Abstract

Capable readers need to choose and integrate a variety of strategies to make meaning of text. The students chosen for this research are grade 2 students who are the most at risk in their year level in their reading ability. Although they can often read text at an age appropriate level, they are often decoding words in a stilted manner without comprehending the context.

The hypothesis of this research project is that **explicitly teaching students in grade 2 to use synonyms and to reading on as a strategy to search for contextual clues will increase vocabulary knowledge and reading comprehension**. Research on building vocabulary knowledge suggest that teaching students to read often focuses on decoding and phonological awareness. This project endeavours to explore the concept that voacabulary knowledge is a vital link in the development of competent readers. In this study, the explicit teaching of reading on to search for contextual clues is taught.
In this research, oral and written cloze tasks are used to develop and assess these strategies that students need to use metacognitively in order to read independently.

The study compared two cohorts of students; a control group and an intervention group who participated in 10 intervention sessions. Results indicate a growth in vocabulary knowledge for the teaching group, but did not reflect the observable change in reading behaviours. Interval measurement tools did reflect the growth in the strategies used by students to make meaning of text, however significant results would be truly apparent over a longer period of time.

This study suggests that explicit teaching makes a difference to vocabulary development and cognitive processing. It also raises an important questions about the way reading is taught to students as a set of subskills rather than a thinking process.

Introduction

It seems obvious that vocabulary knowledge will have a direct impact on a student's ability to comprehend text. However, current programs and materials in schools tend to emphasize phonological awareness, decoding skills and literal comprehension. Vocabulary development has been recognized as a strong determinant of success, and has been researched in many educational studies. The teaching of new words and their meanings, along with teaching the links between words with similar meanings develops the student's vocabulary knowledge and use in oral and written language.

An over-crowded curriculum can mean less opportunity to read aloud to students. Reading aloud is a valuable teaching strategy, allowing students to hear new vocabulary used in context, and has a powerful impact on students' language acquisition. Reading aloud also expands students' skills in listening comprehension and oral expression. Hickman P, Pollard-Durodola S, Vaughn S (2004) state:

> '…explicitly relating words to familiar concepts, integrating new words with context – specific concepts by building on prior knowledge, providing frequent encounters with words, and providing opportunities for students to process the words deeply by using new vocabulary to describe experienced reality makes instruction powerful.'

This form of oral language plays a huge role in students discussing word meanings, thinking of other words with similar meanings, and being able to substitute words with other words that mean the same. Explicit teaching of vocabulary knowledge strengthens the links between making meaning at every level, from word level through to whole text level. Most of the words that students learn are learned in context: relatively few are learned through direct instruction (Joshi, 2005). This signifies the importance of using opportunities to read aloud, teach students about word meanings in context, and engage students in reading texts that are moderately challenging to maximize these opportunities.

Teachers in the early years recognize that students who enter school with stronger vocabulary knowledge often find it easier to learn to read. Students' vocabulary knowledge at this stage is largely determined by parental interaction and incidental sources such as television. Many students in the early years learn to be efficient text decoders, and can read texts at the appropriate level, however lack the skills and knowledge needed to understand the text fully. Biemiller (2003) suggests that 'incidental instruction may not be substantive enough to significantly boost the oral language of students who enter school with weak oral vocabularies.'

Teaching students to use a book to contextualize word meanings is an explicit teaching strategy that might be overlooked in the quest to teach phonological awareness and decoding skills. Joshi (2005) reinforces this issue when he states 'vocabulary development and the role it plays in reading skills acquisition have received much less attention than decoding and comprehension strategies.' He also claims that 'students with poor vocabulary knowledge read less and acquire fewer new words, while students with better vocabulary knowledge read more and improve their comprehension.' Poor readers tend to read easier materials and fewer books and vocabulary acquisition is at a slower pace, whereas students who have 'robust vocabularies, read more, comprehend better, and thus read more still improving their vocabularies. This is often referred to as the Matthews effect.

Struggling readers often lack fluency in their reading, and appear not to use information that is in the surrounding text to bring meaning to the text. Juel, Biancarosa, Coker and Deffes (2003) suggest that 'schools that focus entirely on teaching decoding skills in the early grades, neglect the essential vocabulary knowledge that students need to become competent readers.' Struggling readers often lack the experience needed to understand vocabulary used in school texts. Book language can draw on vocabulary that occurs relatively rarely in oral conversations. For example, authors may use the word leap for jump, or thump for tap. (Juel et al. 2003)

Classrooms with high literacy learning, including extensive oral language discourse plus good vocabulary instruction, can purposefully help all students, including those with limited vocabulary knowledge The use of a multifaceted approach to word learning, incorporating multiple anchors, meaning, spelling and sounds, to scaffold students to learn about words is recommended by Juel et al(2003) If students know a word beyond its visual structure, they are more likely to use that word in different situations, and integrate it with what they already know. Thus students need to make links between words that have the same meaning, as well as continuously building up a repertoire of new words. Joshi (2005) goes on to suggest that cloze tasks where students supply missing words by predicting from the context and thinking of synonyms, focus on developing meaning.

Reading Recovery as an intensive program for struggling readers at year 1 level, also reinforces the importance of vocabulary knowledge by stating that 'to make the child an independent reader the teacher must encourage him to *search* for links between new words and words he already knows.' (Clay, 2005). This researcher also refers to the fact that early readers need to be taught to search for several kinds of information in word sequences and longer stretches of meaning. Then they need to be able to *check* that one kind of information fits with other available information. This is where reading on to search for contextual clues to work out new words and confirm meaning is a key strategy that students can use. Having students identify unknown words themselves, as well as explicitly teaching word vocabulary, along with reading on to search for contextual clues offers excellent scaffolding and support for students to be able to put their 'meaning making motor' into action. A good reader uses a range of strategies to build meaning of a text. Vocabulary knowledge is the critical link between decoding and comprehension, as readers need to be able to understand words to comprehend a text and need to be able to use their knowledge to make meaning of unknown words in the context of the text.

Recently there does seem to be a trend for more word vocabulary building to be integrated into reading approaches. For example, in the Reading To Learn approach (Catholic Education Office, Melbourne, 2004), the whole reading and writing task is taught from the top down; that is students are orientated thoroughly to the topic, text and word meanings before reading.This enables students to more easily make links between sentences and between words as the text is unfolded. The teacher explores unfamiliar concepts with students, and word meanings are elaborated as the teacher explains new concepts or metaphors, literary wordings and student's relevant experience.

This project will explore the hypothesis that explicitly teaching grade 2 students to use synonyms and to reading on as a strategy to search for contextual clues will increase vocabulary knowledge and reading comprehension.

Method

Design: The study uses a case study OXO design, in which the gains in vocabulary development and reading to search for contextual clues, following explicit teaching of synonyms and reading to search for contextual clues, are monitored for Year 2 students.

