Chapter 1

What is Reading Comprehension?

Language conveys meaning and allows the sharing of information, ideas and perspectives. When written messages are successfully understood, reading can be a wonderfully inspiring, enjoyable and transforming experience. Written language has the power to take the mind to different places, times and events; it can put us in the shoes of fascinating characters and hold our attention through gripping plots, suspense and intrigue. Texts can provide escapism and offer alternative perspectives on the world; what's more, they can 'kindle' our imaginations to create rich mental images that may stay with us forever. Texts can inform and develop knowledge, provide us with new vocabulary and provoke new ways of thinking.

For many children, however, the messages conveyed through written text are not well understood; this has potentially far-reaching consequences for their learning, development and well-being. This chapter outlines the richness of written language and the complexities of the processes involved in reading for meaning. This serves to highlight the many ways in which children's ability to understand text can break down, and will provide points to consider when teaching and developing interventions to improve reading comprehension. Chapter 2 considers in more detail the difficulties that cause some children to have specific difficulties in understanding what they read.

To consider the richness of written language, let us consider the following short passage as an example:

Jennie sprang bolt upright. Moments of disorientation followed before she recognised the now faded floral wallpaper and tatty matching curtains. Framed family faces stared down from the bookshelf. 'Home for the holidays' she remembered. Blinking and yawning she stumbled around for her slippers and gown. The tinny voice from the bedside table was delivering the news and warning of harsh winds and icy roads. Jennie reached across and hit the button. 'Today is definitely a two sweater day,' Jennie thought as she rifled around in her suitcase for her favourite winter clothing.

Reflect for a moment on your understanding of the passage and think about the following questions:

Why did Jennie spring bolt upright? Where was Jennie? Why might she have felt disorientated? What are the framed family faces? Why did she stumble? Where was the tinny voice coming from? What was the button? What did Jennie mean by a 'two sweater day'? What was Jennie doing in her suitcase?

Returning to the passage, consider your experience of trying to decipher its meaning. In the annotated version in Figure 1.1 we have documented some of the initial reflections that you may have when you reread the passage.

The complexity of comprehension is highlighted in these annotations. Engaging in this type of conscious 'think-aloud' activity focuses attention on aspects of reading comprehension that might otherwise go unnoticed. In the example, you can see that our understanding of the text's message gradually builds up over the course of reading it. Initial predictions are confirmed by later information, potentially ambiguous vocabulary is resolved by the context and assumptions based on previous experience are tested. The annotations, however, only scratch the surface of the demands of the task. Making connections between parts of the passage in order to build up an interpretation requires recognition of the words, an ability to hold information in mind, an ability to scan backwards and for-wards to relevant words and phrases, an understanding of cues from sentence structure and punctuation, an empathy with the character and many other skills and processes.

Only part of the task of reading comprehension is situated within the text itself; a developed understanding comes from the interaction between the text and the reader's response to it. The diverse perspec-tives that we bring to the task result in different interpretations of a text. When we watch films of books that we have read they rarely match up to our imagined versions. When we discuss reading material

Jennie sprang bolt upright.
- Maybe Jennie is surprised, in shock or has woken up suddenly? Something has caught Jennie's attention.

Moments of disorientation followed
- She may be feeling confused? She could be somewhere unfamiliar?

...before she recognised the now faded floral wallpaper and tatty matching curtains
- These were once in good condition, now they look worn and they may be less recognisable.

Framed family faces...
- The only faces that I can think of that are in frames are in photographs or paintings.
- These may be images of Jennie's family?

stared down from the bookshelf.
- Unlikely to be real faces in frames as it is not possible for people to fit on a bookshelf.

"Home...
- The use of this noun further suggests that the family faces are from her family.

...for the holidays" she remembered.
- The feeling of disorientation coupled with the thought that she is there for the holidays suggests that this is not her everyday home.
- I link this to my experience of spending time at my parent's home during the holidays.
- I consider that this may be the family home that Jennie grew up in.

Blinking and yawning...
- This suggests that she has just woken up.

...she stumbled around
- She may still be feeling disorientated or still slightly sleepy which may cause her to be less co-ordinated when trying to find these items.

...for her slippers and gown
- Presumably a dressing gown rather than a ball gown or graduation gown?

