High Reliability Literacy Teaching Procedures : A means of fostering literacy learning across the curriculum[1]

John Munro

Dealing effectively with students' literacy difficulties is a challenge that faces many teachers and schools. This problem increases in its influence at the late primary and secondary levels when students are required to learn by reading in the various KLAs. It has been exacerbated in recent years with the increased focus on self managed and directed student learning and the need to access a range of information sources.

In order to learn effectively in subjects such as science, technology, economics and social science, secondary level students need to be able to read expository text ((Lapp, Flood, & Ranck-Buhr, 1995). This text is usually more difficult to comprehend than narrative text (Kucan & Beck, 1997) .

Students who have difficulty converting written information to knowledge are at a severe disadvantage in world of the twenty first century. Not only are they less able to access information, but they have less opportunity to display what they know in written ways. As well, they have less opportunity to have their existing knowledge of a topic 'programmed' in verbal linguistic ways. As a consequence, they are less able to align what they know about a topic with related written text on subsequent occasions.

Many subject area teachers at the secondary level find themselves in a perplexing situation. They are aware that successful learning in their content area requires students to read and to learn by doing so. They recognise literacy as an essential vehicle for learning in their subject. As well, because some of their students have difficulty learning by reading, they seek to avoid the need for students to read in their subject and minimise exposure to text.

Over the last four years I have worked with secondary teachers in three secondary colleges to develop an approach to literacy enhancement that attempted to target these problems. The approach involved identifying and researching a set of explicit literacy teaching procedures that teachers in all subject areas could use to enhance students' literacy knowledge. The procedures needed meet a number of criteria:

• they needed to be known to enhance text comprehension
• they needed to be able to be included in the regular teaching program and to be implemented on a whole class basis.
• they needed to teach the learning outcomes that teachers were intending to achieve in each lesson.
• they needed to lead to reading comprehension strategies that students could learn to use, initially when directed and then independently and spontaneously as the need arose.

High Reliability Literacy Teaching Procedures (HRLTPs).

The approach to literacy enhancement involves incorporating seven literacy teaching procedures in regular content area teaching. Each is intended to cue and to foster the use of a matching literacy strategy by students. Students are instructed explicitly to

• get their knowledge ready for learning and literacy about a topic by organising and recoding what they know to a verbal form.

• add unfamiliar verbal concepts to their vocabulary by studying between five and ten verbal concepts that relate to the content to be covered in the lesson. During the lesson the students say accurately each word or phrase, read and spell it, suggest synonyms and antonyms for each, clarify its meaning and link it with other concepts.

- read aloud short portions of written text that teaches the topic..

- paraphrase or say in their own words each sentence in the text.

- say questions that each sentence in the text answers.

- summarise the text, usually paragraph by paragraph.

- review, consolidate and show comprehension of what has been learnt by reading silently a written summary of the content covered.

These procedures were identified following initial trialing across all subject or KLA areas. During the trialing these were shown to enhance students' ability to learn by reading and to enhance literacy knowledge of the topic being learning. They were referred to as 'high reliability literacy teaching procedures' or HRLTPs.

These teaching procedures work by suggesting how readers can 'act on' what they are reading in a number of systematic ways. They can remind the readers to work on making sense of a 'digestible' amount of text at a time. They can suggest actions that readers can take to do this, very gradually. They can suggest that readers make lower level links between the ideas initially and then more complex links. They can also remind the readers of what to do to store what they have just read and understood in long term memory. In this way the new knowledge will be available for later use and for further learning.

Earlier studies have reported the effectiveness of teaching procedures that foster the use of these types of strategies, either as single strategies or as part of a sequence (for a recent review, see Gersten, Fuchs, Williams & Baker, 2001). Teaching students (1) to paraphrase is part of the 'reciprocal teaching' regime (Beck, 1997; Palincsar & Brown, 1984), (2) to summarize has been examined both as a single strategy (Nelson, Smith, & Dodd, 1992) and as part of reciprocal teaching' and part of the SQ3R approach (McCormick & Cooper, 1991) and (3) to self question while reading has been examined by Mastropieri, Scruggs, Hamilton, Wolfe, Whedon and Canevaro (1996) and by McCormick and Cooper (1991).

