

Comprehension – An Overview

By Diane Snowball

What is Comprehension?

Comprehension is a complex process that has been explained in many ways, such as the following

- Comprehension is “intentional thinking during which meaning is constructed through interactions between text and reader” (Harris and Hodges, 1995).
- Comprehension is the process of simultaneously extracting and constructing meaning through interaction and involvement with written language (RAND Reading Study Group, 2002).
- Comprehension is a process in which readers construct meaning by interacting with text through the combination of prior knowledge and previous experience, information in the text, and the stance the reader takes in relationship to the text (Pardo, 2004).

You will notice that the important aspect of all of the definitions is “meaning”. If readers can read the words but do not understand what they are reading, they are not really reading.

Comprehension Strategies

According to two important references, research indicates that there are specific strategies that can improve comprehension and so they are beneficial to teach your students. We have used these as the basis for selecting the six modules of comprehension in our CD-ROMs.

Duke and Pearson (2002) have identified these as

- prediction/prior knowledge;
- think-aloud;
- text structure;
- visual representations;
- summarization;
- questions/questioning.

In the National Reading Panel Report (2000) the same strategies were identified, but the report separated “questions generating” and “question answering”. It also listed “comprehension monitoring” and “cooperative learning” as effective strategies but Duke and Pearson included “comprehension monitoring” in think-aloud to some extent and we have provided a great deal on monitoring in our think-aloud module because the best way to model all kinds of monitoring and fix-up strategies is through thinking out loud. As for “cooperative learning” we believe the same as Duke and Pearson, that this is an instructional approach that is implicit in all comprehension teaching. This collaborative work among teachers and students is one of the guiding principles of our work. You will find more information in the Guiding Principles section of this CD-ROM.

We also extended visual representations to include imagery of what is being read, and so used the embracing term of “visualizing”, and extended “text structure” to “text structure and features”.

Comprehension Overview

Some of you may have read Keene and Zimmermann's (1997) *Mosaic of Thought: Teaching Comprehension in a Reader's Workshop*, in which they describe the strategies used by good readers as

- relating what's in a text to their prior knowledge;
- figuring out the main ideas in text;
- questioning;
- constructing mental images of the meaning conveyed by the text;
- making inferences beyond the information given in the text;
- summarizing;
- seeking clarification when the meaning of text is confusing.

You will notice areas of overlap with the strategies we have focused on, with "constructing mental images" contained in our *Visualizing* module, "making inferences" dealt with in *Think-aloud* because it can only be taught through thinking out loud how you are inferring, and "seeking clarification" being part of monitoring meaning, also in the *Think-aloud* module.

Metacognition

Metacognitive awareness (being able to think about one's own thinking) is an important part of learning. If students can articulate what the strategies are, and how and when to use them, they can be in control of monitoring their own comprehension. They will know when and how to adjust their own use of strategies to achieve greater understanding (Baker & Brown, 1984). Stating your purposes for teaching, giving clear explanations and demonstrations, modeling thinking aloud about strategies and processes, and encouraging your students to reflect and verbalize what they are doing when reading, are all necessary for your students to develop such metacognition of their reading process. Several studies show that students who verbalize their strategies and thoughts while reading score significantly higher on comprehension tests.

The Influence of Readers, Text, Sociocultural Context and Teachers

Although "meaning" is the most important word in the definition of comprehension, there are other words in the definitions that also need to be considered in light of the roles they each play.

The **readers** all have individual characteristics that influence their construction or extraction of meaning. They vary in the skills, knowledge, cognitive development, culture, bias, and purpose they bring to the reading (Narvaez, 2002) and also may have different levels of motivation. The stance they take as they read the text affects their view of what the writer has written. Readers must also ask questions of the text and the author's purpose and this requires critical literacy.

The **texts** all have features that influence the readers' comprehension. These include the genre and related structure and features, the language, vocabulary, and difficulty of readability, as well as the author's purpose, bias, message and style. In order for your students to understand what they are reading they need to have texts that they can read with a high level of accuracy. For students who are novice readers, if we want them to reason their way through more complex texts, the comprehension teaching must occur mostly during Read-aloud and Shared Reading practices.

It is essential to have a range of all kinds of fiction and all kinds of factual texts for class, group and individual use and to teach comprehension with this range. It has been found that when factual texts are read aloud to students there are many more points at which comprehension strategies are used than when fiction texts are read aloud. This probably contributes in some substantively different way to students' long-term comprehension abilities (Smolkin & Donovan, 2002).

