforts in recent years, public awareness of DLD is low relative to other conditions (Lemos et al., 2022). Therefore, it is likely that some adults who experience difficulties with language and literacy may not realise they have grown up living with DLD.

As mentioned earlier, people with DLD experience difficulties in many or all domains of language (phonology, morphology, syntax, pragmatics), including spelling (Werfel et al., 2019). Grammatical difficulties are particularly affected when speaking and reading (Scott & Windsor, 2000; Werfel et al., 2017), and they have difficulty producing and understanding complex sentences (Frizelle & Fletcher, 2014a, 2014b). Children with DLD have been shown to be:

- six times more likely to have difficulties with reading
- four times more likely to have difficulties with maths
- six times more likely to have difficulties with spelling
- 12 times more likely to have difficulties with all three (Young et al., 2002).

Between 50% and 80% of children with DLD have difficulties with reading (Botting et al., 2006), and the degree to which individuals experience difficulties varies between individuals (Freed et al., 2011).

Language difficulties manifest in more nuanced ways in adolescence. While adolescents with DLD often produce short, simple sentences (Nippold et al., 2009), difficulties in higher-order language, inference-making, narrative, expository and persuasive production (verbal and written) and pragmatic communication are more apparent, which ultimately impact social emotional functioning (Arts et al., 2022; Durkin & Conti-Ramsden, 2010). Many also develop strategic skills in 'appearing' to manage, compensate, or avoid certain situations (Ekström et al., 2023).

Young adults with DLD have persistent difficulty with language skills, such as learning new words (McGregor et al., 2020) resulting in smaller vocabularies (Beitchman et al., 2008), which may cause difficulty finding the right words when speaking. Adults with DLD may also have difficulty processing complex sentences even when there are no grammatical errors in their spoken language (Poll & Martin, 2022). This suggests they may have difficulty in post-secondary training programs and workplaces. DLD challenges can make it difficult for adults with DLD to pay attention and remember what they have been told.

Along with persistent language difficulties, young adults with DLD may continue to have co-occurring difficulties with literacy (Botting, 2020). They are more likely to leave school early and less likely to engage in post-secondary learning (Dubois et al., 2020). Literacy difficulties can result in challenges with financial and residential independence (Schoon et al., 2010; Winstanley et al., 2018), as well as with attaining less skilled employment (Conti-Ramsden et al., 2018) or difficulty accessing employment at all (Law et al., 2009). Adults with DLD have shown to be at increased risk of social difficulties and psychiatric disorders (Clegg et al., 2005), as well as anxiety and depression (Conti-Ramsden & Botting, 2008). Lastly, adults with DLD are also at increased risk of experiencing difficulties integrating socially and in the community (Toseeb et al., 2017). This may be due to a lack of confidence in communicating with others, difficulties following the thread of conversations, problems understanding the nuances of high-level language, such as jokes, metaphors and sarcasm, and limited social cognition. In fact, the prevalence of language disorder in youth justice systems is estimated at roughly 50%, which is far greater than population-based estimates (Snow & Powell, 2008).

The needs of adults with DLD may vary depending on their stage of life and the circumstances and contexts in which language is used (Ekström et al., 2023). It is clear that the familial, social, emotional and academic barriers associated with DLD are likely to negatively shape the individual's identity. Families of people with DLD, their support practitioners and employers would benefit from increased awareness of the persisting language difficulties experienced by this population (Botting, 2020). Psychoeducation could help overcome these barriers to develop self-awareness and motivate post-secondary learning and career goals (Orrego et al., 2023).

Implications for practice

Learning goals

Like other adult learners, broader life goals should inform development of individual learning plans. This can ensure buy-in and motivation for the learner (Fallon et al., 2015). Examples of everyday goals may include:

- writing job applications
- developing a weekly schedule
- interpreting pharmacy prescriptions
- reading for leisure.

Drawing on strengths

In typical development and throughout the lifespan, linguistic proficiency is usually acquired by learning the regularities of language without conscious effort. People naturally learn to form accurate and complex sentences to express thoughts. However, this form of implicit learning is challenging for adults with DLD (Lee & Tomblin, 2015). Fortunately, the explicit learning abilities and visuospatial skills of individuals with DLD are intact (Lum et al., 2012), suggesting that explicit instruction approaches which tell individuals the rules of language using metalanguage and visual supports can capitalise on their relative strengths.

Metalanguage is using language to describe language. For example, the words verb, noun, adjective all describe parts of speech. Past, present and future all describe tense. Other examples include imagery, symbolism or mood, character and plot. Fiction and non-fiction, poetry and plays convey concepts that can be described in more detail.

Addressing working memory

Another consistent finding in the literature is that many (but not all) individuals with DLD have difficulty with working memory (see Archibald, 2017, 2018 for summaries). This impacts the ability to store and manipulate information in short-term memory, which is required for basic and more complex numeracy, recalling the name of an unfamiliar person or object, and problem-solving in class or the workplace. While working memory training interventions rarely transfer to real-world tasks (Melby-Lervag et al., 2012), visual aids may support verbal working memory performance for those with DLD (Quail et al., 2009). Applying principles from cognitive load theory will also help design instruction for those with low working memory (see Chapter 2 in Part One).

Explicit instruction

When literacy difficulties are the primary long-term issue, explicit instruction is recommended (Dubois et al., 2020). Explicit interventions using metalanguage and visuals to improve language for children with DLD have proved to be effective (e.g. Calder et al., 2021; Ebbels et al., 2007, 2014). Intervention studies using explicit interventions with adolescents resulted in improved complex syntax (Balthazar & Scott, 2018; Zwitserlood et al., 2015). It would be reasonable to assume that the positive effects of explicit instruction are transferable to adults.[6]

[6] See Balthazar et al., 2020 for an overview of explicit intervention approaches for DLD: https://discovery.ucl.ac.uk/id/eprint/10128236.pdf

DLD and dyslexia

Historically DLD and specific learning disabilities, such as dyslexia, may have been considered mutually exclusive (i.e. the language difficulties associated with DLD explain reading difficulties and therefore cannot be dyslexia). Most recent research supports the co-occurrence of DLD and dyslexia in some individuals as distinct conditions (see Adlof & Hogan, 2018). In fact, as many as half of children with dyslexia could be classified as having DLD, and half of children with DLD could be classified as having dyslexia (Adlof et al., 2017).

This is important for tutors to keep in mind when working with adult learners with literacy difficulties, as language is central to instruction in educational and vocational contexts. Oral and written language is used when tutors provide content and instruction, and learners are asked to perform language-based tasks. As a result of these language demands, learners with DLD will be working hard in tutoring sessions to engage with language-based learning.

Literacy support in applied contexts

9

It is useful to consider how personal and environmental factors influence outcomes for those with a history of DLD. Literacy supports should include a focus on applying new skills to everyday activities, such as job applications, scheduling and making lists, managing finances, and reading for leisure (Fallon et al., 2015). This will help build learners' sense of self-efficacy and their ability to navigate everyday language demands.

Support beyond literacy tutoring

Dubois et al. (2020) highlighted that there is continuity between the challenges experienced in adolescence associated with DLD and the outcomes in adulthood, so tutors should be mindful that current difficulties may have arisen in the past and will persist into the future. Further, DLD will probably affect a range of life areas, especially those that require the use of literacy and/or numeracy. Improvements in high-level language skills are associated with greater outcomes, so working on skills that require planning and reasoning may be beneficial. Literacy tutoring usually includes work on setting goals and planning how to work towards them. When goals beyond developing literacy are considered, referral to support services may be appropriate.

Instructional strategies for adult learners with DLD

The long-term impacts of DLD on educational, vocational and societal outcomes are well documented (Brownlie et al., 2004, 2007; Clegg et al., 2005; Conti-Ramsden et al., 2018; Whitehouse et al., 2009a, 2009b). Cognitive load theory highlights the importance of explicit instruction and provides a useful framework for ensuring instruction is effective.

Cognitive load theory

Cognitive load theory brings an understanding of how both adults and children process and remember information, facilitating effective lesson planning and positive environments for learners. It suggests that working memory capacity sets a limit on how much new content can be learned at once. Therefore, a tutor should systematically break down what learners need to know into small achievable steps, extending just beyond the knowledge a learner already has. These steps are modelled by the instructor in interactive and engaging ways. Through the gradual release of responsibility (I do, we do, you do), a tutor can firstly demonstrate how to successfully do the activity and this might include 'thinking aloud' or explaining the process, then undertaking the activity with the learner and finally supporting the learner to undertake the task on their own.

Clear and immediate feedback helps a learner understand how they can improve on how they are doing a task. Feedback can involve metalanguage as well as metacognitive thinking (thinking about thinking). Using the relative strengths of someone with DLD, metalanguage and visual supports can help develop a learner's understanding.