Participants: The grade 2 students selected for this study, are the most at risk in their year level. The teaching group consists of 5 students from one classroom, whereas the control group consists of 5 students from another classroom. Students were selected based on their Literacy Advance data collected at the beginning of the year, as well as the Reading Progress Test, synonyms task, running records and cloze task.

I hypothesise that by explicitly teaching vocabulary development skills and the use of reading on to search for contextual clues, students will be able to use these strategies when they encounter unknown words within a text. The Literacy Advance data collected for all year 2 students at the beginning of the year, indicated that this cohort of students are most at risk. The classroom teacher had also identified these students as students needing extra assistance, who would benefit from increasing their word vocabulary and learning to read on for contextual clues. Participant's age, reading ability, collected data and pre testing results are shown in Table 1.

Materials: Materials used include the following:

For data Collection:
- Reading Progress Test 1: students worked in small groups to underline answers and pictures to answer questions about text. These tests are designed to provide a valid measure of early literacy and reading comprehension skills. (Appendix 2)

- Synonyms Task: students were given 29 words by the teacher, and responded by naming and writing one or more synonyms for each word. (Appendix 3)

- Running Record and Cloze task: students read a text at instructional level. Students completed a written cloze task related to the content of the text. (Appendix 4)

- Literacy Advance data: Students were administered the PM Benchmark running record assessment at the beginning of the year. Text level data was used to plot progress, and to ascertain students at risk.

- At the end of each teaching session, students were given a written cloze task to complete. The cloze tasks related to the text read during that session, and were designed to measure the effect of synonym knowledge on comprehension. They also provide a measuring tool for interval progress. (Appendix 5)

- Teaching session materials included four different fiction texts. These included a big book, a poem, an article and guided reading books. These texts were chosen because they offered valuable opportunities for teaching synonyms. They also contained high redundancy sentences used in the first sessions to teach how to read on for contextual clues. All texts were at instructional level, so offered support for students whilst challenging them with opportunities for learning. (Appendix 6)

- A written cloze task was administered at the end of sessions 3 – 10, for students to complete independently. These tasks were used as an interval measurement tool. (Appendix 7)

- A teaching journal was used for each session to record anecdotal notes.

Procedure: In pre testing for this study all students were administered the Synonyms Task (John Munro, 2005). Students were given examples of synonyms and had the opportunity to practice saying and writing another word that 'means the same as.' Students then wrote synonyms for each of the 29 words said by the teacher. Students were prompted to write any more words that mean the same. Words were not said in sentences, but were repeated if necessary. Students could take as long as they needed and did not have to write words using correct spelling.

The Reading Progress Test Stage 1 (ACER, 1996) was administered to all students in the teaching and control group.Students completed this test in small groups after thorough orientation, including using practice examples. Students began by underlining words that matched pictures, and words that named something that can be eaten. They progressed to answering questions by underlining pictures representing characters in the text, then by underlining the right answer in words. Finally students completed a cloze task, where a word had been omitted from each sentence. Students had to decide what the missing word was, making sure they retained meaning in the sentence.

The running record administered as a pre testing tool involved students all reading a PM Benchmark Level text (PM Benchmark Testing Kit, 2000). All students were assessed to identify their instructional level of reading, where reading accuracy was between 90-95% Students answered questions linked to the text orally .These questions were designed to assess recall, literal and inferential comprehension, personal reaction and the student's ability to make connections with themselves. Students were also required to generate a question about the text, and complete a written cloze task related to the text. The questioning on many levels was used to ensure that students had read for meaning and were able to make links between events happening in the text. The written cloze task was given to identify if students were able to read on to think about appropriate word use in a sentence. The cloze task also indicated, to some extent, the student's knowledge of synonyms, relating to their choice of word use.

The 3 pre testing assessment tasks clarified the need for intervention, particularly in the area of synonyms and vocabulary knowledge, as most students in the teaching and control group scored poorly in the synonyms task. Two students, one each from the teaching and control group, recorded scores below the 25th percentile for the Reading Progress Test, indicating that they are at risk. Pre test scores are illustrated in Table 1.

Table 1   Pre Test Scores all students

Student	Age in Years & Months	Intervention 1=Yes 0=No	RPT Raw Score	RPT %ile	Synonyms Task Raw Score /29	Running Record Instructional Level	Reading Age
Teaching Group							
A	7.9	1	21	31	11	19	7.5-8
B	7.6	0	25	49	14	19	7.5-8
C	7.9	1	22	35	23	19	7.5-8
D	7.4	0	25	49	16	20	8.0
E	8	1	17	20	8	19	7.5-8
Control Group							
A	8	1	16	18	11	21	8-8.5
B	7.5	1	24	44	11	17	7-7.5
C	7.3	0	21	31	15	21	8-8.5
D	7.4	0	23	39	9	19	7.5-8
E	8.5	0	27	62	13	21	8-8.5

RPT percentiles were calculated using the Norms for the Conversion of Raw Scores to Standardized Scores: Reading Progress Test 1, Year 2 level, Mid-Year 2, Mean Age 7.7(RPT, Australian Norms Supplement, 2000, ACER)
Reading Ages were calculated using the PM Benchmark Kit Teacher's Notes.(PM Benchmark Kit, 2000, Nelson)

The teaching procedure (Appendix 1) followed a series of sessions that focused on both synonyms, and the use of high redundancy texts, as well as oral and written cloze tasks to teach how to read on to search for contextual clues. In each session, students reviewed the action of what they are going to do to help them predict and read unknown words. Students were taught to adopt a self script, which was reinforced throughout all sessions.

The action they learnt is that upon reaching an unknown word, they will say to themselves :

> *This is what I do:…I read on… I 'listen to what I am reading'….I have a picture in my head……Then I think about what word might make sense..... to make meaning….Then I check with what the word looks like….then I read the sentence again to check that it makes sense and sounds right*

In each session, students reviewed this action, before the teacher introduced the new text and modeled the action strategy. Students learnt to identify unfamiliar words and apply the action. Part of each session focused on building synonyms and word vocabulary, where students added to lists of synonyms, visualized words by drawing pictures, played sorting games with synonym flashcards and engaged in oral cloze tasks. The oral cloze tasks were used in context with the text that students were reading, where a word was omitted from a sentence. Students took turns to suggest possible words that could be used in the sentence, and then engaged in oral discussion to decide collaboratively which word they think is the best choice.

Sessions have been designed so that students also complete a written cloze in sessions 3 – 10. These cloze tasks were designed to assess the effect of synonym knowledge on comprehension, as well as assessing whether the student was reading further to search for contextual clues before selecting a word to maintain meaning in the sentences. The written cloze tasks have been used as an interval measurement tool in assessing student progress.