The sequence of teaching procedures used here matches the steps involved in learning new knowledge. Students are cued to stimulate and recode to a verbal form what they know about a topic, learn related new concepts, link these in literal and inferential ways with what they know, summarise what they have learnt and 'program' it in a literacy type way so that it is available for later learning. In line with contemporary strategy teaching, the approach is away from teaching one strategy at a time toward teaching several comprehension strategies simultaneously (Kucan & Beck, 1997; Pressley, Harris, and Marks, 1992).

One goal of the teaching is that students learn to build their personal set of reading comprehension strategies that they can use spontaneously and selectively. A second goal is that they improve their knowledge of spelling and letter patterns, of sentence and paragraph structures and of networks of concepts. These goals are targeted explicitly.

The literacy teaching procedures are described in terms of what students will do, that is, in terms of the student activities they foster. This is because the procedures differ in how they are implemented, depending on such factors as the subject area, the purpose of the lesson and students' existing knowledge.

Helping students get their knowledge of a topic ready for literacy activities and for learning

Many students have difficulty learning by reading because their existing knowledge is not in a form that can be easily aligned or linked with a text. Suppose, for example, a geography class needs to learn about anticlines and synclines by reading. Some of the students may have their existing knowledge of the topic in a verbal form and can easily talk about what they know. They can easily link their knowledge of the topic with the text.

Others may have their knowledge mainly in an imagery form and others again in an action form. These latter groups of students may have difficulty linking what they know with the text. Many do not have an adequate of basic text structures such as compare-contrast and cause effect (Gersten, et. al., 2001). Before beginning to read these readers need to be assisted to recode their nonverbal knowledge into a verbal form. They do this by putting their nonverbal knowledge of the topic into sentences, for example, by saying in sentences about what they know in the alternative forms.

Useful teaching procedures include

(1)   *What do these mean to you ?*   Students hear the title of a text, for example, *Tools used when working with Timber* or *Panda places, how it begins*, for example *Like many animals the giant panda needs a special environment to survive*, ten topic words from it or some of its topic sentences. They visualise the topic and learn to ask themselves "What *does it remind me of ?"* They suggest ideas that might be included in it, questions it might answer and how they decided.

(2)   *Think, pair, share.* Readers work co-operatively with peers on their existing knowledge of the topic. They can (1) engage in mock interviews in which one student interviews another about the topic, for example, about training methods in their favorite sports,   (2) write a possible newspaper article using what they know about a topic when given a headline   for example, an article for A star loses its life or (3) take turns to ask a class mate questions about the topic, for example, Pythagorus' Theorem or Pandas in danger of becoming extinct. When the class mate is asked a question she or he cannot answer, the peer who asked the question becomes the person who is questioned.

Examples of this activity are shown in Table 1.

Table 1 :   Teaching activities for recoding nonverbal knowledge to a verbal form.

Type of activity	Example of activity
What does the title tell you ? Give students the title of a text or some of the topic sentences in a text. They suggest the ideas that might be included in it. They discuss how they decided. They can learn to ask themselves "What *does it remind me of ?"* or "What pictures does it suggest ?"	Write this title: • *Tools used when working with Timber* • *Panda places*
What do these mean to you ? Give 10 topic words from the text to groups of students. They • visualise the topic • describe what the words remind them of • suggest questions that the words might cause them to ask.	Name Personal details Existing loans Writing Application form What I own How much I owe
This is how it begins. Read out the first sentence of several paragraphs. What do these tell you about the text ? What picture/s do they suggest ? What do they remind you of ?	• Like many animals the giant panda needs a special environment to survive • While there are many types of bamboo, the panda will only eat four types • It takes fifty to sixty years for a bamboo plant to mature
Think, pair, share. Readers note possible ideas in a text, pair with other students and share their thoughts.	The Lives of Stars
Ask me about the topic. Students have mock interview activities in which one student interviews another about the topic, for example, one student does a radio interview with another student who tries to get a bank loan when it is harder..	Pythagorus' Theorem Training methods for sports