The tinny voice from the bedside table...
- Tables are inanimate, and do not have mechanisms for conveying sounds so the voice is not actually from the table.
- Rather it must be from something on the table.

...delivering the news and warning of harsh winds and icy roads.
- 'Tinny' makes it sound like it is being transmitted rather than a real voice. News can be transmitted by the radio or television or telephone.
- Radios are often part of alarm clocks and are used to wake people up.

Jennie reached across and hit the button.
- Buttons you hit are usually on machines rather than clothing. These can be used to turn things on or off.
- The button could be on an alarm clock.

"Today is definitely a two sweater day"
- Sweaters are an item of clothing; two of these would be warmer than one.
- This suggests that she is going to wear two to keep warm because of the cold weather mentioned in the news report.

Jennie thought as she rifled...
- 'Rifle' when used as a verb means to search. This is a more likely interpretation than the noun 'rifle' which is a gun.

...around in her suitcase for her favourite winter clothing.
- As it is cold and she is looking for winter clothes it suggests that the holidays that she is home for are in the winter, so may be Christmas or New Year.

Figure 1.1 An annotated version of the sample passage demonstrating the results of a think-aloud activity

with others, we may find that we have interpreted the same sentence in very different ways. We may also find that our interpretations are inconsistent with the message that was intended by the author. Such differences in imagination and personal response, whilst complex and difficult to capture, are at the heart of the reading comprehension experience.

MODELS OF READING COMPREHENSION

Models of reading comprehension can help us to understand the different skills and processes involved in interpreting text. The simple view of reading (Gough and Tunmer, 1986) offers a useful model for characterising successful reading. As shown in Figure 1.2, Gough and Tunmer (1986) propose that two skills are needed in order to read for meaning: the ability to recognise or pronounce the words (decoding) and the ability to understand spoken language (listening comprehension).
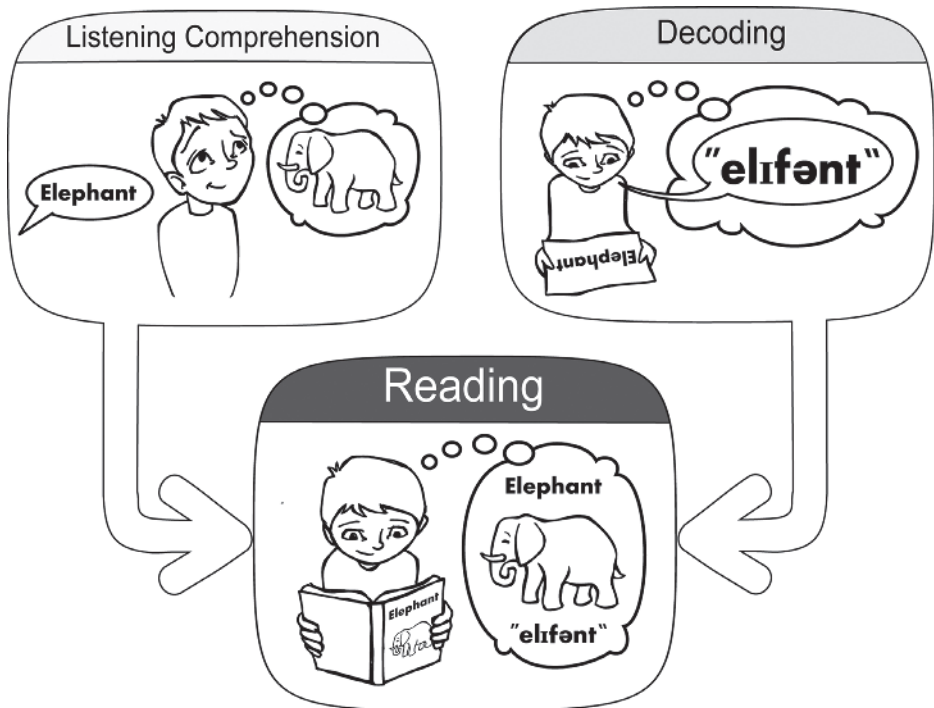

Figure 1.2 The simple view of reading (Gough and Tunmer, 1986)

As well as helping us to understand reading success, this model can help to describe the different ways in which reading can break down and inform early identification and intervention for children at risk of reading difficulties. According to the simple model, a child may show a generally poor reading profile and experience difficulties in developing both decoding and listening comprehension. Alternatively, a child may have difficulties in the area of decoding but show intact or even superior listening comprehension skills. The opposite pattern to this, termed 'the poor comprehender profile', is also possible and will be the focus of the next chapter. This profile is characterised by intact or superior decoding skills coupled with weak listening comprehension. As a result, children with a poor comprehender reading profile will read aloud well but have difficulty understanding what they read. Children who experience difficulties with decoding, listening comprehension or both skills will experience difficulties in understanding text.