General considerations

Individuals with DLD and co-occurring literacy difficulties generally read less and have fewer opportunities to learn new vocabulary, abstract and nonliteral language, complex syntax, and general world knowledge. The literature suggests that young adult learners benefit from instruction that focuses on word knowledge, reading fluency and comprehension. Learners with DLD will benefit from a focus on these Big Six instructional components. More detailed information on these instructional approaches can be found in Chapter 3: Reading in Part One.

Since adult learners typically learn from reading, it is important to consider evidence-based reading strategies to facilitate comprehension of the texts that learners read, such as:

- segmenting texts to identify the purpose or meaning of a passage
- including direct vocabulary instruction or completing a word study when learners encounter unfamiliar words
- providing adjustments to compensate for reading difficulties, e.g. notes, summaries, and searching for the definitions of unfamiliar words.

Instruction should also draw on everyday activities, like interpreting medical referrals/ prescriptions or reading and responding to job selection criteria statements. Lesson planning should be based on the learner's own identified learning goals, interests and strengths. This will ensure activities are relevant and motivating for learners. Tutor support should also offer opportunities for repeated practice with targets such as word reading, vocabulary knowledge, and discussions about the meaning of texts (Fallon et al., 2015).

Direct oral vocabulary instruction

Learning new words is an important part of reading for comprehension and a skill required for participating in post-secondary training and employment. Adults with DLD experience difficulties learning new words (McGregor et al., 2020). Before supporting reading and comprehension of written vocabulary, adult learners must first learn and comprehend spoken vocabulary.

Through a series of studies, McGregor et al. (2017, 2020) found that adults with DLD demonstrate problems 'fast mapping' new words, a process that enables learning vocabulary.

Fast mapping for meaning

Fast mapping new words is a process that usually occurs naturally. Initially, fast mapping involves brief exposure to a new word where the sounds (phonology) and meaning (semantics) are stored to create a 'map' of the word. At first, this fast mapping may be unstable, and the word may only contain enough detail so the learner can distinguish it from other words they hear.

Slow mapping for meaning

When the word is heard in a range of contexts, the mapping between sounds and meaning becomes enriched and refined while it is stored in long-term memory. This later process is referred to as slow mapping, which occurs repeatedly as the word is encountered with shades of meaning in diverse contexts.

Strategies to support learning of new oral vocabulary

1. Engage in **oral rehearsal,** which is the process of pronouncing each sound within a word. This facilitates fast mapping via working memory to map words and meaning to long-term memory, so the new word becomes familiar and can be automatically retrieved for later use (McGregor et al., 2017).

Once exposed to an unfamiliar word which has been orally rehearsed,

2. Engage in **retrieval-based testing**, which is any activity where learners practise retrieving what they have learned from memory. This can be facilitated with learners providing a personalised definition or synonym of the target word (McGregor et al., 2017).

To enhance retention and production of a new word,

3. Provide **multiple exposures** to new words within activities that highlight word forms (the word's part of speech and usage) and a **link to** a picture or object.

Once new words are learned and stored in the learner's spoken vocabulary, tutors can support comprehension and use of written vocabulary through explicit vocabulary instruction.

Explicit vocabulary instruction

Explicit vocabulary instruction includes an easy-to-understand definition (dictionary definitions are not recommended as they often include complex words or descriptions). Tutors should also provide multiple examples and nonexamples of words they are explicitly teaching, brief discussion opportunities, and checks for understanding.

Provide the learner with opportunities to hear, speak, read and write words in various contexts over time to help build their breadth and depth of vocabulary knowledge.

Instructional time is valuable, so it is important to ensure words are selected with careful consideration. When deciding which words to target for explicit instruction, consider words that are:

- essential to understanding the main idea of the text
- used repeatedly or frequently encountered across different contexts
- related to an area of study for the learner
- connected to the learner's interests or goals
- not part of the learner's prior knowledge.

Some adult learners will benefit from explicit instruction to decode and encode the written form of the newly learned word. Decoding relates to the ability to identify the sounds that are represented by letters to read an unfamiliar word, and encoding refers to the ability to translate sounds in words into letter patterns used to spell the words. Both processes involve using knowledge of letter–sound correspondences to read (decode) and write (encode) words, based on hearing, blending and segmenting the spoken sounds within the word. For example, the word 'boats' has four sounds, and each sound is represented by a letter or letter pattern when written. Building knowledge of letter–sound correspondences involves learning the different spellings that may be used for the same sound. In this example, the /o/ sound is spelled <oa>. The conscious and deliberate act of decoding and encoding unfamiliar words ultimately facilitates the unconscious orthographic mapping of words, which enhances the long-term storage of vocabulary (see Chapter 3 in Part One).

Word reading and comprehension may be further enhanced by drawing upon morphological awareness, which refers to the knowledge of how words can be broken down into smaller units of meaning, such as roots, prefixes and suffixes. In our previous example, the suffix '-s' in 'boats' means 'more than one boat'. Extending further, if a learner knows that the 'dis-' prefix means 'opposite', then the learner can deduce the meaning of 'disagree' as 'the opposite of agreeing' or 'not to agree'. This understanding can be applied across the many words that contain the 'dis-' prefix.

Word analysis

The process of teaching an adult with DLD to learn a relevant yet unfamiliar word independently begins with steps that facilitate the gradual release of responsibility (I do, we do, you do). The tutor would demonstrate breaking a spoken word into sounds and mapping the letter patterns for that word to each sound. Then the tutor would do this with the learner to support learning the process, and finally the tutor would encourage the learner to practise doing this themselves. The process would be used repeatedly with new words, so the learner understands and can apply this strategy to new words independently.

It is helpful to keep a log of unfamiliar words to identify target vocabulary words for instruction and review previously targeted vocabulary as part of your lesson.

Activities that target word learning

Essential words routine

During this routine, the tutor introduces target words with easy-to-understand definitions, visual cues and examples. Phonology and morphology may also be discussed if the word contains a spelling pattern they are currently working on.

Interact

Definition: when two or more things have an effect on one another

Synonyms: connect, influence, act together

Example sentences:

1. One way to learn another language is to interact with native speakers of that language.
2. The garden produced a lot of vegetables when it interacted with plenty of sunlight, rain and warm temperature.

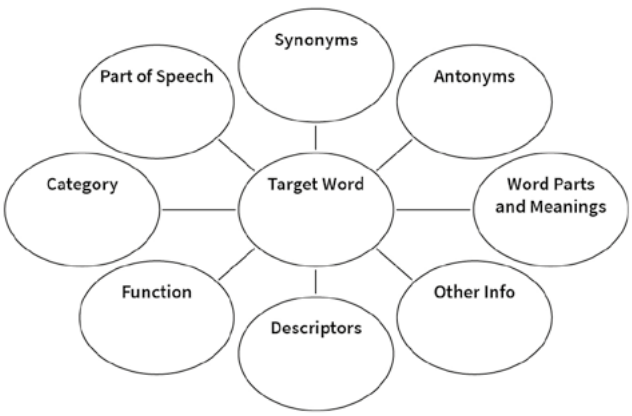
Discussion

1. Tell your tutor about a time when you interacted with someone and it influenced you in a positive way.
2. Tell your tutor about ways that people can interact online.

Graphic organisers

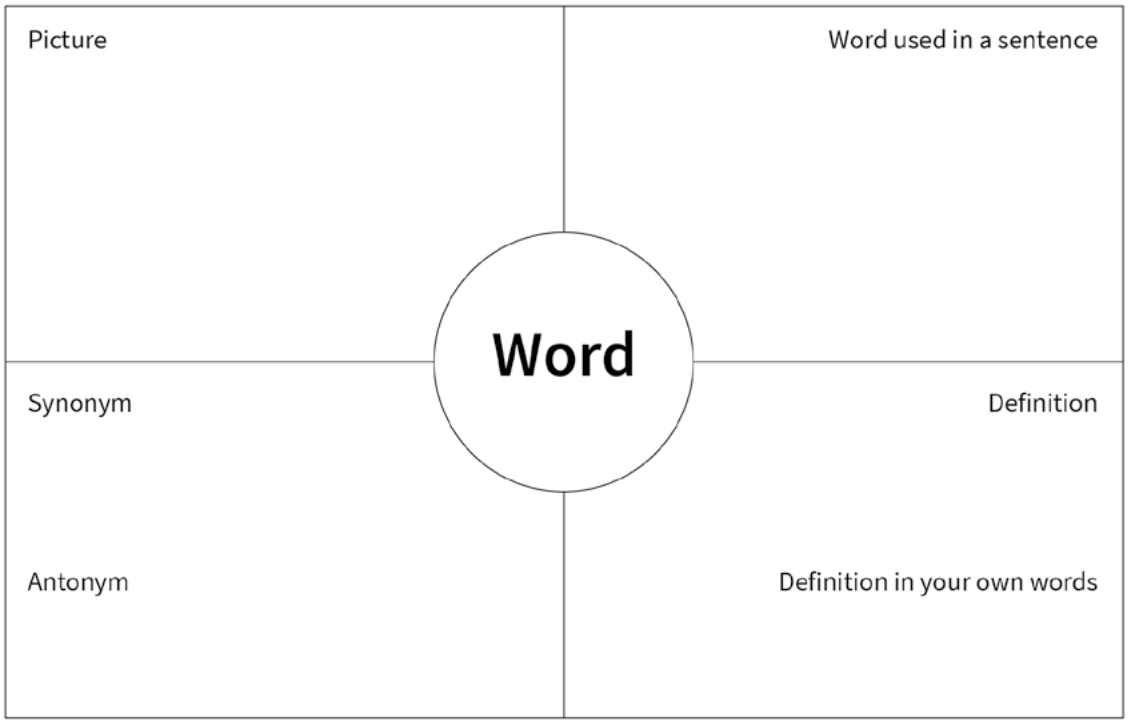
Semantic mapping

Semantic maps visually connect a word or phrase and a set of related words or concepts. Using semantic maps, including metalanguage, as part of your lesson may support the learner in recalling the meaning of words and support development of their content knowledge when reading a particular text (The Meadows Center for Preventing Educational Risk, 2012).