You write the article . Give students headlines and have them write possible articles to follow. They can work on this in group activities	Pandas in danger of becoming extinct

Learn how to read, spell key concepts, suggest synonyms, antonyms for key words

The main words and phrases that make up a lesson are the key concepts or 'building blocks' for the knowledge being developed. When students learn these in an explicit, systematic way they are more likely understand the topic being developed in lesson.

The relationship between reading comprehension and vocabulary knowledge is strong and unequivocal (Baumann & Kameenui, 1991). Vocabulary knowledge contributes to reading comprehension and grows through reading experiences (Cunningham & Stanovich, 1998) for readers at all skill levels. Many readers learn word meanings from reading inefficiently (Beck & McKeown, 1991) and hence the reason for helping students acquire this ability through explicit context- relevant teaching procedures.

A major reason why many students have reading difficulties is because they cannot read words accurately or automatically. In other words, they have not learnt and stored in their memories sets of letter clusters that they can use to work out unfamiliar words. They also have corresponding difficulties with spelling.

This difficulty arises for several reasons:

- some students have reading difficulty understanding and using sound patterns in words. This is referred to as phonological and phonemic knowledge and is an essential prerequisite for learning to read and spell words.

- some students have difficulty retrieving rapidly the sounds that match particular letter clusters. This is referred to as 'rapid automatised learning'.

- some students have difficulty learning the actual letter cluster patterns, that is, forming an image of the letter patterns in memory. This is referred to as 'orthographic processing'.

- some readers have difficulty linking word meanings, that is, linking together words that have similar or related meanings and words that have opposite meanings, etc. This is referred to as 'semantic processing.

- some students have difficulty using what they know about the letter patterns, sound patterns and meaning patterns in words they know to read novel words. This is referred to as 'reading by analogy'.

This teaching procedure needs to target each of these potential areas of difficulty.

The teacher selects between five and ten key concepts (single words or short terms) to be covered in the content for the lesson and, during the lesson

- teaches the class to say them accurately .

- extends what students know about reading them, encourages them to see similarities between the key words and words they can read.

- helps them learn unfamiliar meanings. Students can work in pairs to (1) assemble their definition of each word, (2) use it in a sentence that shows its meaning, (3) write a paragraph / short story that uses the words, (4) suggest synonyms and antonyms for key words, (5) suggest the category to which each belongs, (6) draw a network diagram linking the word meanings, (7) explore words that have the same prefix or suffix, for example, re- or micro- and guess the meaning of prefixes or suffixes.

- dictates the words to the class, says them 'stretched out' so that each syllable is stressed and has the students write them.

When teaching the meanings of words, it is advisable to have students

- use the context in which a word is used to work out its meaning, rather than using a dictionary. For the word 'endure', for example, they might hear sentences such as "They endured the winds and storms of Antarctica", "Their food endured for months because of the icy temperature." and "Their love endured for the time Tom was in Antarctica'.

- check their understanding of a word's meaning through examples, with perhaps three or four examples of each, wherever possible.

- suggest what they think the word doesn't mean. This helps them to 'put bounds' on the meaning of the word.

These activities help them to learn 'word meaning building' strategies. It is more useful to consult a dictionary once they have formed an impression of what a word might mean, or 'have a feeling for it'.

Examples of word lists used in Year 9 subjects are shown in Table 2.

Table 2 : Word lists used in Year 9 subjects.