Another model that can be used to capture the skills and processes involved in successful reading is the Construction–Integration Model of Kintsch and Rawson (2005). This model, presented in Figure 1.3, provides a more detailed overview of the processes involved in reading comprehension. The model proposes that when we read text we create a personal representation of its meaning; this representation (or mental model) is made up of the information from the text itself alongside our general knowledge of the words and the topic.

The processes involved in deciphering the text are described in terms of three levels. The first is the 'linguistic' level in which the reader recognises and processes individual words and their meanings. The second is the 'microstructure' in which the reader goes beyond words in isolation to recognise and process the meaning of larger chunks of text. The third is the 'macrostructure' in which the reader recognises and processes themes, topics and genre information about the text. These three levels form what is called a 'textbase'. The textbase combines with the reader's existing general knowledge to form an individual's representation of the meaning of the text. This interpretation is called the 'situation model' and, in forming it, the reader uses many different types of knowledge. For example, the reader may need to use theory of mind skills to understand the author's or character's intentions, beliefs, desires and feelings. To have a 'theory of mind' requires an awareness of your own mind, recognition that other people have minds and an understanding that another's mind is independent of your own. This understanding provides the foundation for perspective taking and the realisation that others have ideas and emotions which may be similar to or different from your own.
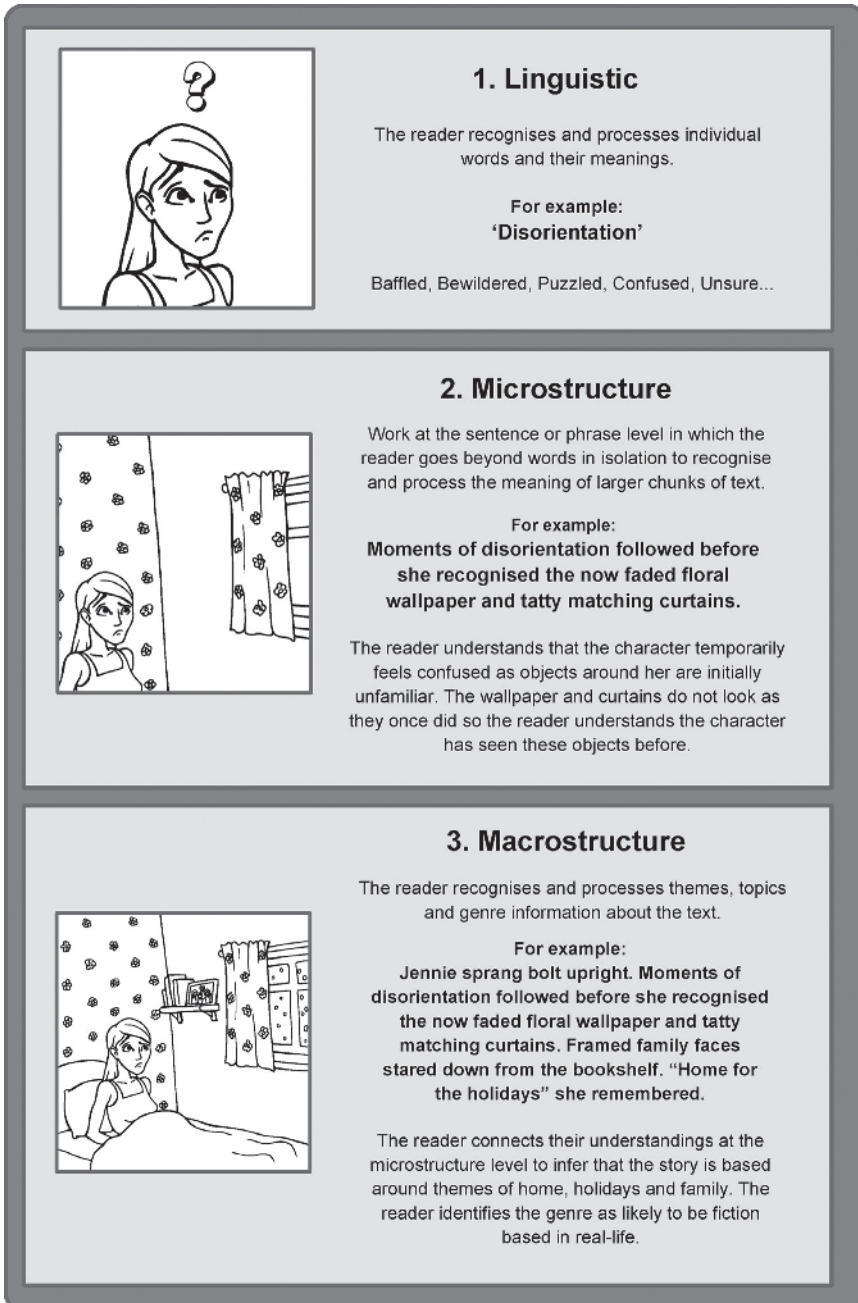
1. Linguistic