New word analysis

Four square strategy is another example of a graphic organiser that promotes critical thinking and helps deepen learners' understanding of key vocabulary. When using this strategy, learners determine and clarify the meaning of targeted vocabulary words encountered. This strategy is effective in helping learners come to understand vocabulary at a level beyond defining words and promotes a more concrete understanding of the meaning of the words.



Consider background knowledge

Text comprehension draws heavily on prior knowledge (Carrell, 1983). In fact, background knowledge may be the single greatest contributor to reading comprehension for struggling adult readers (Sabatini et al., 2010; Talwar et al., 2018). For adult learners with DLD, it can be beneficial to spend more time on a text to allow for discussion, so that the learner has a greater chance of understanding through listening, speaking, reading and writing. **Close reading** may be a useful strategy to help learners gather meaning from texts by carefully engaging with the language used within the text. For example, a reading can address any issues with decoding or unfamiliar vocabulary. Then, the text may be read again to derive meaning through tutor questioning, commentary, and joint discussion of the text's purpose. And finally, the text may be read again to allow the learner to summarise, critique, and/or extend their discussion and analysis of the meaning.

Stop and think

After reading about DLD, what tutoring strategies would you use for a learner who may have these indications?

Summary

If you suspect an adult learner may have underlying language difficulties, make sure that assessment of their skills identifies the specific difficulties they have, so you can tailor instructional work to their needs.

Strategies to consider when planning lessons

- Consider their learning goals and how these inform their learning plan.
- Drawing on assessment information, ensure you have a good understanding of the learner's knowledge and abilities and plan your sessions to build on these.
- Check for understanding. If the learner does not understand, repeat and rephrase more simply.
- Consider cognitive load, and present information in small digestible chunks.
- Summarise after providing information.
- Take the time to talk and discuss, including about learning strategies to facilitate metacognitive thinking.
- Provide science-based reading instruction, i.e. a structured, explicit literacy approach.
- Provide feedback and opportunities to practise so that new information is retained.
- Implement direct vocabulary instruction strategies.
- Use visuals to help with understanding, such as pictures, symbols, drawings and graphic organisers.

Resources for teaching

Engage with DLD
https://www.engage-dld.com/

DLD and me
https://dldandme.org/

RADLD – Raising awareness of DLD
https://radld.org/

The DLD project
https://thedldproject.com

Podcast: DLD and adulthood with Sophie Franks
https://thedldproject.com/dld-adulthood-with-sophie-franks/

Helping adults with long-term language disorders to achieve their goals
https://www.banterspeech.com.au/helping-adults-with-long-term-language-disorders-to-achieve-their-goals/

Life as an adult with DLD
https://www.youtube.com/watch?v=bgSgvvPX-EY

Sophie talks about growing with DLD
https://www.youtube.com/watch?v=lzy71gbf1z8

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Chapter 10

Trauma-informed practice

Main points

- Many learners seeking tutoring have had complex lives and experienced marginalisation, abuse or displacement from their country of origin; they may have experienced trauma.
- Some learners may also have been traumatised in educational environments, particularly if they have a learning disability.
- Tutors need to understand how to recognise the signs of trauma and how to make sure they create a safe working relationship with learners.
- Being trauma-informed will enable a tutor to understand some of the responses and behaviours that might be encountered in learners that might otherwise be difficult to understand.
- It is important for tutors to be calm and to model emotional regulation to create a safe and predictable learning environment for learners.
- There may be times when a learner is too emotional to focus on learning and a tutor may need to stop the session.
- It is important to know how to refer someone for specialist support if needed.

Introduction

This chapter will firstly look at what trauma is and how it can impact on adult learners, including some of the neurophysiology that drives trauma responses. Secondly, we will look at what a trauma-informed approach to working with learners is and how this can be applied in practice. This does not include working with learners on their trauma which is an area of specialist work – learners can be referred to a specialist if this is needed. It is helpful for tutors to recognise the signs that someone may be experiencing the effects of trauma, particularly trauma relating to previous learning experiences. It is also helpful to understand how to stay focused on learning and ensure learners feel safe enough to learn. Learning involves taking risks, so building confidence and cultivating a growth mindset will support this work.

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What is trauma?

Trauma is a response to an incident or series of events that are emotionally disturbing or life-threatening with lasting effects on an individual's emotional, psychological and physiological wellbeing. Trauma is caused by an experience that overwhelms a person's ability to cope, and their neurological system is unable to process the stress. Their body continues to operate as if the threat still exists. Trauma can cause a prolonged alarm reaction – the body will be full of adrenaline and cortisol, which alters neurological, adrenal, nervous and digestive systems. Trauma impacts people's bodies and minds.

As Bruce Perry (2006) said, "Trauma changes the brain".

Trauma may be caused by a single incident – like a car accident, death of a loved one or a natural disaster. Or it may be caused by exposure to a repeated experience over time, for example, neglect or childhood abuse. This is referred to as complex trauma. It can also be intergenerational, as the effects of trauma are passed on to the next generation. A clear example is the trauma of colonisation manifesting in the Aboriginal community. We also see trauma in some communities we work in, where disengagement with education has become a norm.

Not all traumatic events cause trauma, as the human body is designed to respond and adapt to a range of stressors. In a healthy human system, once the threat is over, the body ideally returns to a regulated state.

Why is it important to know about trauma?

Based on US and Australian data it is estimated that somewhere between 70% and 90% of adults have experienced a potentially traumatic event, and this does not account for unsurfaced childhood trauma (Kilpatrick et al., 2013). Many adult learners will have experienced trauma in their lives. Childhood trauma can be a reason that someone might not have engaged well at school, missing out on learning and struggling with behavioural expectations. Children may also experience trauma at school if they experience damaging teaching approaches that shame and humiliate. This will be compounded if they have a specific learning disability. Traumatised children grow into adults who continue to navigate the impacts of their trauma in educational settings (Kerker et al., 2015). Trauma is strongly associated with chronic mental health issues. This can impact an adult's ability to engage in learning during tutoring.

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We need to understand how some of the ongoing impacts of trauma may be manifesting in our learners and how a trauma-informed approach can help us work with these learners.

Learning as an adult can help repair trauma

We have the opportunity to create welcoming and safe learning environments and new and safe learning experiences. A trauma-informed educator who can build a safe working relationship and be responsive to learner needs can create the safety required to learn.

These can help repair previous difficult experiences of education. Over time, new neural pathways can emerge that recode the negative historical experiences of learning into positive situations, allowing people to flourish. Consistent, supportive and sensitive attention to the learner's state of mind when learning allows a new, productive engagement with the process of learning.

There are many stories of adult learners who have experienced the transformative effects of learning through improving their literacy and rebuilding their lives.

How does trauma impact people?

Trauma can have a major impact on children – impacting on physical, emotional, social and cognitive development. In adults, these impacts manifest as anxiety, depression, and difficulties forming and maintaining or having appropriate boundaries in relationships (Siegal, 2020). These difficulties can then impact on families and communities.

Adults with histories of trauma may have difficulty with self-esteem. They may also have built up fear and embarrassment around learning. For adult learners who have experienced trauma in schools and other learning institutions, new learning environments can trigger a stress response (Wilson, 2016). A tutor's early interactions with a learner determines whether the learner feels like they can trust the tutor enough to continue. Even if they persist, if they feel overwhelmed or inept in learning sessions, they may become either angry, withdrawn or defensive. Some may dissociate – manifesting as going quiet or having a glazed expression. If learning sessions are too confronting, they may become avoidant and miss sessions. Some adult learners may not even be aware of their own trauma or the associated behaviours they display.

Interestingly, there is a relatively small amount of research on the experience of traumatised adults in learning and language acquisition, and the majority of this research has been undertaken with EAL populations who have come from a traumatic background, such as refugees (Yehuda et al., 2015). Within the adult literacy sector, work with EAL people has included an awareness of the range of trauma backgrounds that some of this cohort have experienced as refugees and migrants. Using inclusive language and being culturally sensitive is essential.

Using trauma-informed practices is an integral part of enacting values of diversity, equity and inclusion.