The sessions were planned to increase sentence and text complexity, using sentences with less redundancy, so that students needed to read on more in order to search for further information to work out unfamiliar words.

At the end of each session, students articulated what they had learnt during the session, as well as reviewing the action strategy. Detailed lesson plans can be found at Appendix 1.

The 10 teaching sessions were conducted daily over a 2 week period, in the student's classroom during the literacy block. Each session was 30 minutes duration. Written cloze tasks, written reflections and anecdotal evidence was used to monitor students, and provide valuable assessment at intervals.

Students in the control group continued to participate in the regular classroom program. Following the 10 sessions of teaching, all students were assessed again using the same materials and procedure used for pre testing.

Results

The post test results for both the control and teaching groups yielded inconclusive results. Table 2 summarises raw scores and averages for each of the tests administered.

Table 2   Pre and Post Test Results for the Teaching Group and Control Group

Teaching Group	RPT Pre Raw	RPT Post Raw	Synonyms Pre test	Synonyms Post test	RR Level Pre	RR Level Post
Student A	21	22	11	24	19	21
Student B	25	26	14	18	19	20
Student C	22	27	23	38	19	20
Student D	25	26	16	31	20	22
Student E	17	25	8	16	19	20
Average	22	25.2	14.4	25.4	19.2	20.6
Control Group						
Student A	16	24	11	15	21	22
Student B	24	26	11	17	17	19
Student C	21	21	15	12	21	22
Student D	23	27	9	18	19	20
Student E	27	28	13	17	21	24
Average	22.2	25.2	11.8	15.8	19.8	21.4

There were several dependent variables that impacted on some of the predicted results. The first variable was that the RPT testing was confusing for the grade 2 students to complete independently because of the way questions needed to be answered. Questions 24-32 were relevant to the teaching sessions, and all students were able to complete the cloze activities with increased accuracy. This meant that although scores improved marginally for most students, the overall post test scores did not reflect the student's progress in synonym use and reading comprehension. The other dependent variable was the absence of one student from the teaching group for 5 intervention sessions. Her absence did have an impact on her results in comparison to the others in the intervention group. Other dependent variables were the students who participated in this action research study. One student is extremely bright and performs well with any oral language task, yet struggles to read independently. Thus his results varied widely, depending upon the type of testing. Another student has severe language disorder, thus his scores impacted on the teaching group's average scores.

Graph 1 illustrates the mean results for each group. The mean results were calculated using raw scores from pre and post test data.

Graph 1

Mean Scores
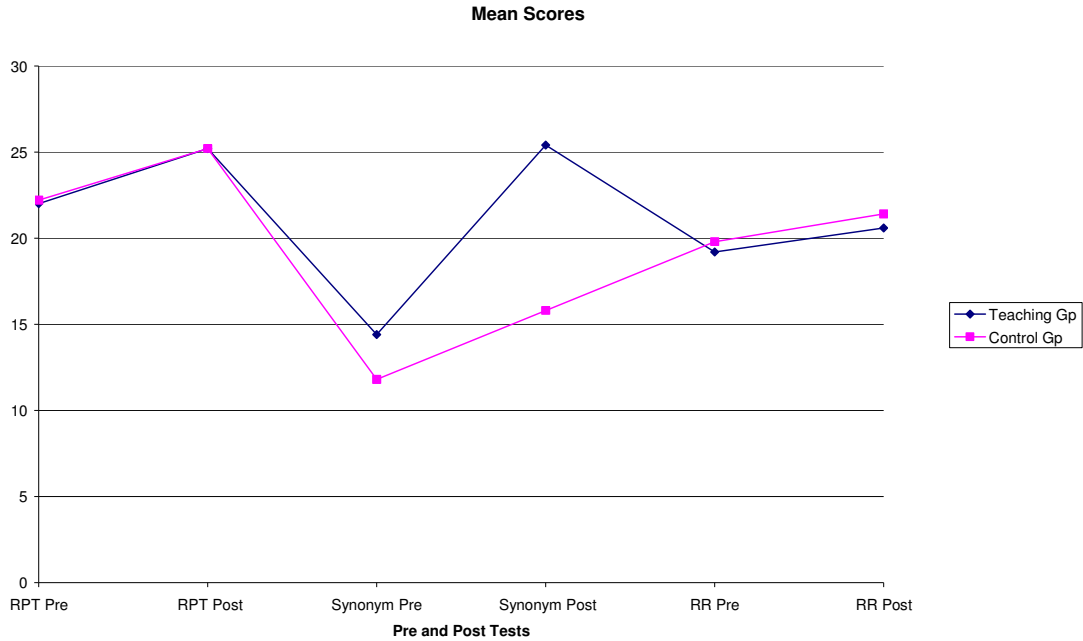
This graph illustrates the difference in synonym knowledge and vocabulary development in the post testing phase. Both groups were administered the synonyms task under the same conditions, however the teaching group had increased their vocabulary knowledge at a much greater rate than the control group. The teaching and control groups both had similar averages for the RPT and Running Record tests, as illustrated on Graph 1 and Table 2. The interval measurement used during the intervention sessions reflects this growth in vocabulary knowledge and reading comprehension. Although the averages for both groups, and the difference in raw scores is minimal, an increase in one text level over a 2 week period can be quite significant for students who have not progressed for several months.

Table 3　　**Mean scores showing ± 1 standard deviation from the mean for each of three tests, for the teaching and control groups pre and post-test**

	Reading Progress test		Synonym task		Running record level	
	Pre-test	**Post-test**	**Pre-test**	**Post-test**	**Pre-test**	**Post-test**
Teaching Group	22 ±3.3	25.2±1.9	14.4±5.7	25.4±9.1	19.2±0.45	20.6±0.89
Control Group	22.2±4.1	25.2±2.8	11.8±2.3	15.8±2.4	19.8±1.8	21.4±1.9

Inspection of the means and standard deviation would appear to support the idea that there was little difference between the control group and the teaching groups both pre and post-test, across any of the tests. One exception might be within the synonym task where what would seem to be a large difference in the mean pre- and post-test within the teaching group is confounded by the apparently larger standard deviation post-test. This implies that while the teaching group on average improved, the spread within the population was larger. With a small group of 5 students it is difficult to reach clear conclusions from the numbers alone. Within the teaching group there is one student who has advanced oral language. This student excelled in this task, (contributing a high score) whereas the student with the learning disability is poor at oral language and showed minimal improvement.

Observations of the Group: Trends for the group indicated that the intervention sessions were effective for synonym knowledge, and their use in written cloze tasks. All but one student in the teaching group, (who missed 5 teaching sessions) improved significantly in this area, with 4 out of 5 students approximately doubling their pre test scores. In comparison the control group showed slight improvement with 4 students improving scores by a small increment.
The improvement in synonym knowledge can be attributed to the 10 lesson sequence, in which students drew pictures of synonyms, developed lists of synonyms, played sorting games with synonym flashcards, and discussed the choice of synonyms for oral and written cloze tasks. The students' prior knowledge had a direct impact on their vocabulary knowledge and ability to make connections at the conceptual level.