The reader recognises and processes individual words and their meanings.

For example:
'Disorientation'

Baffled, Bewildered, Puzzled, Confused, Unsure...

2. Microstructure

Work at the sentence or phrase level in which the reader goes beyond words in isolation to recognise and process the meaning of larger chunks of text.

For example:
Moments of disorientation followed before she recognised the now faded floral wallpaper and tatty matching curtains.

The reader understands that the character temporarily feels confused as objects around her are initially unfamiliar. The wallpaper and curtains do not look as they once did so the reader understands the character has seen these objects before.

3. Macrostructure

The reader recognises and processes themes, topics and genre information about the text.

For example:
Jennie sprang bolt upright. Moments of disorientation followed before she recognised the now faded floral wallpaper and tatty matching curtains. Framed family faces stared down from the bookshelf. "Home for the holidays" she remembered.

The reader connects their understandings at the microstructure level to infer that the story is based around themes of home, holidays and family. The reader identifies the genre as likely to be fiction based in real-life.

Figure 1.3   The Construction–Integration Model (Kintsch and Rawson, 2005)

Textbase
This represents the meaning of the text derived only from information expressed by the text.

General Knowledge

The reader draws on their own general knowledge about holidays in the past involving the home and family members.

This general knowledge may be drawn from a variety of experiences including those personally encountered, those read about, those seen on television and so on.

Situation Model

For a deep understanding of the text, the reader goes beyond the textbase to incorporate general knowledge and thereby reach a personal and emotional representation of what has been read.