How does trauma impact on learning?

Early trauma can impact the brain's language development centres. Language acquisition in early childhood relies on a nurturing environment where caregivers model speech and provide the social context for learning. Early life trauma impacts the areas of the brain involved in emotional regulation and responding to stress (Perry, 2009). Trauma may also affect the hippocampus, crucial for memory and learning, impacting the child's ability to retain language-related information (Yehuda et al., 2015). The effects on learning can be significant, as trauma can affect cognitive functions, attention and regulation. Learners from traumatised backgrounds may have difficulties in concentration, impaired memory, and challenges in forming healthy relationships with educators and/or peers.

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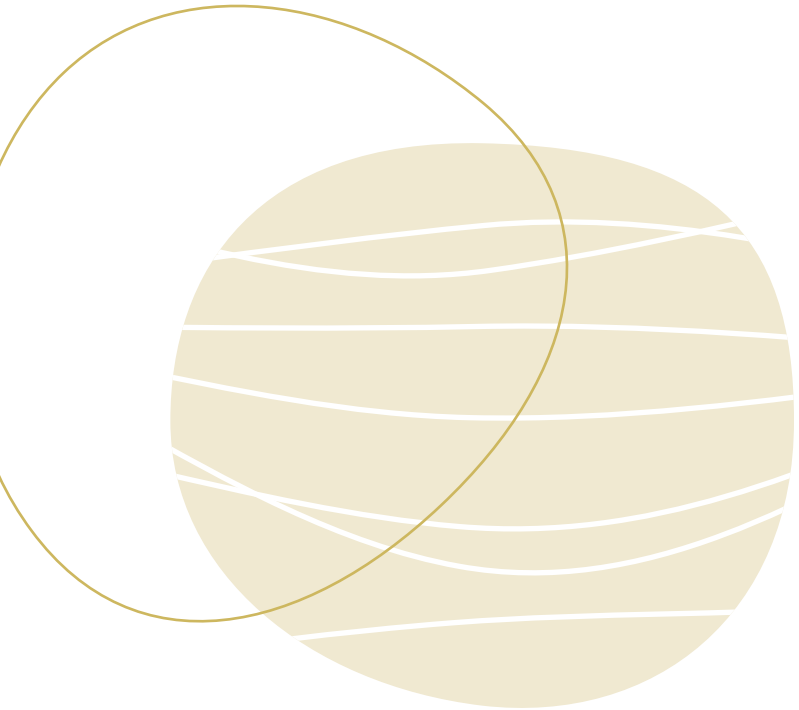
Trauma results in a person staying in a constant state of alert, as their brain remains endlessly vigilant, scanning for threat. A frightened person does not focus on words, but on what may be threat-related signals in the environment. They may be hypersensitive to non-verbal cues, like facial expression, body posture, tone of voice, sudden movement or noise. They may perceive a situation as threatening even though the threat might not be real.

This can leave less cognitive space for learning, as the rational part of the brain is hijacked by fear. Learners with trauma histories may struggle to focus, retain information, and regulate their emotions. They may also have difficulty finding the right word to use because trauma affects the language area of the brain. Tasks that require paying attention and retaining and recalling new information can be difficult – with clear implications for learning.

Learners of all ages need to be able to focus and concentrate over a sustained period in order to learn. Memory is required for learning to enable the new information to be stored and later retrieved (Morgan-Short et al., 2014). Traumatic stress can negatively impact a person's ability to control their thoughts, emotions and behaviours, and limit their ability to store and retrieve new information, including vocabulary and grammar (Yehuda et al., 2015; Perry, 2009). This means literacy and language learners can struggle to remember what they've learned, retrieve the information, and apply it in the right contexts.

Learning requires a calm and attentive state of mind. When in an anxious state, it is harder to process new information and be creative. Anxious adults may have difficulty taking risks in learning, including starting new tasks, responding to questions, or considering an alternative viewpoint (Kerka, 2002). When an adult is in a state of fear, it can be more difficult to process directions and they may get confused and more anxious. If a tutor responds with frustration and impatience, this can escalate anxiety, leading to mutual misunderstanding – like hostility and inappropriate or dissociative responses.

While this manual focuses mainly on providing tutoring in a one-to-one context, it is important to note that when working with groups, trauma responses can impact on group dynamics. Biologically, our safety mechanisms and nervous systems are built to operate collectively, so when one person is experiencing fear, it will often cause fear in others as they become alert to a potential danger to the group. This can generate disruptive or disconnected behaviours in a group. Similarly, if a tutor becomes triggered, this can affect a learner and lead to situations that can become difficult to manage.



The neurobiology of trauma

Trauma can be broadly defined in two main branches: shock trauma and developmental or interpersonal, complex trauma.

Shock trauma is trauma that overwhelms the nervous system, causing it to go into a freeze state. Without therapy, debriefing or recovery, a person who experiences shock trauma may struggle to cope with the emotions caused by the trauma, causing adrenaline, cortisol and other stress hormones to remain stuck in the nervous system. Therefore, when they feel unsafe, trauma can be reactivated and experienced as if the traumatic incident was happening all over again, leading to debilitating emotions, thoughts and experiences that often lead to a PTSD diagnosis.

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Developmental or interpersonal trauma is caused by persistent and repetitive experiences that directly influence the development of the nervous system and have long-lasting effects. They happen in childhood, between the ages of 0 and 8, and can be influenced by stressors during pregnancy and the lasting effects of family trauma (Yehuda et al., 2015). Dr Dan Siegal uses the term interpersonal trauma to describe where primary carers do not consistently or appropriately provide safety cues to infants and young children, leading them to not correctly develop an understanding of what threats are and how to correctly respond to them. These experiences also impact a child's ability to develop attachments and relationships throughout life, including with educators (Siegal, 2020).

Developmental trauma is often used clinically to describe children (and adults) who have been subjected to significant adverse childhood events. These events can include trauma such as sexual abuse, violence, severe neglect and malnutrition, parental death or absence, and family situations of drug use, incarceration and poverty. Such events have well-documented, lasting impacts on brain development, especially the parts of the brain that enable information processing, cognition and executive function, affecting a child throughout their life and into adult learning. These cognitive and emotional disruptions can hinder an individual's ability to learn, adapt to new situations, and navigate complex social interactions (Kerker et al., 2015).

Intergenerational trauma

Intergenerational trauma is often a significant issue for learners in navigating adult learning. Intergenerational trauma refers to the transmission of traumatic experiences, emotions and psychological distress from one generation to the next within a family or community. This concept suggests that the effects of trauma can persist across generations, influencing the mental health and wellbeing of individuals who were not directly exposed to the original traumatic events (Gaywish & Mordoch, 2018).

The transfer of intergenerational trauma can occur through various mechanisms. Traumatised parents may behave in ways that make it hard for them to connect with and provide a secure environment for their children (Siegal, 2020). They might unintentionally pass on the trauma to vulnerable infants and children. Aboriginal people have experienced significant trauma from white colonisation and this includes institutional distrust. The stories of abuse remain alive within Aboriginal communities and the trauma continues even in the present.

Biological factors may also be significant in intergenerational trauma. Although not yet conclusive, research suggests trauma can influence gene expression and become embedded in an individual's biological makeup (Yehuda et al., 2015). The impacts of intergenerational trauma on brain and nervous system development are complex and can manifest in various ways, including impacting mood regulation and contributing to mental health disorders (Van der Kolk, 2017).

Intersection with other challenges – neurodiversity, race and gender issues

There is a connection between social factors, marginalisation, oppression and inequality in incidents of developmental trauma which is well established in research. Specific learning disabilities can result in traumatic learning experiences in education. When dealing with adult groups with disadvantaged backgrounds, the frequency of developmental or interpersonal trauma is much higher (Bryant-Davis, 2019). When someone has experienced more than one of these factors, their needs will be higher and specific to this combination of factors. People with EAL may have a range of trauma backgrounds – asylum seekers, refugees and migrants.

Using trauma-informed practices is an integral part of enacting values of diversity, equity and inclusion. Using inclusive language and being culturally sensitive is essential.

Resources

Video: What is trauma? The author of 'The body keeps the score' explains.
https://www.youtube.com/watch?v=BJfmfkDQb14

What does being trauma-informed mean?

Educational institutions are increasingly becoming aware of the need for a trauma-informed approach, particularly following the challenges presented by the impact of COVID (Founds, 2023; Wahler, 2023). A trauma-informed organisation ensures that all policies, procedures and staff practices are cognisant of the needs of people who have or are experiencing trauma. A trauma-informed approach should be implemented with consideration for the operating context of the service in relation to the needs of staff, tutors and learners (Gross, 2019).

To be trauma-informed, an adult learning organisation needs to:

- realise the widespread impact of trauma in learners and understand potential paths for recovery
- recognise the signs and symptoms of trauma in learners, tutors and staff involved with the literacy service
- respond by integrating knowledge about trauma into policies, procedures and practices.
- actively avoid retraumatising people (SAMHSA, 2018).