All students in the teaching group improved their scores on the Reading Progress Test marginally. The growth in improvement in this test was similar to that of the control group. There may be several reasons for this. A major factor is the way this test is administered. Students were not used to answering questions about text by underlining pictures of characters, and became confused with who said what, or who might have said what. Although students were told that they needed to re read the text to find the answer, most students did not. The students in the teaching group did show slight improvement over the control group in the last part of the RPT, which is a written cloze task related to a story they had read. It was noticeable that the teaching group were reading on to the end of the sentence to search for more information before writing the omitted word. The control group tended to fill in the cloze with a word that made sense up to that point, without reading the rest of the sentence. These words sometimes luckily made sense, however the teaching group chose more suitable words, and read on to make sure meaning was maintained.

The running record results showed steady improvement for the teaching group over the ten session / 2 week period. All students progressed at least one level, and were reading using more of the meaning making strategy. I observed all but one student in the teaching group reading on and thinking about what unknown words could make sense, rather than stopping at the word and using pure visual cues. The teaching of reading on as a strategy to search for contextual clues gave the teaching group an extra strategy to cross check information to maintain meaning. The results do not reflect this important strategy achievement that I observed.

Learning Trends for Each Student:
The graphs for each student are interval measurements that were administered at the end of each session, commencing from session 2. The measurements used were written cloze tasks. The cloze tasks increased in complexity as the sessions progressed..
Accuracy was calculated by working out the number of correct responses supplied, that maintained meaning, compared to the total of responses possiblble.

Student A

Student A

Cloze Task Accuracy
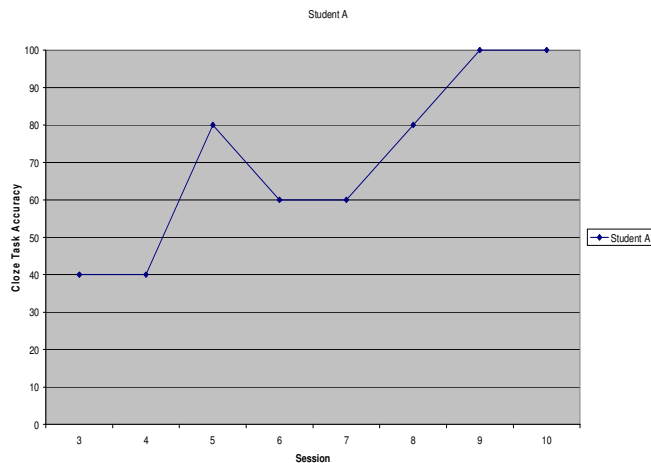
Session

Student A

Student A's results demonstrate that she developed her ability to understand the concept of using meaning making strategies to complete written cloze tasks. In the first 2 sessions when simple written cloze tasks were introduced, this student had no concept of reading on to the end of a sentence before thinking about what word she could insert that would maintain meaning. Therefore she would only read up to the omitted word, and write a word that only made sense up to that point. As the sessions progressed and we articulated and reviewed the action constantly, her ability to read on to the end of the sentence to search for contextual clues became progressively stronger. Session 6 was a difficult text that was not matched well to student learning, as the text was abstract and offered low redundancy.The reinforcement of this strategy during oral cloze tasks, along with discussion about best choice of synonyms provided a strong scaffold in her learning to use this strategy.

In the synonyms pre test, Student A often suggested rhyming words or opposites as words that mean the same. The hands on games where synonyms were sorted into groups helped this student see connections between words visually, and working in a co operative group offered her a supportive environment to discuss word meanings. Drawing pictures to represent words, along with making a picture in her head helped clarify the understanding of synonyms. Her pre test score for the synonym task was 11, whereas post test score was 24. This improvement of 50% illustrates this vocabulary knowledge development. Student A began to contribute more confidently to oral discussions as to which word was the best choice for meaning making at the sentence level.

Student A has received intervention in a small group for most of grade 1. She has seemingly stagnated at around level 18/19 for the last 6 months, despite good classroom teaching and extra support. During teaching session 5 as students were reading aloud and articulating what they were going to do when they reached an unknown word, Student A suddenly started using this strategy, making connections in her head and realizing that this made predicting a word easier.

In the past she had been very much bogged down in using visual cues to work out words, and would spend a long time trying to chunk words. By the time she had sometimes worked out words she had forgotten what the story was all about. The teaching of reading on as a strategy enabled her to make more connections and use her meaning making motor to think of what word might make sense. She realized that she didn't have to laboriously sound out or chunk words, but could make a prediction and see immediately if the word looked right.

Thus the teaching of this strategy actually turned her around from relying predominantly on the visual cue, to using the meaning and structure cues at the sentence and concept level. Her progress from level 19 to 21, with high comprehension accuracy was a significant gain for her.

This student will need continuing reinforcement of this strategy until it becomes an automatic component of her meaning making motor.

Student B
There is no interval measurement graph available for this student, as she was absent for 5 of the intervention sessions.

This student has not been identified previously as being a student who needed extra support. At the beginning of grade 2 her literacy advance results indicated that she was working at an appropriate level. However, as the year has progressed it has become apparent that she is not progressing at the same rate as the majority of grade 2 students, and really struggles to hear and record sounds in words. There is a family history of lower literacy achievement, with siblings at the school all having received extra support during primary school.

Student B went away on a cruise after 5 teaching sessions. She returned in time to have her post testing administered after the completion of all sessions. This is particularly evident in her synonyms results, as this is where the most change occurred for the teaching group. This student however, was only able to think of 4 more synonyms than during her pre testing. She struggled to visualize and make connections to think about words that could mean the same. She did show a small gain in improvement in the Reading Progress Test, scoring 1 more mark. She also advanced in her instructional reading level by one level.

Student B's results, do demonstrate that the explicit teaching of synonyms does expand student's word vocabulary, as her absence has meant that she did not make the gains that others in the teaching group did. However her results in the Reading Progress Test demonstrate that she progressed marginally, though this could be because she was more familiar with the testing procedure, and had read the text before. The running record text level did improve by one level, although Student B did not display outwardly that she was reading on to search for contextual clues.

In conclusion, the only comparison with results that can be made is in the synonym pre and post test scores, where gains in improvement were considerably less than others in the teaching group.