English	technology	SOSE	maths	phys ed	science
calmed	temperate	information	circle	power	lustre
fascinated	biome	primary source	circumference	maximum	lattice
impatiently	tropical	secondary source	diameter	endure	metallic bonding
inquisitive	tundra	event	radius	endurance	malleability
curiously	envision	eye witness	area	aerobic	reactivity

Activities that teachers can use to develop each aspect of word level knowledge are shown in Table 3.

Table 3 : Activities to develop each aspect of word level knowledge.

Area of activity	Type of activity
say accurately each list word	• If necessary identify each syllable in a spoken word. • Draw attention to possible areas of pronunciation difficulty • Ask students to suggest similar sounding words • Build an awareness of functional sound patterns in words. If possible, teach sound patterns that have a meaning base as well, for example, 'micro' , 'nomic', ial'.
read each word with you / after you	• Read each word in syllables, say each part and then blend syllables; loc-a-tion, sev-er-al. • Let students see how stress patterns change when you blend syllables. • Help students see similarities between words on the lists and words they can read ; use analogy.

work on / explain meanings of key words	Each pair of students
	• has two words and put together their definition, use each word in a sentence that shows its meaning, write a paragraph / short story using the list words.
	• suggests as many synonyms and antonyms for key topic words.
	• suggests the category the topic words belong to, draw a network diagram linking the word meanings.
	• explore several words, that have the same prefix or suffix, eg., re- or micro- They
	  • link each word both with what they know about similar words and how it is said
	  • segment each written word into parts.
	• guess the meaning of the prefix, in this case, re- .

spell the words.	Develop writing and spelling in parallel with reading: • show how to get from how word is said • ask students to write down all they know about a spelling pattern • ask students to segment words into syllables and write each syllable. • when correcting incorrect attempts, show the syllables / letters that are in the correct positions . • help them see the value of syllabifying or having words syllabified for them.

When teaching the meanings of words, it is advisable to have students

- use the context in which a word is used to work out its meaning, rather than using a dictionary. For the word 'endure', for example, they might hear sentences such as "They endured the winds and storms of Antarctica", "Their food endured for months because of the icy temperature." and "Their love endured for the time Tom was in Antarctica'.

- check their impressions through examples, with perhaps three or four examples of each, wherever possible.

- suggest what they think the word doesn't mean. This helps them to 'put bounds' on the meaning of the word.

These activities help them to learn 'word meaning building' activities. It is more useful to consult a dictionary once they have formed an impression of what a word might mean, or 'have a feeling for it'.

You can use the following format to teach synonyms and antonyms :

target words	synonyms suggested by students	antonyms suggested by students
calmed	not excited	
fascinated	attracted by someone	
impatiently		
inquisitive		
curiously	taking interest	
protectively		

You can apply this word study to texts the students are reading. As they read a text, have them select key words. Write them in the table below and work in think-pair-share to say what you think each word means and suggest 1-2 synonyms.

Key word	meaning	synonyms

Read aloud short portions of relevant text

A key literacy teaching procedure is having students read text aloud. Each student reads aloud a small portion of the text. Before reading aloud, pairs of students can be allocated sentences or paragraphs on which they can practise and support each other. They can ask for help with words they may find difficult.

Reading aloud can be used within a lesson to achieve various purposes. A class can be given 10 topics relating to the Crusades or the Solar System, hear each pair of students read a sentence and guess the topic to which it belongs. Before beginning a science prac, students can hear each step read aloud by a class member, visualise doing it and act it out.

Reading aloud provides students with auditory feedback for the text read. As well, it can help students retain sentences in short term memory and to use their oral language to knowledge to reason about what they read.

Paraphrase sentences

Paraphrasing a sentence is one aspect of sentence comprehension. It gives students the opportunity to learn to link the new concepts, often in unfamiliar relationships and to talk about the new ideas. It teaches them ways of talking about the ideas in the topic area and helps them retain the related ideas in short term memory. As well, it helps readers to link the new ideas with what they know. When

students re-tell a sentence they have read, they link the new concepts with concepts they know. Working on synonyms before paraphrasing usually assists here.