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Trauma-informed work as a tutor

To be clear, as tutors we are working in a learning context. This is not about setting up an expectation for tutors to provide counselling or clinical support to learners. It does not mean working with people directly on their trauma stories or even working with their emotions. Trauma work sits outside the scope of these roles.

A trauma-informed tutor understands that the safer and more connected people feel, the better they can learn and retain information. Having a trauma-informed lens means that a tutor can understand behaviours and attitudes they might encounter in learners. Tutors should stay focused on learning with their students, bringing a range of skills and instructional knowledge to the task.

A skilled tutor will be responsive to the difficulties a learner might have with learning tasks. They will adapt their instruction to ensure a learner is well supported to learn skills and not left to guess or flounder when learning.

Skilled tutors will value a learner's identities and strengths and will acknowledge and draw on learner knowledge and abilities.

Tutors may have their own lived experiences or interpersonal or learning-related trauma, and it is important that they are able to manage their own nervous system responses. This includes being able to set and manage boundaries and respond to situations where they feel unsafe or uncomfortable personally or professionally. In these situations, tutors need to feel confident enough to stop a session and seek help as necessary.

Key concepts for working with people who have experienced trauma

Learners need to feel safe in order to learn.

The necessary sense of safety to encourage adult learners comes from consistent, nurturing, and sensitive attention to the learner's state of mind (Daloz, 1999).

How tutors can build safety for learners:

- Establish respectful and supportive working relationships.
- Create safe learning environments in which learners are supported to focus and learn.
- Be consistent and create structured routines that become familiar.
- Establish expectations and maintain clear boundaries.
- Model self-regulation with consistent behaviour and interactions.
- Plan strategies to help learners manage transitions, e.g. entering or exiting the service or a change in tutors.
- Be inclusive and culturally sensitive.

What can a tutor do within the scope of their role?

- Understand the scope and responsibilities of their role.
- Be culturally sensitive and aware of diversity.
- Build good working relationships, with a consistent, calm manner and clear expectations.
- Use inclusive and non-judgemental language and non-threatening body language.
- Ensure you are self-regulated when interacting with learners.
- Create safe learning environments that are predictable and structured.
- Establish clear boundaries with learners, tutoring not counselling.
- Use a strengths-based approach, getting to know learners and what they are good at.
- Embed a trauma-informed approach in processes (e.g. welcoming intake, working together agreements, navigating transitions).
- Ensure learners feel safe enough to learn and are supported to achieve new skills.
- Build instructional skills and focus on providing effective instruction so learners experience success.
- Seek supervision and information when necessary.
- Know when and where to refer to a support service.

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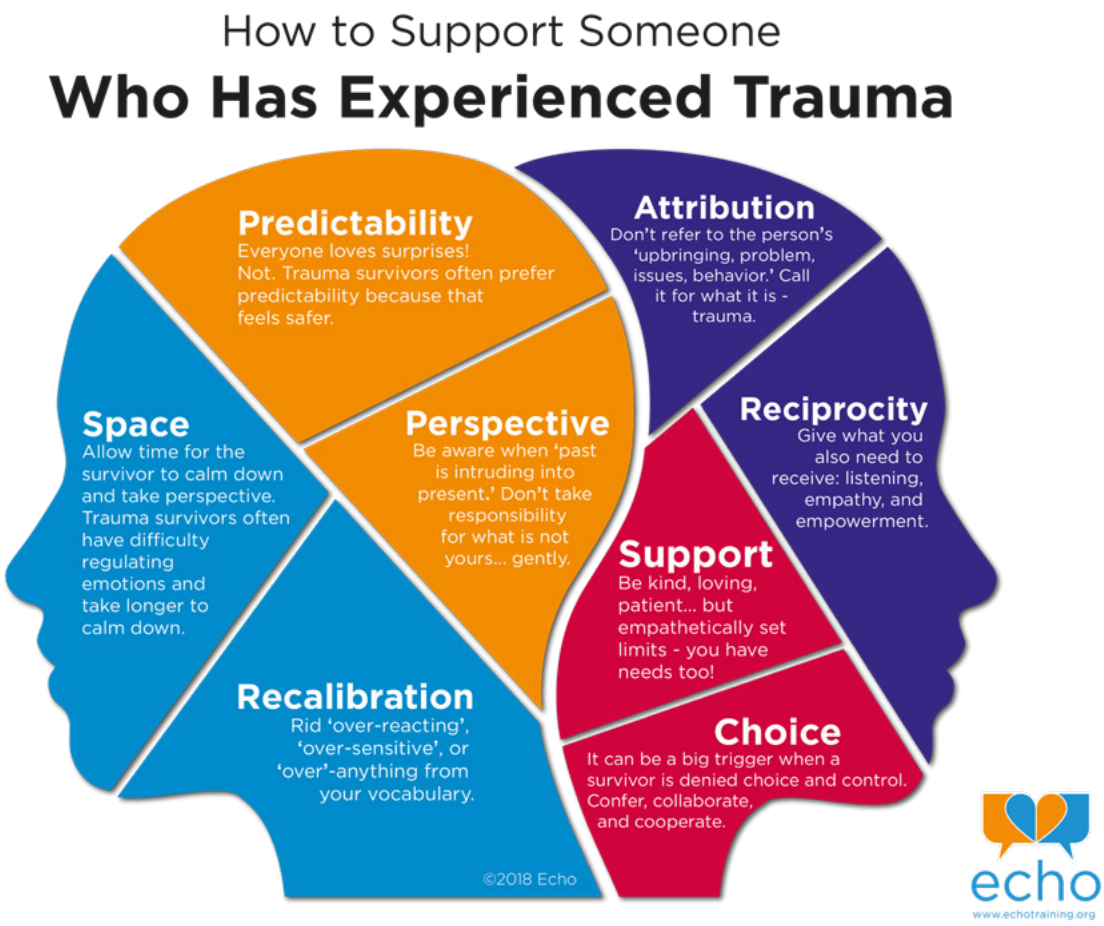
How to Support Someone
Who Has Experienced Trauma
Predictability
Everyone loves surprises! Not. Trauma survivors often prefer predictability because that feels safer.
Attribution
Don't refer to the person's 'upbringing, problem, issues, behavior.' Call it for what it is - trauma.
Space
Allow time for the survivor to calm down and take perspective. Trauma survivors often have difficulty regulating emotions and take longer to calm down.
Perspective
Be aware when 'past is intruding into present.' Don't take responsibility for what is not yours... gently.
Reciprocity
Give what you also need to receive: listening, empathy, and empowerment.
Support
Be kind, loving, patient... but empathetically set limits - you have needs too!
Recalibration
Rid 'over-reacting', 'over-sensitive', or 'over'-anything from your vocabulary.
Choice
It can be a big trigger when a survivor is denied choice and control. Confer, collaborate, and cooperate.
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Recognising the signs that someone may be dealing with traumatic responses

People are impacted by trauma to varying degrees. Someone who has experienced trauma may be able to function most of the time but may be triggered by situations that resemble their previous threatening and traumatic experience. Triggers will be different, depending on the original experience. Once triggered, someone may become hyper-aroused – becoming alert and reactive, or they may become hypo-aroused – withdrawn and uninterested.

Behaviourally, **hyper-arousal** might present as jittery, appearing on alert, irritable, quick to anger, startled by loud noises, frustrated, panicky, thinking rapidly, impulsive, stressed, or finding it difficult to concentrate or focus. **Hypo-arousal** might present as appearing withdrawn, quiet, uninterested, bored, unable to think clearly, not focused, fatigued or with low energy.

Both hyper-aroused and hypo-aroused learners may no longer be in a space where they can effectively engage in learning and manage their emotions.

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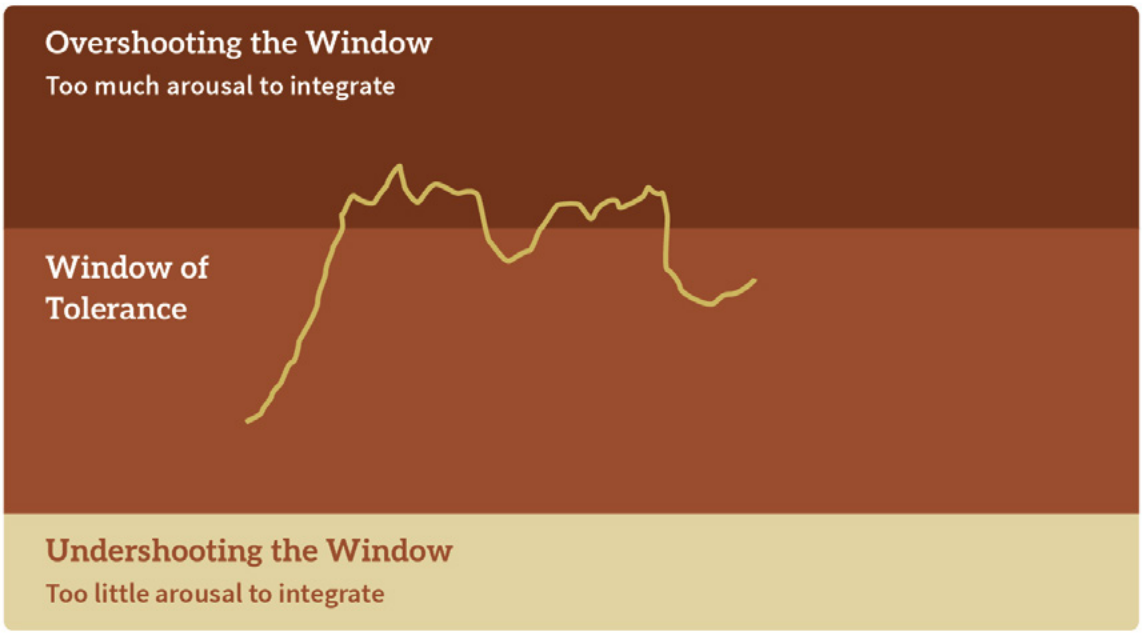
Source: New Moon Psychotherapy