This draws on their 'theory of mind' skills. In our example, the reader may think about they feel when visiting family. They may also consider what preparations they make at holiday times and consequently what the character might be thinking about or planning whilst on their visit. The reader may think about a time when they felt disorientated and remember how that felt.
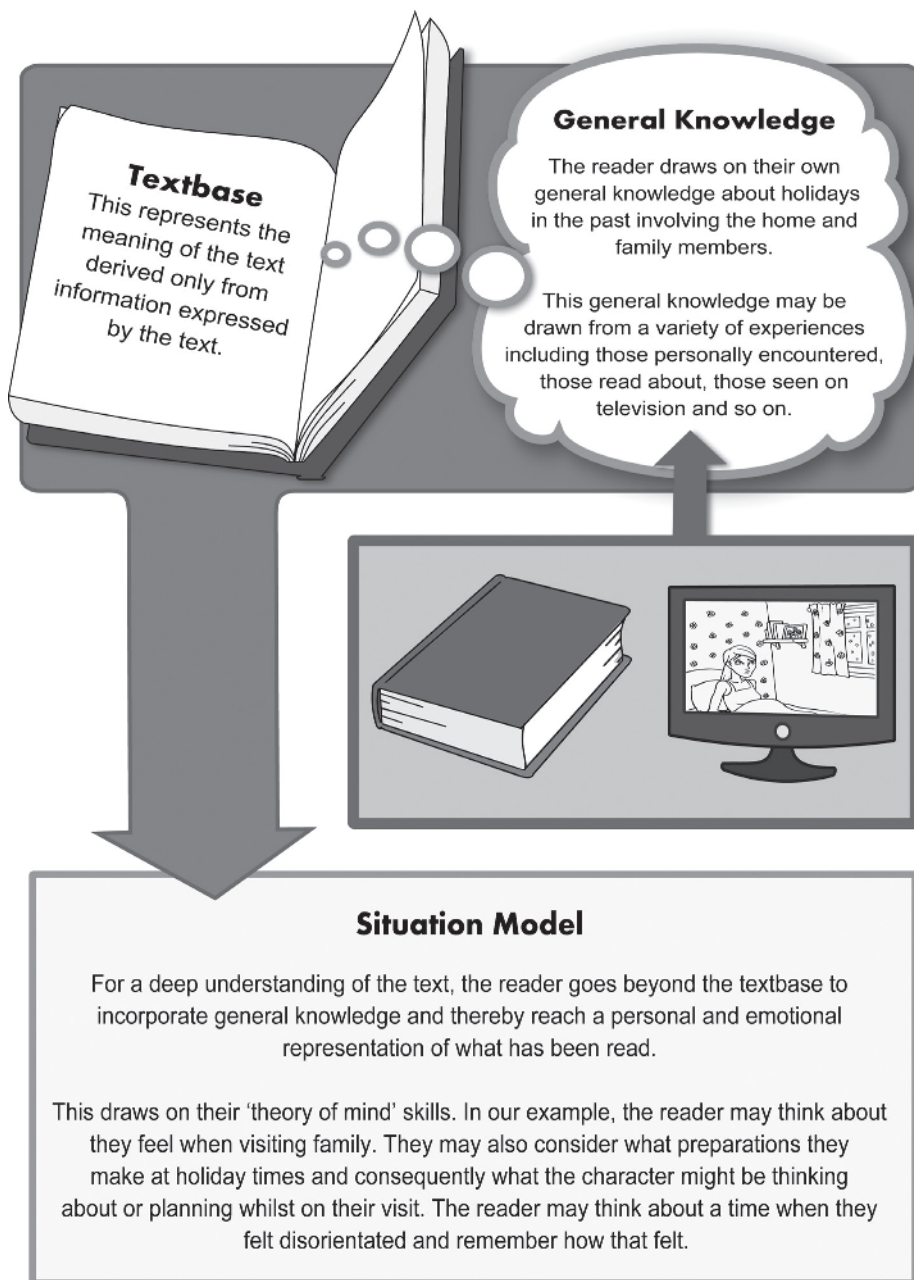
Figure 1.3   (*continued*)

To illustrate the application of this model, we can link its features to the processes involved in understanding the passage introduced at the beginning of this chapter. Let's remind ourselves of the passage:

Jennie sprang bolt upright. Moments of disorientation followed before she recognised the now faded floral wallpaper and tatty matching curtains. Framed family faces stared down from the bookshelf. 'Home for the holidays' she remembered. Blinking and yaw[ning] she stumbled around for her slippers and gown. The tinny voice from the bedside table was delivering the news and warning of harsh winds and icy roads. Jennie reached across and hit the button. 'Today is definitely a two sweater day,' Jennie thought as she rifled around in her suitcase for her favourite winter clothing.

By following this example through, you can see how an apparently simple passage can be understood at several different levels, all of which contribute to the formation of a rich situation model.

Taken together, these models describe many of the skills and processes involved in reading comprehension. However, it is important to remember that models are not 'real' – they are theories that may be incomplete or incorrect in a variety of ways. Such models can be tested and refined in research into how people read. Consideration should also be paid to other aspects of reading not specified in these models, for example the relationship between understanding text and motivation. When we read something that we understand and can immerse ourselves in, we are motivated to read more. Enjoyment of text promotes engagement and sustained interest and attention. If comprehension breaks down reading will be less pleasurable, which may lead to less time spent reading, which in turn will weaken reading skills further.