Various teaching procedures can be used.   The focus is on replacing as many of the words as possible in the original sentence.

After one member of a class reads aloud a sentence, a second student is asked
1.   *"Say that in your own words* or *What is another way of saying it ?*
2.   *What does it mean ?*
3.   *Say it to someone else in another way*

Encouraging students to evaluate alternative attempts at paraphrasing can also assist learning. Students

1   hear or read alternative attempts at re-telling a sentence and select the most accurate,
2.   practise writing paraphrases for sentences
3.   are given a set of sentences and a paraphrase of each but with the paraphrases jumbled and
          match them and
4.   explain what they do when they paraphrase and comment on it helps them read better.

Students can hear 2 or 3 students' paraphrases of a sentence and select the closest paraphrase to the text. They can Practise writing paraphrases for sentences. A paragraph of 3-4 sentences can be given to a small group of students. Each student paraphrases one sentence. Combine the four paraphrases into a paragraph.

Substances come in three types of forms; solids, liquids and gases. We say something is a solid if it has a shape that doesn't change when it is left alone. We call this a 'fixed shape'. Examples are a chair, a biscuit, a rock. Something is a liquid if it has a fixed amount but not a fixed shape. The space it takes up stays the same. This is called its volume. However, it changes its shape to match the container that holds it. Something is a gas if it doesn't have a fixed shape or a fixed volume. It simply fills the shape it is in.

Students can explain what they do when they paraphrase and comment on it helps them read better . They can be given 3-4 paraphrases and be asked to arrange them in order of closet to furthermost away from text

Say questions the text answers

After reading a sentence aloud, ask readers *What question/s does this answer for us ?*"   This procedure focuses student attention on analysing the ideas in the sentence in terms of its purpose and to link the sentence with what they know.   It extends their comprehension of the sentence and encourages them to be active as readers.

Being able to ask questions is a key aspect of effective literacy practice.   Adults generally read when they have a reason or purpose, that is, they have questions that they seek to answer by reading. Readers who can decide rapidly the questions that a text answers are more efficient readers.   They can more easily align the questions they seek to answer with the questions the text answers.   They can also segment the text into 'digestible chunks' based on the questions answered by each section.

Students need to learn how to ask questions of topics they are learning, to identify the questions answered by a text and match the questions in their head with the text questions. Many secondary students have difficulty identifying the questions that sentences in a text answers. They often have had little experience questioning the topic they are learning. They are more skilled in answering questions.

Useful teaching procedures include the following :   students

(1)   are given a set of sentences and a matching but jumbled set of sentences and link each sentence
          (or 'answer') with its question.

(2)   decide whether a particular sentence answers a who, what, when, where or why question. Gradually they can apply this to text comprising two to four sentences.

(3)   in small groups write down the question that each sentence answers; in pairs, one student reads a sentence and the second decides the question that would be asked to get that answer.

(4)   reflect on how asking questions assists them as readers and the types of questions particular sentences might answer.

Summarise the text

Summarising is key aspect of reading. It helps readers abstract the main ideas of a text. This is the knowledge that they add to what they already know. In the process of reading a text, we retain in short term memory a summary of what we have read earlier while processing a later portion of the text and cross-reference them.

After reading a set of sentences aloud, ask readers *What is the main idea in this paragraph ? What is its topic ? Say in a few words what the paragraph says.* Teaching procedures include students

(1)   selecting the key words in two or three consecutive sentences,
(2)   identifying the topic sentence of a paragraph,
(3)   matching sentences from different paragraphs with their topic sentences,
(4)   reviewing or summarising a paragraph, saying in one sentence what it is about or what they know having read it,
(5)   saying the main question a paragraph answers,
(6)   writing the topic sentence or headline for a paragraph and
(7)   teaching students to skim and to scan paragraphs.