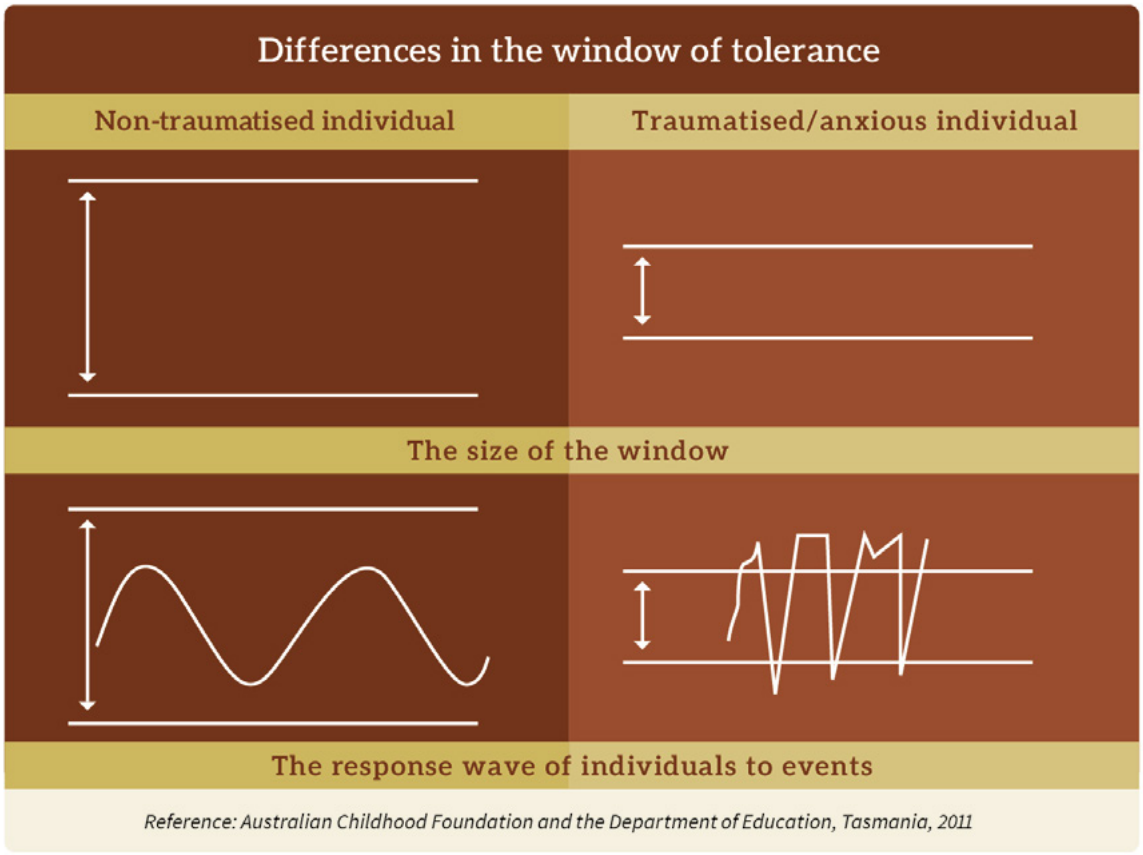
Window of tolerance

The concept of the **window of tolerance** is useful for us to assess whether someone is in a state of readiness to learn. Dan Siegal developed the concept of the window of tolerance. We have an optimal zone for processing and integrating information and managing our experiences. When we are in this window, we can engage our rational minds to learn, focus on tasks and reflect on problems. We are in touch with what is going on around us and feel relatively calm.

All of us have times when we move outside this window and become flooded with emotional and physiological arousal, becoming either hyper-aroused – flooded by emotion, or hypo-aroused – falling into a low state of arousal. Our thinking is disrupted, and we may be triggered into a fight, flight, freeze or fawn response.

People with a trauma history have a narrower window of tolerance and are more easily triggered into one of these dysregulated states.





Adapted from: DECYP, 2020

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What to do when someone presents in a state of hyper- or hypo-arousal

Both the tutor and the learner need to be within the window of tolerance or in a regulated state for them to work together effectively.

If a learner presents for a session in an obviously hyper- or hypo-aroused state, dealing with this will take precedence over attempting a learning session. If you talk with them and they are not able to shift back into a regulated state, there is no point attempting a learning session. This is not likely to go well and is likely to result in an unsuccessful experience, which no learner needs. You may need to seek help from your supervisor to deal with the situation.

A learner might shift into a state of arousal outside their window of tolerance as a learning session progresses. If a learner becomes triggered during a session or a learner wants to talk about personal issues, they will gently need reminding that you are both here to work on their literacy. You may need to remind them that you are not a trained counsellor, and you can help refer them to appropriate supports. There may be times that a tutor will need to seek debriefing via supervision.

Tutors should avoid triggering learners as much as possible. This includes avoiding selecting learning materials or topics that present content that will be triggering for the learner (Wilson, 2020). A tutor should be aware of the emotional state of their learner throughout the session. Indicators that a learner is starting to struggle include difficulties understanding instructions, reluctance to undertake tasks, expressing frustration, arguing, or alternatively withdrawing and going silent. Within the scope of their role, a tutor can respond by adjusting learning activities and approaches and engaging in metacognitive conversation about learning. Generally, this will keep a session on track and ensure a learner manages to engage with learning.

It is worth noting that it is possible to find that you are working with adults who are **currently** experiencing trauma – like domestic violence. This will require a considered and sensitive response, with the aim of setting up an appropriate referral.

Storytelling

Adult learners are often encouraged to tell their own stories to validate their lives and experiences. This can be a powerful process, but it can also be a minefield when working with someone with trauma. A skilled tutor needs to be able to carefully navigate the telling of traumatic experiences. For example, if a particularly difficult story begins to emerge, a tutor should interrupt and invite the learner to choose a less difficult story. If a difficult experience is recounted, a tutor can help the learner see this from the point of view of how they drew on strengths and managed the situation as well as they could, highlighting their resilience. It is not useful to allow a learner to rehearse a story of victimisation. In storytelling environments, remember to manage your own wellbeing and emotions – you may hear something triggering to you and should seek out relevant support when necessary.

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It is also important to ensure that learners' stories are only shared with their permission, whether they are traumatic or not (Ball, 2013). Sharing without permission is another way that boundaries can be breached. If sharing will be in a public space, it is important that this is discussed with the learner to consider who might read it and how the story might be used (particularly if it will be in the media). It is important not to exploit the vulnerability of a learner by putting them in a situation where they feel unsafe all over again. The last thing we want to do is retraumatise our learners.

Activities to help self-regulation

It is important that tutors are in a self-regulated state when engaging with learners. Various strategies can help you move back into a regulated state, and these may be helpful when you are faced with managing a difficult situation.

1. **Breathing:** Slow inhalation via the nostrils and slow exhalation out of the mouth activates the parasympathetic nervous system and simultaneously creates calm and focus. Try the box breath technique: 4 count breath inhalations, 4 count hold, 4 count exhalation through the mouth, 4 count hold. Do this for 5-10 rounds and notice how you are feeling at the start, and at the end.
2. **Stretching:** Bringing mindful movement into the body helps activate energy, especially if you have been sitting for a while and have disconnected or dissociated, it can bring you back into your body. Stand up and stretch and walk around the room or look out of the window.
3. **Mindfulness:** Mindfulness is the practice of noticing without judgement, and bringing focus to the here and now, rather than being stuck in a loop if a traumatic memory or sensation has been activated. Notice how you are feeling in your body, and specific areas where there is sensation. Stay with the sensation, just noticing it, and noticing when its intensity wanes. Place your hand on your heart, and a hand on your stomach while you do it, externally signalling your nervous system to calm down.