Student C
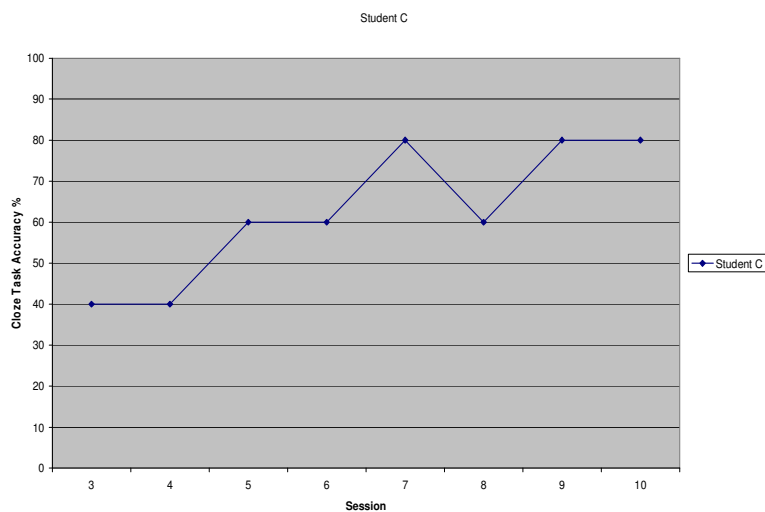
Student C

The interval measurement results for Student C illustrate that this student struggled with applying strategies to complete the cloze tasks as they became more complex. This student has an extensive vocabulary knowledge, and is extremely strong in his oral language. However, his application of strategies to make meaning of text vary according to his concentration span. He used words in the cloze tasks such as 'get' instead of 'getting', thus confusing grammar and structure. So he was able to know conceptually what type of word should go in the sentence, but was unable to make links with the language structure. So this student has an unusually high vocabulary knowledge, but is unable to make links and search for infornation to work out new word meanings whilst reading.

Student C is currently taking medication for ADHD. He has a low concentration span and is distracted easily. He has received small group assistance in literacy for most of grade 1.His pre test result for the synonym task was extremely high, with a score of 23. Although he was unfamiliar with the term 'synonym', after being given an example of what a synonym is, he was able to think of many words that mean the same as. For example, when the word 'boat' was said, his immediate reply was "ship, ferry, yacht." Other grade 2 students mostly had only single word responses.

The pre and post test results for the synonym task are 23 and 38 respectively. Even though student C had such a high score for the pre test, he still continued to improve his score by 15 after the teaching sessions. This marked improvement correlates with other members of the teaching group, and again reinforces the effectiveness of the explicit teaching of synonyms in expanding vocabulary knowledge.

This student showed a marked improvement in the reading Progress Test, scoring 5 marks more in the post test. This may have been because of familiarity with the test contents and procedure. The results for reading and comprehending instructional text showed improvement by one level.
This student reads in a stilted way because he keeps losing his place, and can find it difficult to focus. His automaticity in using effective strategies is often interrupted as he looks at the picture for too long, or is distracted by minor noises.
This student will continue to need extra assistance in literacy to reinforce the strategies needed to develop his meaning making motor.

Student D
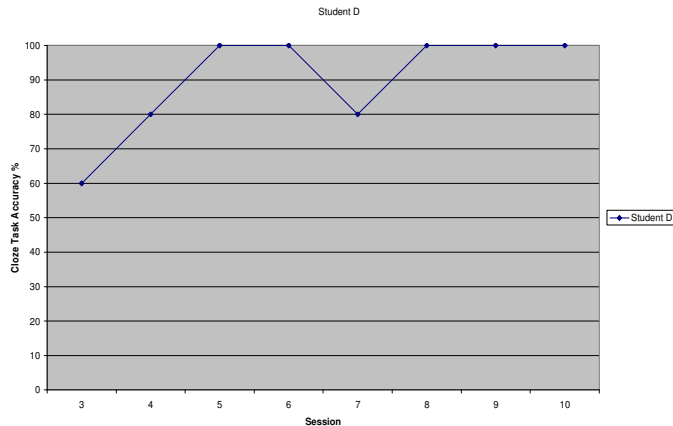
Student D

Student D's results illustrate that he was able to apply strategies to complete the cloze tasks efficiently, after the first 2 sessions. This student found it easier to apply the taught action earlier than others in the intervention group. This student's pre test scores show that he is not a student at risk, as his reading age is 8 years, and he is at the 49th %ile in the RPT. Student D has not received any extra support with literacy during his time at school. He has therefore not been seen as a student at risk, although his literacy advance test results show that in reading he has always been at the lower end of the class mean standard.

Student D's results showed significant improvement in the synonyms task with his pre and post test scores being 16 and 31 respectively. This student increased his instructional text level by 2 over the 2 week period. Observations during the reading showed that he was reading on to search for contextual clues, and finding this a useful strategy. Student D did not appear to use this strategy in the pre testing, but after articulating the action many times, he used it most times upon reaching an unknown word during the post testing and written cloze tasks. This student grasped the concept of making links between known and unknown words quickly. For example, he used his vocabulary knowledge and information in the surrounding text to work out the meanings of words such as 'shades' of green in text.

The reading progress test result showed little improvement. The type of written comprehension questions in this test confused this student even after thorough instructions were given.
Student D is more able to learn and apply strategies at a greater rate than the others in the teaching group. However, his automaticity in applying these strategies to develop his meaning making motor is still developing and needs further scaffolding.

Student E
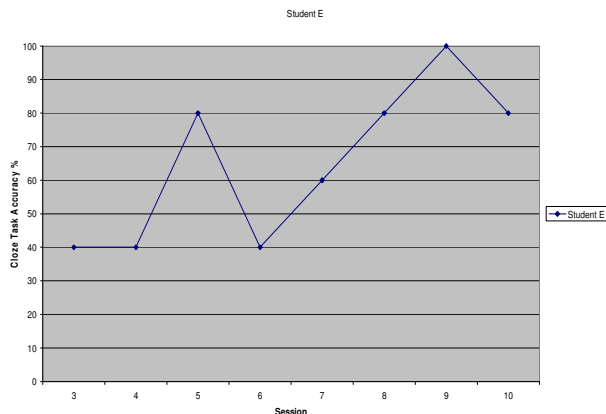
Student E has integration funding for severe learning disorder. His progress in reading has been slow and his fine motor skills are extremely poor, as reflected in his writing. His ability to focus varies enormously depending upon environmental conditions such as background noise and level of tiredness. He has received extra assistance with the integration aid since prep, and literacy support in a small group during grade 1.The interval measurement illustrates the erratic style in which he learns, seemingly using strategies effectively in some sessions. The mismatched text at session 6 with little sentence redundancy is illustrated on the graph by this student's inability to choose words to maintain meaning.

This student tended to mostly read up to the omitted word, rarely beyond to search for contextual clues. However if prompted to read back the whole task, he would realize his errors quickly. Unfortunately his response to these prompts was erratic. This student managed to increase his score in the synonym task, with pre and post test scores at 8 and 16 respectively. His 7 point improvement in the RPT score was surprising, and may be an outcome affected by independent variables such as concentration span. For the pre testing all students in the teaching group were tested together in a small group. However, this student was absent for the group post testing, and was tested on his own. This resulted in far fewer distractions, and his attention was plainly more focused.