Begin by having readers summarise two sentences and then three or more sentences. You can develop the notion of the topic sentence and ask students to find the topic sentence in a text. They can also have activities in which they match each sentence with its head-line.

Review and consolidate what has been read by reading silently a summary text.

There are two purposes here: for students

(1)   to identify what they have learnt by reading and to link the new knowledge with what they already know and

(2)   to have their new knowledge structured in a 'linguistic' or 'verbal way'. This is an investment for future learning. Students whose knowledge is organised in a verbal way will be more able to use it in subsequent reading and writing activities. Their knowledge will be easier to enhance further by reading and writing. They will also be more able to show what they know in written assessment formats and to receive positive feedback for what they know.

Teaching procedures include having students

(1)   say as briefly as they can what they have learnt, record it in writing, in pictures or in distinctive gestures,
(2)   say the questions they can now answer,
(3)   say how the new ideas are similar to and different from what they knew
(4)   work on cloze activities in which they complete a written retelling or summary of text they read
(5)   answer written questions about the topic,
(6)   write questions they can now answer, work in a small group to make up 5 difficult questions that are answered another group,
(7)   write a summary of the knowledge they have gained and (8) draw network of semantic maps showing the ideas learnt and the links between them.

Useful activities to achieve this include students reading silently a relevant sample of text, showing comprehension, reviewing and consolidating what has been read in a range of activities:

- cloze activities in which students complete a written retelling or summary of text they read.

- activities in which students answer written questions about the topic or write questions that they can now answer. Each group of students can make up 5 difficult questions that can be answered by thinking about the text. These are given to another group that frames up a response.

- activities in which they match questions with relevant text or match topic sentence with text.

- students in small groups write a summary of the knowledge they have gained.

- students draw network of semantic maps showing the ideas learnt and the links between them.

Examples of activities include the following. Read and complete each of the following summaries:

Substances come in three forms; solids, _____ and _____. Solids have a shape that doesn't change when it is left alone. We call this a _____. Examples are a chair, a _____ , a _____ Liquids have a fixed _____ but not a fixed _____. They change their shape to match the container they are in. Gases don't have a fixed _____ or a fixed _____. They simply fill the shape they are in.

Year 9 Commerce : Applying for a loan

You are 30 years old and you want to buy your first house. To do this you need to borrow $ 200,000 from a finance company. You have an interview with Ms Tight, loans manager. You hear that she is grills people who want loans. You want to prepare for your interview with her so that you are most likely to get the loan. What will she want to know about you ?

First she will want to know personal details such as your name , _____, _____ and
_____.

Second she will ask you about where you are working now and where
_____. These are your _____ details. She needs this information so that she can see whether you can go on _____ to pay off the loan.

Third, she will ask you for the names of _____. She may contact some of these to see if you
_____.

Fourth she will be interested in how well you have paid off earlier debts you had. This is called you _____.

Fifth, she will be interested in financial commitments you have at present such as _____ , _____ and _____.

Sixth, she will want to know about things you own that could be sold to pay off your loan, if necessary. These are called your _____. You may have _____, _____, _____, _____ and
_____.

Seventh, she may ask you about what income you get from shares and other sources or your partner's salary. These are your _____ details.

Integrating the reading strategies.

As well as learning each strategy separately, students can integrate their use. When required to read a text that has several paragraphs, they can use the following format to record the key words or phrases, the question/s answered by each paragraph and summarise it.

When students are required to read a text that has several paragraphs, they use the following format to record the key words or phrases, the question/s answered by each paragraph and summarise it.

	As you read each paragraph of a text	
select the key words	*summarise it - say what is it about in one sentence*	*say the main question it answers*

Write these in the table below for each paragraph.