Activities that can support learners to stay in a regulated state include:

1. **Have a brain break:** Playing a game can break a period of intense focus and tension and help someone find their way back to a more relaxed state, particularly if it involves laughter. Word games like spaceman, bingo with words and Bananagrams can be helpful.
2. **Focus and location:** Have a student describe five things they see in the room, four things they feel with their skin, three things they can hear, two things they can smell, and one good thing about themselves. This focus and location exercise anchors the learners into the room and themselves. Ask them to share the one good thing so they can say it out loud and hear themselves express positivity.

Vicarious trauma

Vicarious trauma is a term used to describe the cumulative impact of empathetic engagement with other people's trauma.

Adopting these trauma-informed practices and clarifying the boundaries of the tutoring role will contribute to significantly reducing this possibility. It is the responsibility of a tutor to maintain the focus of the sessions on learning and not enter discussion about learner's personal histories. Tutors need to manage and limit disclosures, responding respectfully and empathically but reminding a learner that they are not a counsellor. Tutors should seek advice from more senior or qualified staff they have contact with, if situations like this occur. They may present opportunities for a learner to seek further support to deal with the trauma.

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Having access to supervision has been shown to be a protective factor against vicarious trauma. Tutors should similarly seek support if they need to debrief on situations or stories they encounter. Self-care strategies are important, as they enable tutors to manage their stress and take extra steps to look after themselves when they notice their stress levels are raised.[7]

Stop and think

What indications could be apparent if a learner's trauma is affecting their learning? How would you adjust tutoring when working with this learner?

[7] ACT Community Services provides the following factsheet on self-care and vicarious trauma: https://www.act.gov.au/__data/assets/pdf_file/0020/2380502/Vicarious-trauma.pdf

Summary

Trauma affects the learning brain. Generally, adult learners with trauma experience slower, lower-level language acquisition. Educators need to be aware of the presence of trauma in their learners – particularly when it relates to trauma that may be triggered by a learning environment. Awareness of the way trauma impacts the nervous system helps tutors understand how learners might experience patterns of fight, flight and collapse. Learners may get stuck in the learning process and exhibit protective behaviours such as withdrawing or becoming disruptive when frustrated. Understanding how early life experiences and ongoing relationships shape the nervous system provides insight into why and how people who have experienced trauma might behave.

A trauma-informed tutor can identify signs that a learner may be dealing with traumatic responses and can apply a range of strategies for supporting a learner in the educational context. Though best practices continue to be identified, activities aimed at increasing attention, supporting learning, and modelling emotional regulation can assist learners whose trauma impacts their learning environment.

Building safe working relationships with learners and creating safe and predictable learning environments can be enormously significant in restoring emotional regulation and repairing a learner's sense of agency and wellbeing. Safe working relationships are built by establishing clear expectations and maintaining boundaries, which are critical when working with those who have experienced trauma. A skilled tutor brings not only well-founded instructional strategies to a learning session, they also apply a trauma-informed lens to understand learners and how to support them.

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List of acronyms

Acronym	Full title
ABS	Australian Bureau of Statistics
ACSF	*Australian Core Skills Framework*
ADHD	attention deficit hyperactivity disorder
AIATSIS	Australian Institute of Aboriginal and Torres Strait Islander Studies
CALD	culturally and linguistically diverse
CVC	consonant vowel consonant
DLD	developmental language disorder
EAL	English as an additional language
IELTS	International English Language Testing System
OECD	Organisation for Economic Co-operation and Development
PIAAC	Programme for the International Assessment of Adult Competencies
TBLT	task-based language teaching
UDL	Universal Design for Learning

Glossary

Literacy and numeracy terminology	Meaning
Affix	A morpheme (prefix or suffix) added to the beginning or end of a word to change its meaning or make a new word.
Algorithm	A set of steps to solve a particular mathematical problem.
Alphabetic principle	The understanding that the relationships between written letters in words represent spoken sounds in a more or less predictable way.
Andragogy	A method and practice for teaching adult learners.
Antonym	A word that means the opposite of another word, e.g. fast is the opposite of slow.
Array	A set of numbers or objects that follow a pattern, presented as an arrangement of rows and columns.
Base word	The smallest part of a word that has meaning. It may have prefixes or suffixes added but can stand on its own, e.g. help, helpful, unhelpful (compare 'root word').
Blend (consonant)	A group of 2 or 3 commonly occurring consecutive consonant letters in a word that are not digraphs or trigraphs – they each represent a sound, e.g. the /b/ and /l/ in 'black' or the /n/ and /d/ in 'send'.
Blend (sounds)	The ability to say the individual sounds in a word or together to rapidly form a whole word, e.g. the sounds /c/ /a/ /t/ are blended to say the word 'cat'. An important reading skill.
Coarticulation	The natural overlap of mouth movements when we speak, such that neighbouring sounds blend into each other. While saying one sound in a word, the lips and tongue are starting to form the following sound in that word. For example, in the word 'ham', as you are saying the open-mouthed /a/ sound, you are starting to form the closed-mouthed /m/ sound.
Cognitive load – extraneous	Any additional load added to a task that makes it more difficult for the individual, e.g. background noise or information that is not relevant.

Literacy and numeracy terminology	Meaning
Cognitive load – germane	Information that helps the learner link new information with what they already know, e.g. worked examples of the task.
Cognitive load – intrinsic	The complexity or difficulty of the task for the individual.
Cognitive load theory	An explanation of how learning happens when new information moves from working memory to long-term memory. This informs instructional practices that will support learning.
Cohesive ties/cohesive devices	Words or phrases used to connect ideas between different parts of a text. They can be pronouns that refer to a noun mentioned previously; a synonym used for a previously mentioned noun; or a transition word such as 'and', 'so', 'because' or 'but'.
Complex trauma	The long-term impacts from experiencing multiple or repeated traumatic events.
Consonant	A speech sound that is made by obstructing breath – the tongue, lips or soft palate stop the air flowing easily through the mouth.
Contraction	A combination of two words into one shorter word by leaving out one or two letters and replacing them with an apostrophe, e.g. 'do not' becomes 'don't'.
Cultural competence	The ability to understand, communicate with and effectively interact with people from different cultural backgrounds.
Decoding threshold	The point at which a learner can read text accurately and fluently enough to focus on comprehension rather than word recognition.
Decoding	The process of translating written words into speech using knowledge of letter patterns, 'sounding out' when reading words.
Deletions	An exercise to build phonemic awareness in which a learner is asked to identify the word made when one sound is deleted. For example, the word 'black' without the /l/ sound makes the word 'back'.
Denominator	The number below the line in a fraction.

Literacy and numeracy terminology	Meaning
Developmental language disorder	Persistent difficulties using words and sentences to express information and understanding spoken or written information.
Digraph	Two consecutive letters that represent one sound, e.g. <th>, <sh>, <ee>, <oa>.
Diphthong	A vowel sound that combines two vowel sounds in a glide. For example, in the words 'oil' and 'boy', the /o/ and the /i/ are co-articulated, making the distinct sound /oi/.
Dissociate/dissociation	A trauma response involving disconnection or detachment from your sense of identity, your surroundings, thoughts, feelings or memories.
Dyscalculia	A learning disability making it hard to understand and work with numbers.
Dysgraphia	A neurological condition causing difficulties with fine motor coordination and the physical act of writing or the expression of thoughts in written form.
Dyslexia	A learning disability involving difficulty reading and spelling despite having the ability to learn.
Encoding	The process of converting spoken words to write them, transcribing each sound by representing it with a written letter/s. Important for spelling.
Escape velocity	The point at which a learner has enough phonic knowledge to learn from reading with less and less supervision. Less phonics instruction is needed after this.
Etymology	The study of word origins.
Expressive language	The ability to put thoughts into words and sentences, both spoken and written, that make sense and are grammatically correct.
Expressive vocabulary	Words that a person understands and uses in spoken or written communication.

Literacy and numeracy terminology	Meaning
Factor	A whole number that divides exactly into another number, e.g. 3 and 5 are factors of 15.
Graph	A single written letter representing one sound in a word.
Grapheme	A letter or letter combination (spelling pattern) that corresponds to one sound (phoneme) in a printed word. Graphemes can be 2-4 letters, e.g. <ch> makes the sound /ch/, <igh> makes the sound /I/.
Graphic organiser	A visual tool that helps learners organise their ideas and information on a topic, such as a mind map.
Homophone	Words that sound the same but are spelled differently and have different meaning, e.g. to, too and two (homo = same + phone = sound).
Intergenerational trauma	The lasting psychological and emotional impact of trauma experienced by one generation that is passed down to the next generation.
Irregular word	A word that has spelling patterns that do not follow most common patterns, e.g. 'young', 'said'. Note that only 4% of words are truly irregular.
Learner agency	The capacity to take the initiative, set goals and reflect on learning, involving choice and responsibility for one's own learning.
Linguistics	The study of the structure and development of a language.
Long-term memory	The process of storing information permanently in the brain. This enables quick recall of information, events, skills, procedures and concepts. Long-term memory is unlimited.
Metacognition	Being aware of and understanding your own thinking processes – thinking about thinking. This enables learners to choose learning strategies and problem-solve.
Metalanguage	The technical language used to describe a language, e.g. grammar, sentence, noun, motifs, imagery.