His instructional reading level improved by one level, with understanding again tested by questioning on different levels. Student E does often display the ability to use strong meaning and structure cues whilst reading, with a high self correction rate. Observations during the post testing and written cloze task administration suggest that the teaching of reading on to search for contextual clues was not used, instead he uses re reading regularly as a strategy. This may explain why he found the written cloze tasks more difficult.

Student E's learning trend indicates that the intervention sessions did impact on his vocabulary knowledge. His progress in the RPT may be attributed to testing conditions, as the action taught was not outwardly observable. This student would need far more than 10 sessions to embed new knowledge and strategies to use in making meaning of text.

Discussion
The pre and post test results do not provide quantitative conclusive evidence to support the entire hypothesis. The general trends for the intervention group are positive, however the intervention would have to be taught over a more extended period of time to bring about significant change. The extent to which student's vocabulary knowledge increased through the use of synonyms is evident. The teaching group improved their post test scores in the synonym task, with an average of 25.2 whilst the control group improved slightly with an average of 15.8.

The interval measurement is more indicative of the progress made by individual students. This is because the written cloze task targeted the hypothesis specifically, as students had to read on to search for contextual clues and use their knowledge of synonyms to maintain meaning. Therefore, the explicit teaching in the intervention program was tested at each session with students completing these tasks independently.

My observations and anecdotal evidence provide support for the hypothesis as the teaching group was able to suggest synonyms more readily than the control group. The teaching group was able to suggest multiple synonyms for many words, but the majority of responses by control group were one word

Although the results do not show conclusive evidence for improvement in reading comprehension, the use of reading on to search for contextual clues as a strategy was recorded during the post test running record administration. The teaching group used this strategy more often than the control group, mostly with positive outcomes.

The hypothesis that reading on to search for contextual clues increases reading comprehension is not proven by results, as the RPT scores did not improve markedly, and both teaching and control groups improved their running record text level scores by a similar amount. On reflection, a cloze task would have been a better test of this hypothesis, as students have to read on to search for contextual clues to insert meaningful words in sentences. Students also need to use their knowledge of vocabulary to provide effective word choices. The only available cloze task was the TORCH test, and the simplest cloze was too difficult for these grade 2 students at this time of the year.

If this intervention program were to be used again, there are some factors that would increase the explicit instruction.. The construction of carefully matched oral and written cloze activities would complement the program. Some of the written cloze tasks designed were too complex, and practice is needed to plan tasks that target vocabulary use and sentence structure in a supportive , challenging sequence.
A careful text selection, with increased complexity in vocabulary and less redundancy in the latter sessions is also necessary. At the grade 2 level, I found that teaching these students to read to the end of the sentence for further information was manageable. To teach students to read on until they had put together enough information to solve more complex vocabulary would take a longer time for this age group.
Another concept that would complement this intervention is to include visualization tasks in each session to deepen understanding of meaning at the word, sentence and conceptual level.

The results support the research of Beimiller (2003) who suggests that vocabulary knowledge needs to be explicitly taught, and that incidental instruction may not be enough to boost the oral language of all students. This was demonstrated clearly by Students A, C and D in the teaching group, all of whom showed significant gains in the synonym task and the written cloze task, where vocabulary knowledge and choice of language improved. It was interesting to note that the teaching group was unaccustomed to thinking of synonyms and this was not something that had been taught explicitly. The intervention program reinforced the importance of teaching vocabulary knowledge, as the majority of students had real difficulty suggesting synonyms in the pre testing.

Juel et al. (2003) discuss the notion that a multi faceted approach to teaching words allows students to know a word beyond its visual structure, thus teaching students to make links between words. For instance, Student A knew the words thin and skinny, but was unable to link them The explicit teaching of synonyms enabled her not only to link words, but also to be able to identify a new word not in her word bank, and link it with a known word. She was able to search for clues in the surrounding text to link back to the new word and this meant her starting to work at the conceptual level, not just the word level.

This relates to Clay's research (2005) where she states that the teacher must teach the student to search for links between new words and words they already know. This type of checking for information is crucial as part of the range of strategies that students need to build meaning of text. Student C is an example of a student who has an extensive vocabulary knowledge and strong oral language. Yet he cannot efficiently cross check for information to determine the meaning of a word whilst reading text. The intervention program action and self script needs to be taught and reinforced for a longer period of time to become fully embedded for students such as Student C.

Hickman et al. (2004) discuss the importance of integrating the teaching of word meanings with the content area and context in which they will be used. The use of oral and written cloze tasks in the intervention program, along with the synonym building in each session allowed students to see the links between words and the wider information presented to them in text. The results from the written cloze tasks supports this research, as students improved in their ability to choose and select appropriate words to make meaning in context. The improvement in the interval measurement also is indicative of improvement in the student's cognitive processing as they make decisions about which strategies to use to make meaning.

After teaching this intervention program, there are several important implications for literacy teaching practice. Teachers model frequently the strategies that they use to make sense of text. Often these strategies are modeled during the shared reading time. I have seen teachers model how to look at the picture for clues, re read, look at initial sounds, read on etc. However, with the teaching group in my research, although the teachers had modeled all these strategies and more, not one student had been explicitly taught *how* reading on can help. The repetition of the self script along with reading aloud and articulating the action whilst reading, explicitly taught the students that reading on can help them think about what word could make sense. Although I intended to teach them to read on for as long as it takes to gather information, even reading on to the end of the sentence gave them another strategy to add to their meaning making motor. This implies that teachers need to investigate with students why actions help, not just model them.

The repetition of the self script aloud is another factor that has implications for teaching. Articulating an action aloud, and hearing others do the same, has an impact on student learning. Often in guided reading sessions students read silently. Does this allow for students to hear others and partake in a problem solving dialogue where collaborative learning is happening? During the intervention program this style of learning scaffolded the readers to take risks, and review the action. Self scripting is not a teaching strategy that teachers commonly use, however the outcome can be to improve students' metacognitive thinking and reinforce useful strategies.

The third implication for teaching practice is the concept of building vocabulary knowledge. Students drawing pictures about words and visualizing them is not something used commonly in classroom practice. As indicated in this research, students were unused to thinking of and building lists of synonyms. Does this mean that teachers do not give enough time to discussing vocabulary in texts and developing vocabulary knowledge? Often teachers focus on word structure not meaning. Tasks such as word sorts with synonyms, word meaning discussions and the development of a vocabulary rich environment in classrooms would enhance the knowledge that good readers need to make connections at the conceptual level. Word vocabulary development would also enhance oral language, which is an important determiner of reading ability.