Comprehension Overview

Texts are not only those available in printed form, but include all kinds of multimedia texts such as images, animations, text links, videos, audios, text messages on cell phones, websites, CD-ROMs

and emails. The onslaught of text messaging and email has been a great motivation for many students to learn to read and for these students these types of text are the most common ones for them to read. The term 'multiliteracies' has been used for some time to encapsulate the changing nature of literacy and communication and teaching your students to comprehend all of these text types is essential. Students doing research should be referring to websites and other multimedia resources, but they need to learn how to use them wisely. Access to so much information requires your students to be wary and discriminating, and to know how to manipulate and organize information from many different sources. This requires digital literacy, understanding the benefits, advantages and dangers of using technology in everyday life and learning.

The **sociocultural context** that is created influences the readers' comprehension too. Depending on the place, the situation and the purpose readers will transact with the text in different ways. The teacher's instructions, willingness to allow risk-taking, classroom environment, and provision of independent reading time with a variety of texts being available will all influence the way the readers view the text.

Teachers are able to influence all of these by the way you instruct and support the readers, the types and range of texts you provide, and the classroom learning environment you structure. Your role at school is vital and your influence beyond the school setting can be a positive one if you build independence and confidence in your students and instil a love of reading.

It is your "use" of methods and procedures that makes the difference to your students' learning. You need to be in charge of instruction and be able to make choices about what this will be by

- learning how to interact with students at the right time and the right place during the reading of a text;
- analyzing your students' statements to understand their interpretations and what intervention is required if they are off track;
- determining what specific strategy (or strategies) must be taught to struggling readers;
- deciding which students will benefit from more explicit explanations.

Obviously your knowledge of the following are all essential for you to be able to use your influence wisely

- the reading process and the cognitive process that occur when reading; comprehension strategies;
- how the comprehension strategies can be used by a reader;
- how to assess comprehension;
- effective approaches to teaching through explaining, modeling, and involving your students in interactive discussions.

Comprehension Instruction

Research has shown that comprehension instruction can improve the reading comprehension of all readers, even beginning readers and struggling older readers.

Instruction in comprehension can help your students to

- understand what they read;

Comprehension Overview

- enjoy what they read;
- remember what they read;
- communicate with others about what they read;
- want to read more.

“Comprehension can be improved by teaching students to use specific cognitive strategies or to reason strategically when they encounter barriers to understanding what they are reading. Readers acquire these strategies informally to some extent, but explicit or formal instruction in the application of comprehension strategies has been shown to be highly effective in enhancing understanding. The teacher generally demonstrates such strategies for students until the students are able to carry them out independently.” (National Reading Panel, 2000)

Instruction should include

- telling your students the purpose of your instruction and why you have chosen to involve them in such instruction;
- explaining the strategy explicitly, specifically saying what it is, and how and when it should be used;
- modeling of the strategy in authentic reading situations, saying when it is most useful or even when it is not applicable;
- thinking aloud about strategy use as you read;
- using the strategy collaboratively with your students and encouraging students to do this with each other;
- encouraging your students to explain to each other how they are processing the text;
- emphasizing that choosing an appropriate strategy is important and that different strategies may be applied in different situations;
- guiding students’ practice of the strategy in small groups and individually, gradually releasing responsibility to them;
- making sure that your students are involved in a lot of rich dialogue about what they are reading and what they are doing to help their comprehension;
- relating the use of the strategy to their own independent reading;
- providing many opportunities for students to use the strategy independently.

Strategy instruction may be with the whole class, in small groups or with individuals, but it is stressed that as your students practice the strategies in large or small settings they are expected to transfer them to their own independent reading. Asking questions and comments such as the following will remind your students about this transfer

- “How could you use this strategy in your own reading?”
- “How could this to help you with anything you are reading?”
- “Don’t forget to predict before and during the reading of your books today.”

Also, when listening to and conferring with your students during independent reading time, ask them to explain about the strategies they have been using in their reading, and to share this with their fellow students during share time. Your students then know you expect them to be able to use the strategies they have been learning about.

Effective strategy instruction involves a gradual release of responsibility from the teacher to the learner (Duke & Pearson, 2002) so that over time your students gradually take over the responsibility for decision making and putting the strategies into practice.

Comprehension Overview

Teaching Comprehension at Different Grade Levels

All comprehension strategies need to be taught at all grade levels, with fiction and factual texts at every level, as these CD-ROMs (K-2, 3-6, 6-9) show. Pearson and Duke (2002) state that comprehension instruction in K-2 is not only possible, but wise and beneficial rather than detrimental to overall reading instruction.