Literacy and numeracy terminology	Meaning
Metaphor	A figure of speech that compares two unrelated things, stating that one thing is another, e.g. 'the exam was a piece of cake', or 'life is a rollercoaster'.
Mnemonic	A technique or strategy to help remember something e.g. **E**very **G**ood **B**oy **D**eserves **F**ruit for remembering the names of the musical notes that are placed on the line (E, G, B, D, F).
Morpheme	The smallest unit of meaning in a word, e.g. 'munched' contains 2 morphemes, 'munch-' meaning to chew and '-ed' meaning in the past.
Morphological family	A group of words that contain the same base word, e.g. writer, written, writing, writes, rewrite, unwritten.
Morphology	The study of the smallest meaningful parts of words and how different meanings are created by combining these word parts with each other or when they stand alone.
Neurodiversity/ neurodivergent	The differences in the way people's brains work and the idea that people experience and interact with the world around them in different ways because of these differences.
Numerator	The number above the line in a fraction.
Onsets (and rimes)	Onset-rime refers to the division of a syllable into two parts – the onset and the rime. Onset – the initial consonant sound/s before the vowel in a syllable e.g. /ch/ in 'chop' and /scr/ in 'scrap'. Rime – refers to the vowel sound and all the other sounds after it in a syllable e.g. /op/ in 'shop', 'top' and 'flop' and /ap/ in 'scrap', 'map' and 'clap'. Teaching onset and rime is a strategy for building sound awareness in words but is not necessary. Instead, we focus on hearing the individual phonemes in words.

Literacy and numeracy terminology	Meaning
Orthographic mapping	The process the brain uses to store words permanently in memory for instant retrieval by linking the individual sounds of words with their spelling.
Orthography – transparent, opaque	Orthography – The accepted conventions for writing and spelling words, e.g. words never end in <v>, they almost always end in <ve>. Transparent orthography – A writing system where there is a consistent and predictable correspondence between letters and sounds, making reading and spelling very easy to master. Opaque orthography – A writing system in which the pronunciation of a word may not always be predictable from its spelling and there are many exceptions to general spelling rules. English has more opaque orthography. In English, meaning also influences spelling.
Part–whole knowledge	The understanding that a number can be broken into smaller parts e.g. the number 7 can be 2 + 5 or 3 + 4 or 1 + 6.
Partitioning – additive, multiplicative	Partitioning – The ability to divide an object or objects into smaller groups or parts, e.g. 48 can be partitioned into 4 tens and 8 ones. Additive partitioning – A strategy for adding and subtracting numbers by breaking them into smaller, more manageable parts, e.g. 43 is 4 tens and 3 ones. Multiplicative partitioning – A strategy for multiplying and dividing numbers by breaking them into smaller, more manageable parts, e.g. for 27 x 6, first break 27 into 20 + 7, then 20 x 6 = 120 and 7 x 6 = 42, then add 120 + 42 = 162.
Pedagogy	The method and practice of teaching/instruction, including the strategies used to promote learning, based on understanding learners' needs and adapting teaching accordingly.
Phoneme	The smallest distinct speech sound in words, e.g. pot has three phonemes /p/ /o/ /t/.
Phonemic awareness	The understanding and ability to identify and manipulate individual phonemes/sounds in speech. This is an important subset of phonological awareness.

Literacy and numeracy terminology	Meaning
Phonics	A body of knowledge focused on sound–letter relationships in text. Also used to describe instruction that teaches this knowledge.
Phonological awareness	Awareness that spoken words are made up of parts – syllables, onsets and rimes and phonemes – and the ability to identify and mentally manipulate those parts.
Phonology	The study of sound patterns in speech and how those speech sounds are organised in the mind as words and used to express meaning.
Place value	The value of each digit in a number depending on its position in that number, e.g. in the number 379, the digit 7 has a value of 70 units.
Proportional reasoning	The ability to understand the relationship between numbers in terms of being double or half or five times greater.
Prosody	The particular patterns of stress and intonation of a spoken language – speaking and reading with expression.
Punctuation	The writing symbols that clarify meaning in text, indicating pauses and intonation. They make sentences easier to read and help readers to separate ideas. Examples are full stops, commas, question marks and exclamation marks.
Quadgraph	A four-letter combination that represents one sound in a word, e.g. /ough/ in 'n**ough**t'.
Quotient	The number result of dividing one number by another number.
Reading vocabulary	Words that a person can easily read or decode and understand but cannot clearly define.
Receptive language	The ability to understand language that is heard or read.
Receptive vocabulary	Words that a person can recognise and understand when reading or listening.
Rime (onset and)	see Onset and rime.

Literacy and numeracy terminology	Meaning
Root word	Holds the core meaning of a word and has prefixes or suffixes added. It cannot stand on its own, e.g. aud-, audio, audible, auditorium (compare 'base word').
Schema	A knowledge structure built from simpler pieces of information, helping to organise knowledge. For example, the word frog is built from four specific sounds and their associated letters. It is the name of an amphibious animal that hops and can be described... More information can be added to schema over time.
Schwa	A short vowel unstressed sound that sounds like /uh/. It appears in the unstressed syllable of a multisyllabic word, e.g. the second <e> in el**e**phant or the <a> in **a**bout.
Science of Reading	Refers to the consensus of scientific evidence that helps us to understand how reading develops in both typical and atypical learners, how we learn to read and effective instructional strategies for teaching reading.
Scope and sequence	A summary of what should be taught and in what order to meet the intended learning outcomes, e.g. the order of teaching phonic knowledge, starting with simpler patterns and progressing to more difficult ones.
Segmenting (sounds)	Being able to hear and articulate the individual sounds separately in words, e.g. the word sprint is made of the sounds /s/ /p/ /r/ /i/ /n/ /t/. This supports spelling.
Semantics	The meaning and interpretation of words, phrases and expressions of a language.
Set for variability	A strategy for reading to support decoding. This builds on the understanding that some spelling patterns can represent more than one sound, e.g. <ea> can sound like /E/ or like /A/. When decoding, the learner can try either of the sounds to work out the word they are reading.
Short-term memory	The temporary storage of a small amount of information in the brain, kept available for a short period of time, typically a few seconds.

Literacy and numeracy terminology	Meaning
Sight vocabulary	The bank of words stored in long-term memory that a person can identify immediately and effortlessly.
Sight word	Any word that a reader knows and can read automatically without needing to actively decode it.
Sound–letter correspondences	The letter or combination of letters that each represent a sound in English.
Split digraph	A spelling pattern that represents a long vowel sound made of a vowel and the letter 'e' divided or 'split' by a consonant letter e.g. the <a-e> pattern in s**a**m**e** or <o-e> pattern in h**o**p**e**.
Strength-based approach	A teaching strategy that focuses on the learner's abilities, strengths and resources rather than their weaknesses or deficits, prioritising empowerment and growth.
Subitising	The ability to look at a small group of up to six objects and instantly know how many are in the group without counting them.
Syllable(s)	The individual beats in a word. Every syllable contains a vowel sound. Words can have one syllable such as dog, tree, met and well, or more than one syllable such as won.der, daff.o.dils, hipp.o.pot.a.mus.
Syllables – stressed	The part of a multisyllabic word that has more emphasis, e.g. table has the emphasis on the first syllable: **ta**.ble.
Syllables – unstressed	Sometimes called an unaccented syllable. Where the vowel sound in the syllable is reduced to a schwa sound, such as the /uh/ in hol**i**day or mark**e**t.
Synonyms	A group of words that have similar meaning e.g. fast, quick, rapid.
Syntax/syntactic awareness	Sentence structure. An awareness that different words have differing roles in a sentence e.g. nouns, verbs, adjectives, prepositions etc.
Synthetic phonics	A method of teaching English spelling that first teaches letter–sound correspondences and simultaneously teaches how to blend these sounds to make words. It takes a systematic and structured approach to build reading skills.

Literacy and numeracy terminology	Meaning
The big ideas in number	A framework that describes the critical elements learners need to learn about, understand and use to build numeracy skills.
Trauma	The long-term emotional response to extremely stressful, frightening or distressing experiences which overwhelmed someone's ability to cope with the situation.
Trigraph	Three consecutive letters that represent one sound e.g. 'igh' for the long /I/ sound in n**igh**t.
Variable	A symbol, usually a letter of the alphabet, that is used to represent an unknown number in a mathematical equation.
Vocabulary	The words we need to know and understand to communicate effectively – knowledge of words and meanings.
Voiced/unvoiced consonants	Voiced – a speech sound that is made by vibrating the vocal cords such as /m/, /v/, /j/. Note that all vowel sounds are voiced. Unvoiced – a speech sound that is made without vocal resonance e.g. /b/, /f/, /th/.
Vowel	A speech sound made by vibrating the vocal cords without much restriction by the tongue, lips or soft palate.
Working memory	Draws on short-term memory but adds processing and manipulation functions. The average person can typically manage to process four pieces of information in working memory. Important to remember when managing cognitive load.

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