	Key vocabulary in the text	Summarise main ideas of paragraph	Main question answered by paragraph
1			
2			
3			
4			

The framework provides a useful means for keeping track of the ideas mentioned in the text and assists students to direct their thinking. As well, it provides a means for gathering information as one reads. It can become part of the student's knowledge of how to read and learn.


Students use the procedures spontaneously.

A long term aim of the teaching is that students will learn to use the sequence of literacy strategies spontaneously and selectively as part of their self talk or self instruction whenever they need to comprehend written text. Whenever they are required to learn by reading, the aim is that they will, where necessary, tell themselves to

- get their knowledge ready for learning by organising and recoding what they know to a verbal linguistic form.

- use the word level procedures to add unfamiliar verbal concepts to their vocabulary.

- read aloud short portions of relevant text.

- paraphrase or say in their own words each sentence in the text read.

- say questions that each sentence in the text answers.

- summarise the text read, usually paragraph by paragraph.

- review and consolidate their comprehension of what has been learnt, linking it with what they already knew.

The teaching procedures initially cue students to use them. Gradually students learn to talk about what they do when they use the strategies, to evaluate their usefulness and decide when to use them. This helps them build self instruction strategies that

These procedures can gradually be learnt by students as 'self dialogue' or 'self instruction' statements that students can learn to use to convert information to knowledge and to enhance the knowledge. They can use the self talk to manage and direct their learning by reading. As an intermediate step students can write the strategies on small cards and use these to self cue.

Teachers cue students to use them explicitly	⊣⊢	Students see the strategies work for them and write them on self cue cards to remind themselves to use them.	⊣⊢	Students use them as 'self dialogue', self scripts, or 'self instruction' statements to convert information to to manage and direct their learning by reading
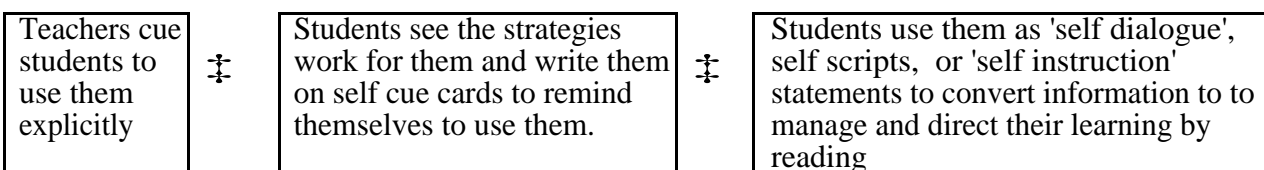
Students can learn to use the strategies in a self diagnostic way. Each strategy leads to a particular type of knowledge about a text. When they have difficulty comprehending a text they can use the sequence to identify which strategies they have used effectively and which ones they may need to re-

apply. Do they, for example, believe they understand a sufficient portion of the key concepts in the text ? Can they say in their own words enough of the sentences ?

Teachers can also use the sequence in a diagnostic way. When students have difficulty learning from a particular text, teachers can identify which aspects have not been sufficiently well understood and re-implement activities for those procedures.

Teachers learn to implement the high reliability literacy teaching procedures

The teaching procedures were trialed across the subject areas typically taught in Australian secondary schools. They have been shown to enhance both students' ability to learn by reading and their literacy knowledge of the topic being learnt. They have been particularly useful for students who had reading difficulties. They are referred to as 'high reliability literacy teaching procedures' or HRLTPs.

This work has involved assisting teachers, subject area faculties and departments and schools to implement the procedures systematically by learning to embed them in regular teaching. Several professional development procedures are relevant. Teachers have needed to (1) see the teaching procedures modelled and implemented in their classes for content they are teaching, (2) develop action plans that gradually incorporate each procedure into their teaching, (3) explore and trial particular HRLTPs in small scale action research projects as part of their regular teaching (Calhoun, 2002), (4) be coached in the implementation of the procedures and (5) to evaluate the effectiveness of the procedures, discuss them with colleagues (Routman, 2002) and to report the outcomes of the evaluation to their department or faculty group, for example, in the form of a poster.