“To delay this sort of powerful instruction until children have reached the intermediate grades is to deny them the very experiences that help them develop the most important of reading dispositions – the expectation that they should and can understand each and every text they read.” (p 257)

They also describe a study that shows that comprehension instruction for young students can also improve their decoding skills.

The comprehension instruction needs to continue in all grades and by teachers in many curriculum areas because the levels of difficulty and complexity of texts increases as your students’ reading develops and they are expected to read various types of texts in different subjects. This instruction needs to be sufficiently long term so that students’ comprehension processes will become automatic.

Integrating Strategies

Although at times you may provide such instruction with a focus on only one strategy, include the use of other strategies as they naturally occur, particularly known strategies that have previously been introduced. Good readers do not just use one strategy when reading; they use multiple strategies in integrated ways and know what strategy to use in a particular reading situation.

As each strategy is introduced add it to the repertoire of other strategies as soon as possible, talking about which one to use at different points in the reading and how this varies with different texts and your students’ knowledge of the topic or text type. Do not think of comprehension as just a list of strategies.

There are still some issues about using routines with multiple strategies that still require more research (Stahl, 2004). It may be too cognitively demanding for some younger students who are not yet fluent readers, although research done to study the effects of one year of weak grade 2 students involved in transactional strategies instruction showed they became much better readers than students in control classrooms (Brown, Pressley, Van Meter, & Schuder, 1996). With transactional strategies instruction there is a strong emphasis on self-regulated use of the strategies and it is emphasized that choosing an appropriate strategy is important and that different strategies apply in different situations.

Also, Reciprocal Teaching, which typically involves the use of four strategies: predicting, clarifying, questioning, and summarizing, can be used effectively with all grade levels, with good and poor readers, and in small-group and whole-group contexts (Rosenshine & Meister, 1994). You will find information on Reciprocal Teaching and transactional strategy instruction such as SAIL in the *Think-aloud* module on this CD-ROM.

You may also like to find out information about a reading framework named “concept-orientated reading instruction” (CORI) developed by John Guthrie (2002) and others, which integrates a number of strategies and has been found to be successful with low-achieving, multicultural students in the later elementary grades.

Comprehension Overview

Teacher Differences

Some evidence indicates that experienced teachers may be better able to balance process-content instruction than novice teachers (Stahl, 2004). Teachers report that their program of teaching comprehension improves over a course of two to three years, as they continually modify their approach. This CD-ROM allows you to become very familiar and comfortable with one strategy at a time, gradually building up your repertoire of strategies, and supports you with planning and teaching ideas. You can easily move backwards and forwards from one module of the CD-ROM to another and link to other strategies and teaching suggestions, according to what suits your style of learning. Information is also provided for multiple strategy teaching, and the videos of teachers demonstrating single and multiple strategy instruction provide models for you to view and learn from as often as you need. You will find a list of videos in the Resource Bank section of the CD-ROM.

The Importance of Dialogue

Your students must be involved in analytical interactions in the discussions about the texts being read. Interchanges between a teacher and the students that are of the type I-R-E (teacher initiation, student response, teacher evaluation, e.g. T: "What did the girl do next?" ST: "she ran down the road." T: "Yes. Good.") are very common in schools, but are not helpful for comprehension. A co-constructive style is not something that comes naturally to everyone and you may need to tape your interactions with your students to evaluate what they are like.

Using prompts to your students such as the following may help

- What do you think about..?
- Tell us about...
- Say something about...
- Can you think of a way that...?
- What if...?

You will find a range of questions to ask in the *Questions and Questioning* module on this CD-ROM.

You also need to allow your students to interject the reading with genuine comments and questions, but guide them if they are not related to interpreting or understanding the text.

Decoding, Vocabulary, Fluency and World Knowledge

Luke and Freebody (1997) refer to readers as "code breakers, meaning makers, text users and text critics", and all of these need to be considered when thinking of comprehension instruction and improving comprehension is not just a matter of teaching your students strategies. Comprehension also depends on

- word level skills (decoding words fluently);
- extensive vocabulary;
- fluent reading;
- background knowledge of the world.

Decoding and Word Recognition

Your students cannot understand texts if they cannot read any of the words and being aware of letters and the sounds they represent can help them pronounce words. However, Pressley (2001) sites studies that have discovered that being able to sound out a word does not guarantee that the

Comprehension Overview

word will be understood as the student reads, but that word-recognition skills must be developed to the point of fluency if comprehension benefits are to be maximized. When words are learned to the point of automaticity word recognition consumes little cognitive capacity, leaving more cognitive capacity for understanding what is read.