A strategy that worked really well in the intervention program was the reciprocal use of oral and written cloze tasks. Cloze tasks that are purposeful in teaching students to make meaning within context are valuable. Perhaps this strategy is one that teachers can use more as an assessment tool to ascertain whether students are searching for information in surrounding text to comprehend.

Focusing on word vocabulary *before* reading is a practice that develops prior knowledge and scaffolds the learner. In teaching literacy, this is a skill that is often taught while reading. Targeting and discussing the meaning of unknown words before reading is an approach that was an effective strategy in the intervention program. This practice may be one that many teachers use, however many teachers address vocabulary meaning during the reading.

Possible Directions for Future Research
The concept of reciprocal oral and written cloze tasks to increase cognitive thinking skills would be interesting to research. Reading can often be thought of and taught as an accumulation of subskills. If instead we were to see reading as a thinking process, perhaps the focus would change to teaching students a repertoire of cognitive strategies that can be integrated to make meaning of text.
During this research project, the use of oral and written cloze tasks provided opportunities for discussion about integrating these strategies, and thinking about what strategies are best for comprehending text at different levels. These tasks are one way of increasing student's thinking processes, as they are interactive, constructive and strategic.

References / Bibliography

Beimiller,A. (2003). Vocabulary: Needed if More Children are to Read Well. *Reading Psychology*, 24, 3 / 4, 323-336.

Clay,M.M. (2005). *Literacy Lessons: Designed for Individuals, Part Two, Teaching Procedures*. Heinemann, NZ.

De Lemos, M.M. (2000) *Reading Progress Test: Australian Norms Supplement:* Melbourne : ACER

Hickman,P., Pollard-Durodola,S. & Vaughn,S. (2004). Storybook Reading: Improving Vocabulary and Comprehension for English Language Learners. *The Reading Teacher*, 57, 8, 720-731

Joshi, R.M. (2005). Vocabulary: A Critical Component of Comprehension. *Reading and Writing Quarterly*, 21, 3, 209-219.

Juel,C., Biancarosa,G., Coker,D. & Deffes,R. (2003). Walking with Rosie : A Cautionary Tale of Early Reading Instruction. *Educational Leadership*, 60, 7, 12-19.

Munro, J. (2005) Synonyms Task

Nelley E, Smith A. (2000) PM Benchmark Kit. Nelson, Australia

Vincent D., Crumpler M. & de la Mare M. (1996) *Reading Progress Test Stage 1:* London : Hodder & Stoughton

Resources

De Lemos, M.M. (2000) *Reading Progress Test: Australian Norms Supplement:* Melbourne : ACER

Etherton,M.(2006) *My Coat of Many Colours. Comet*,4,12-13

Hill,T (2006) *Build A Cubby*. Comet, 1, 16, 24

McMillan,D. (2001) *Wet Weather Camping*. Nelson, Australia

McMillan,D. (2001) *The Chocolate Cake*. Nelson, Australia

McMillan,D. (2001) *Roller Coaster Ride*. Nelson, Australia

Poupa,P (2006*) Our Home*. Comet,1,16-17

Munro, J. (2005) Synonyms Task

Nelley E, Smith A. (2000) PM Benchmark Kit. Nelson, Australia

Vincent D., Crumpler M. & de la Mare M. (1996) *Reading Progress Test Stage 1:* London : Hodder & Stoughton

Wilcox Richards,N. & Zimmerman,W. (1997) *Farmer Joe's Hot Day* . Scholastic, Australia

APPENDICES

1. Teaching Unit

2. Sessional written cloze tasks

3. Sessional texts

VOCABULARY DEVELOPMENT   Teaching Program   Appendix 1

ACTIVITY	TASK DESCRIPTION	TIME
Session 1 Introduce and clarify terms	Discuss focus of lessons – to be able to work out meanings of words using synonyms and surrounding information in the text. Clarify term' synonym' Explain to children that we are going to build up a list of synonyms as we learn about them	3 – 5 mins
Shared Reading – read big book	Read big book to children – narrative text	5 mins
Revisit text	Select 3 sentences from text that have targeted words in them. Formulate ideas on what these words might mean. Draw a picture for target words How could I work out what this word means? Teacher models out loud how to read on to search for clues, how to think of other words that might make sense in the sentence, what picture do I have in my head? (visualization) *This is what I do….I read on….. I 'listen to what I am reading'…I have a picture in my head….Then I think about what word might make sense…. to help me think about meaning* Teacher lists possible words that could be used (on paper). Ask for suggestions from group – add to list Model this for each sentence Introduce term 'synonym'	15 mins
Oral cloze	Teacher writes high redundancy sentence from text omitting one word. Revise process to formulate ideas on possible words that could be used. *I read on… I listen to what I am reading. I think of what word could make sense…* List possible synonyms that could be used in that sentence. Revisit text to find out what actual word was used. Which words did we think of that mean the same as? Discuss which choice is the best. Review meaning of 'synonym' again	5 mins
Reflection	What have you learnt today? How did you work out word meanings? Children articulate how they worked out word meanings *'As I read on I am going to….'*	5 mins

ACTIVITY	TASK DESCRIPTION	TIME
Session 2 & 3 Review the action	Have examples of keywords discussed last session on flashcards Revise orally what these words mean, using other words that mean the same Revise what you are going to do to help you work out word meanings. *I am going to…..*	5 mins
Book Introduction	Look at book title and cover. Make predictions about the text from the title and front cover. Introduce some new words that they might come across in the book. List these on Synonym chart. Draw a picture for targeted words.	5mins
Text reading.& Oral cloze	Read the Big Book together. Have targeted words covered with paper, so children predict what word may be orally. Model reading on to the end of the sentence to think about what word might fit best. List suggestions	5-10 min
Building synonyms and meanings	Uncover targeted words, comparing with list of possible words. Model re reading whole sentence. Review action: *When I reach a word I don't know, I read on…I listen to what I am reading….I have a picture in my mind……then I think what word would make sense.* Discuss best choice of words from lists made. Discuss importance of reading on to find further information to help work out the word.	10 min
Written cloze task	Students complete a written cloze activity using simple sentences from the text and inserting a word for each sentence that makes sense. Share these. Which word fits the best?	3 mins
Reflection	What have you learnt today? How did you work out word meanings? Children articulate how they worked out word meanings *'When I reach a word I don't know I…….'*	5 mins