It is also necessary to recognise the metacognitive skills that underlie reading for meaning. Metacognition refers to what we know about our own knowledge and includes the ability to reflect on our understanding of text as it unfolds. As we saw in the 'think-aloud' activity at the beginning of this chapter, there are many aspects of reading comprehension that can be dissected and reflected upon. As individuals, we vary in our ability to keep track of what and how much we understand. Some people may think frequently about their interpretation of a text both during and after reading, whilst others may monitor less and may continue to read on, long after they have lost the thread of the story or passage. The extent to which an individual monitors their own understanding may also vary according to the reason why they are reading. For example, if you have been asked to prepare for an exam, you may read more intently

and with more emphasis on understanding than if you are flicking through a magazine in the dentist's waiting room. This aspect of reading for meaning is often referred to by the term 'standard of coherence'; that is the degree to which an individual is concerned with whether text makes sense.

Perfetti, Landi and Oakhill (2005) argue that for reading comprehension to develop, a high standard of coherence is necessary. To give an example, Sophia and George are two children with different standards of coherence. When reading a story, they may extract the same level of meaning but while Sophia classes this as unclear, George considers it is satisfactory and therefore does not seek further clarification. Sophia is likely to be better able to develop good comprehension because she deploys a number of strategies to gain further information that will enable her to overcome the feeling of not fully understanding; these may include asking an adult or a peer a follow-up question or thinking back to a similar personal experience and bringing her previous knowledge to bear. George, on the other hand, may read on without the sense that he has not fully extracted the meaning from the passage.

THE IMPORTANCE OF READING COMPREHENSION

At this point, it is necessary to return to the importance of reading for meaning. Much of the commentary surrounding theoretical models of reading comprehension has focused on the knowledge that the reader brings to the process of understanding. However, it is important to recognise that reading can be a transformative experience influencing the thinking and learning of the reader. New words, concepts and perspectives can be encountered that challenge and enhance existing knowledge. Consequently, reading is central to teaching and learning and it is vital to consider the circumstances in which the developing child is required to extract and apply meaning derived from text.

Reading comprehension skills become more important as children progress through the educational system. Teachers frequently expect children and young people to research topics from books or from the internet in the Sciences as well as the Arts and Humanities. Indeed, in all areas of the curriculum children need to be able to locate relevant information, to filter out the information that is less pertinent to the current topic and to select the appropriate information to focus upon. For example, maths comprehension exercises draw upon reading comprehension

skills to support the development of numeracy skills. Consider the following:

> *The local primary school was having a cake sale to raise money for charity. John baked two dozen buns. Anita made ten brownies but two were too burned to be sold. Before the sale, John dropped half a dozen buns on the floor which his dog promptly ate. In total, how many baked goods did John and Anita bring to the cake sale?*
>
> Answer: 26

Having read this chapter, you will no doubt recognise the number of comprehension processes and skills involved in completing this calculation. For example, a number of vocabulary items are crucial to understanding the question including 'dozen', 'brownie', 'baked goods'. Furthermore, the child must understand the preposition 'before' in order to correctly sequence the events in the question. Thinking back to the Construction–Integration Model, the child is likely to be assisted by accessing general knowledge and previous experience of baking and attending cake sales. A child's success in understanding the question at the levels of words, sentences and overall gist will impact on the cognitive resources available and capacity to attend to the key mathematical calculations required. This is just one example of how reading comprehension skills support and influence learning in areas that are not generally associated with literacy.

Box 1.1   TA commentary

Maths is definitely an area where I have worked with children who are unable to decode the question, and therefore are unable to provide an answer until the question is either read out to them or rephrased in a manner that they can understand. The simple act of reading a SAT's paper question to them may be all that is needed to enable them to concentrate on the maths and not the reading.

SUMMARY

When we read we seldom pay attention to the complex processes that contribute to our ability to understand text. In this chapter we have considered the inherent complexity of reading for meaning. In doing so, we have made reference to key theoretical models and component skills and processes. In this book we will consider the skills that are involved in learning to read with understanding, how and why reading comprehension may break down and what characterizes a 'poor comprehender'. Against this backdrop, we describe in detail a project that we undertook to develop and evaluate a set of interventions to develop reading comprehension in children in the middle school years. We will present findings that demonstrate the efficacy of these interventions and elaborate their content for practitioners who wish to use them. We will argue that such interventions should be part of the 'toolkit' of teachers, teaching assistants, special needs advisors and speech and language therapists who are concerned with individual differences in children's literacy.