Vocabulary

When students are taught vocabulary in a thorough fashion, their comprehension of what they read improves. Your students do develop knowledge of vocabulary through extensive reading of text rich in new words, but vocabulary can also be increased through explicit teaching.

Asking your students to find definitions in a dictionary is not effective because there may be many definitions and a wrong one may be chosen, which in turn creates more confusion in the reading.

Studies show that words should be processed repeatedly and deeply and that they are typically learned gradually through immersing your students in a word rich environment and involving them in fun word activities. Here are some ways to do this

- During Read Aloud, Shared Reading and Guided Reading explicitly teach how to predict the meaning of a word and look for clues to help figure out the meaning.
- Encourage your students to actively attempt to construct their own meaning based on this teaching.
- Select words that show how morphology can be helpful (eg. auto – automatic, autobiography, autonomous) but this needs to be done in a problem solving way rather than just telling the answers.
- Use graphic organizers such as semantic maps to show relationships between words, making sure there is a lot of discussion about these.
- Show how to relate new words to one's own past experiences and use mnemonic strategies including pictures and images.
- Provide explicit instruction for important concept words and content vocabulary, drawing on multiple sources of meaning, and referring to these words as required rather than dealing with all of them prior to the reading of entire chapters.
- Construct definitions together in many ways, such as using antonyms and synonyms, using example sentences, comparing and contrasting words, and creating frames based on what the object is and what features it has (suitable for nouns).
- Develop and interest in words by playing word games, puzzles, puns and having a word of the day selected by your students.
- Have fun with words through books of riddles and rhymes.
- Read aloud texts with interesting words and then use the words in retellings or use pictures or drama to retell using the words.
- Expect students to select their own words to learn by noticing words they do not know in their own reading. They can create personal word books.
- Encourage use of the new words in writing and speaking.

When your students' literacy is sufficiently developed they may be taught to write word meanings that they figure out while reading and also note which words they still have questions about. Novice readers and writers could just place a post-it anywhere they thought they figured out the meaning of a word or beside words they don't know the meaning of. These words can be discussed during the share time at the end of independent reading.

Fluency

Fluency is important because it affects your students' reading efficiency and comprehension. Fluency has been shown to have a reciprocal relationship with comprehension, with each fostering the other.

Comprehension Overview

Reading fluency is the ability to read accurately, quickly, effortlessly, and with appropriate expression and meaning. This does not mean that definitions of fluency only refer to oral reading. As most of our reading is silent, it's also important to focus on fluency in silent reading.

Pikulski and Chard (2005) propose a more comprehensive definition of fluency

Reading fluency refers to efficient, effective word recognition skills that permit a reader to construct the meaning of text. Fluency is manifested in accurate, rapid, expressive oral reading and is applied during, and makes possible, silent reading comprehension.

One fluency goal for reading then, is to develop your students' decoding to the point where it becomes an automatic process that requires a minimum of attention (Griffith and Rasinski, 2004). Another goal is for your students to be reading with appropriate expression and as they are doing this they are also learning to construct meaning from the text.

Fluency develops when your students

- hear fluent, expressive reading from you and others reading out loud;
- join in with fluent, expressive reading with you during Shared Reading;
- have the opportunity to practice reading texts multiple times (especially useful for struggling readers);
- take part in Readers Theater, where they need to reread the same text multiple times and take on the voice and expression of their character;
- are coached in fluent, expressive reading by you and their peers;
- read onto tapes, listen to themselves, and do this multiple times with the same text as they personally coach themselves to read more fluently;
- engage in timed readings to set personal goals for improving fluency;
- have many opportunities for independent reading.

However, Pikulski and Chard (2005) claim that at least some students will need more teaching and guidance to build graphophonic foundations, including phonological awareness, letter familiarity, and phonics, and high-frequency vocabulary (both usually accomplished in a year or two) and to build and extend oral language skills so that students are familiar with the syntax or grammatical functions of the words and phrases they are reading and with their meanings.

World Knowledge

Although this is dealt with in the *Prediction/Prior Knowledge* modules it is important enough to deal with again in this context. Reading comprehension can be enhanced by developing your students' prior knowledge and one way to accomplish this is through extensive reading of high-quality information-rich texts. You will find more information in the *Prediction/Prior Knowledge* module on this CD-ROM. Some readers do not automatically relate new text information to their prior knowledge and they need to be taught how to do this.

If you do nothing else, at least extend your students' knowledge of the world through reading many factual and fiction texts to them, and show them how and when to use this knowledge to help them understand what they read.