ACTIVITY	TASK DESCRIPTION	TIME
Session 4 & 5 Review the action	Have examples of keywords discussed last 3 sessions on flashcards. Play sorting game with cards – children group words that mean the same Revise orally what these words mean, using other words that mean the same Revise what you are going to do to help you work out word meanings. *'When I come to a word I don't know I read on…..'*	5 – 10 mins
Book Introduction	Orientate small guided reading book with high redundancy – discuss what we already know about topic. Teacher introduces new words that children may come across in book. List synonyms for these words.	5 mins
Text reading & Oral cloze	Teacher reads first paragraph aloud, with target word covered up. Teacher models meaning making strategy using self script to predict omitted word. Repeat modelling for 3 or 4 omitted words. 'What will you do in your mind when you get to the targeted word?' *When I reach a word I don't know I read on….. I 'listen to what I am reading'…I have a picture in my head….Then I think about what word might make sense…. to help me think about meaning….then I look at the word to confirm,*	5 mins
Building synonyms and meanings	Students take in turns to read next few paragraphs aloud. When they reach an unknown word, they articulate and apply learnt strategy to work out word. *'I am going to read on….'* Repeat reading aloud and applying strategy aloud several times.	10 mins
Written cloze task	Students complete a written cloze activity using sentences from the text and inserting a word in each that makes sense. Share these. Which word fits the best?	3 mins
Reflection	What have you learnt today? How did you work out word meanings? Children articulate how they worked out word meanings *'When I come to a word I don't know I…….'* How did we decide the best synonyms to use?	5 mins

ACTIVITY	TASK DESCRIPTION	TIME
Session 6 & 7 Review the action	Have examples of keywords discussed last few sessionson flashcards. Play sorting game with cards – children group words that mean the same Revise orally what these words mean, say targeted words in a sentence. Revise what you are going to do to help you work out word meanings. *'When I come to a word I don't know I read on…….'*	5 mins
Book Introduction	Orientate small guided reading book with lower redundancy – discuss what we already know about topic. Teacher introduces some new words that children may come across in book. Discuss 2 or 3 , listing synonyms.	5 mins
Text reading & Oral cloze	Teacher points out that text does not offer as many obvious clues to help work out word meanings. Teacher models and applies strategy using oral cloze with covered up words in first 2 paragraphs. Teacher also models how reading the next sentence may offer additional information to work out word. Teacher models how to scan a paragraph and identify new words. Jot words down. Teacher models 'These are the words I'll apply the strategy to….' *This is what I do….I read on….. I 'listen to what I am reading'…I have a picture in my head….Then I think about what word might make sense…. to help me think about meaning*	5 mins
Building synonyms and meanings	Students have a go at scanning a paragraph and identifying new words. List these words. List possible synonyms, then as a group refine words to choose best synonym. Use clues in text to confirm. Students say what they will do to work out meanings. Students read aloud and practise applying strategy in turn. Students also retell their paragraph using their own words.	10 mins
Written cloze task	More complex written paragraph cloze task based on retell of text. Students use synonyms to make meaning. Cloze task offers less redundancy.	3 mins
Reflection	What have you learnt today? How did you work out word meanings using more than one sentence? What did you use to give you information? Children articulate how they worked out word meanings *'When I come to a word I don't know I read on…..'* How did we decide the best synonyms to use?	5 mins

ACTIVITY	TASK DESCRIPTION	TIME
Sessions 8 – 10 Review the Action	Revise words identified by scanning a paragraph last session. Use flashcards to complete oral cloze from a paragraph from last session. Work out best choices as a group. Discuss reading on further to gather more clues to word meaning Revise action *'When I reach a word I don't know I read on....'*	5 mins
Book Introduction	Orientate guided reading book with increasingly lower redundancy. Discuss what we already know about the topic. Teacher introduces some new words that children may come across in book. Discuss 2 or 3, listing synonyms.	5 mins
Text Reading & Oral cloze	Teacher models reading first paragraph and articulates strategy used to work out omitted words. Discuss need to read on further to search for clues to help work out words. Articulate strategy *'When I come to a word I don't know I read on....'*	3 mins
Building synonyms and meaning	Children read next paragraph silently and use strategy to work out unknown words. Children offer choices for unknown word meanings, and articulate what information in the text supports their choice. Discuss and refine as a group after each paragraph. Continue for several paragraphs. Each student takes turns to retell a paragraph after reading silently.	10 mins
Written cloze task	Cloze task based on retell of story events. Cloze task offers lees redundancy, so children need to read on to search for further information to work out words. Discuss words chosen, and refine as a group.	3 mins
Reflection	Revise strategy we have applied when encountering new or unknown words. Discuss how strategy is used for reading, but also to complete cloze tasks. *'When I come to a word I don't know I read on...I listen to what I am reading....I have a picture in my mind.....Then I think about what words might make sense.... To help me think about meaning'*	5 mins

Written Cloze Tasks   **Appendix 2**

Session 3
Our home has stairs that are _____ and wobbly. The floor is rough and _____.
Our home is _____ the biggest and the kitchen is very small. But I _____ our home
because our family is _____ it.

Session 4
The sky was getting _____ as the clouds began to gather. It started to rain in _____
heavy drops. We decided to _____ up the tents in the lounge room. We had _____
much fun. We lit the stove and _____ marshmallows _____ the fire.

Session 5
Mum _____ on her bed and read a book. Dad cooked some _____ as if we'd
caught them in the river that day. We _____ cards just like we _____ if we
were camping. I liked camping _____.

Session 6
A chameleon can _____ its colour to _____ different shades of green.
When a chameleon _____ stressed, it goes black. If a chameleon is
_____ it goes green and _____ its eyes back and forth.

Session 7
Tess and Nathan decided to _____ a cake. Nathan held the _____ and began
to _____ everything together. Nathan and Tess took turns at _____ the
cake mixture until it was thick and _____.

Session 8
Rosie felt _____ and _____ about going on the roller coaster ride. She
thought she _____ be sick and held onto her dad's hand _____. She
_____ to tell dad that she had changed her mind.

Session 9
As the carriage _____ to the top of the hill, Rosie looked down and _____
the safety bar. She _____ her mouth and screamed. Then she _____ at
her dad and saws that he was _____ too.

Session 10
To build a cubby you _____ wood and nails. You choose wood that is _____ so
it is strong enough for nails. The wood needs to be nailed to _____ pieces of
wood. You must make sure that the nails go _____ both pieces, to hold everything
_____ in place.

Session Texts   **Appendix 3**

Session	Text	Genre	Series
1	Farmer Joe's Hot Day	Big Book Narrative	Scholastic Big Books
2	Farmer Joe's Hot Day	Big Book Narrative	Scholastic Big Books
3	Our Home	Poetry	Comet Magazine
4	Wet Weather Camping	Narrative	PM+ Series Level 18
5	Wet Weather Camping	Narrative	PM+ Series Level 18
6	My Coat of Many Colours	Non Fiction article	Comet Magazine
7	The Chocolate Cake	Narrative	PM+ Series Level 19
8	Roller Coaster Ride	Narrative	PM+ Series Level 20
9	Roller Coaster Ride	Narrative	PM+ Series Level 20
10	Build a Cubby	Non Fiction	Comet Magazine