Part of this has involved learning to embed the procedures in regular teaching. One of the materials that has assisted here is the following planning and review sheet.

Planning and review sheet for mapping literacy teaching strategies into lessons in week

Content for session	read aloud short portions of relevant text	paraphrase text	say questions the text read answers	summarise text	work on key words	read silently and show comprehension
1						
2						
3						
4						
5						
Evaluate each activity						

Other aspects of facilitating the implementation have involved

- school leaders, KLA leaders, KLAs and individual teachers having clear visions of the intended outcomes of the implementation and how students and teachers will be working differently when the procedures are in place

- action plans and pathways for achieving the vision . This may include KLA leaders being equipped to be the 'leaders of literacy learning' and each KLA group   developing its literacy enhancement pathway.

- KLA teachers seeing the HRLTPs modelled in their teaching, having the opportunity to explore and trial particular HRLTPs in small scale action research projects ELTPs as part of regular teaching and to report the outcomes to the KLA, sometimes in the form of a poster.

Conclusion

The High Reliability Literacy Teaching Procedures (HRLTPs) program is continuing as an increasing number of schools incorporate them within their regular teaching.

References

Baumann, J. F., & Kameenui, E. J. (1991). Research on vocabulary instruction: Ode to Voltaire. In J. Flood, D. Lapp, & J. R. Squire (Eds.), Handbook of research on teaching the English language arts (pp. 604-632). Upper Saddle River, NJ: Merrill/Prentice Hall.

Beck, I. (1997). Comprehension instruction: A research agenda for the 21st century. Paper presented at the annual meeting of the American Educational Research Association, Chicago.

Beck, I., & McKeown, M. (1991). Conditions of vocabulary acquisition. In R. Barr, M. Kamil, P. Mosenthal, & P. D. Pearson (Eds.), Handbook of reading research (Vol. 2, pp. 789-814). New York: Longman.

Calhoun, E.F. (2002). Action research for school improvement.   Educational Leadership, 18 -24.

Cunningham, A. E., & Stanovich, K. E. (1998). What reading does for the mind. American Educator, 22(1 & 2), 8-15.

Gersten, R., Fuchs, L.S., Williams, J.P. and Baker, S. (2001). Teaching reading comprehension strategies to students with learning disabilities : A review of research. Review of Educational Research, 71, 2, 279 – 320.

Kucan, L., & Beck, I. L. (1997). Thinking aloud and reading comprehension research: Inquiry, instruction, and social interaction. Review of Educational Research, 67, 271-299.

Lapp, D., Flood, J., & Ranck-Buhr, W. (1995). Using multiple text formats to explore scientific phenomena in middle school classrooms. Reading and Writing Quarterly: Overcoming Learning Difficulties, 11, 173-186.

Mastropieri, M. A., Scruggs, T. E., Hamilton, S. L., Wolfe, S., Whedon, C., & Canevaro, A. (1996). Promoting thinking skills of students with learning disabilities: Effects on recall and comprehension of expository prose. Exceptionality, 6(1), 1-11.

McCormick, S., & Cooper, J. 0. (1991). Can SQ3R facilitate secondary learning disabled students' literal comprehension of expository text? Three experiments. Reading Psychology: An International Quarterly, 12, 239-271.

Nelson, J. R., Smith, D. J., & Dodd, J. M. (1992). The effects of a summary skills strategy to students identified as   learning disabled on their comprehension of science text. Education and Treatment of Children, 15, 228-243.

Palincsar, A. S., & Brown, A. L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. Cognition and Instruction, 1, 117-175.

Pressley, M., Harris, K. R., & Marks, M. B. (1992). But good strategy instructors are constructivists! Educational Psychology Review, 4, 3-31.

Routman, R. (2002). Teacher Talk. Educational Leadership, 32 -35.