*Explicit teaching of paraphrasing improves comprehension
for accurate text decoders when reading factual texts.*

Abstract

As students reach the upper levels in primary school there is greater need for them to effectively comprehend texts and to develop skills that will be used in further education. The following hypothesis was investigated:

Explicit teaching of paraphrasing improves comprehension for accurate text decoders when reading factual texts.

This research project was designed to enhance the reading comprehension skills of grade five and six students through teaching the paraphrasing strategy. Ten students of varying abilities from a 5/6 class were chosen for this study. In the control group there were ten students of similar abilities.

The reading intervention program consisted of ten lessons of 40 minutes over a period of four weeks. Firstly, students were explicitly taught synonyms and this formed the basis of further lessons. Students worked in groups, pairs and individually. Paraphrasing practice developed from words, to sentences and then to paragraphs.

Post-testing showed an increase in all but three students' comprehension. When tested for paraphrasing skills, all but one student made progress. Hence, the explicit teaching of paraphrasing demonstrated improvement in some students' comprehension skills. Further teaching and practice of this strategy for those who did not make progress could be of benefit.

Introduction

Teachers of children in upper primary often assume that their students are able to comprehend text as they are accurate text decoders. Do they really understand what they are reading? For many children the answer is no. Whilst they are able to read accurately at their age appropriate level, it is common that they are not able to retell the information they have read with detail when asked. Reading is a lifelong skill that is not only used in school. Therefore, texts read throughout life will vary with complexity and our students need to be adequately taught to cope with more complex texts.

In order to enable students to comprehend texts Parker and Hurry (2007) recommend that it is necessary to explicitly teach them strategies to use whilst reading. According to Coutant and Perchemlides (2005), the definition of reading comprehension varies among teachers. The National Council of Teachers of English Commission on Reading (as cited in Coutant and Perchemlides, 2005) describe reading comprehension as:
 a complex, purposeful, social and cognitive process in which readers simultaneously use their knowledge of spoken and written language, their knowledge of the topic of the text, and their knowledge of their culture to construct meaning. Reading is not a technical skill required once and for all in the primary grades, but rather a developmental process.

Research has shown that teaching comprehension strategies will improve the reading comprehension of all readers (Snowball, 2006). Comprehension skills vary from student to student as some will struggle to decode words, hence have difficulty comprehending whilst others are not able to read with enough fluency to make comprehension possible. Others will decode accurately and quickly, but lack the ability to comprehend what they have read (Biancarose & Snow in Coutant & Perchemlides, 2005).

In order to monitor students comprehension teachers often ask students to 'put things in their own words.' These students are actually being asked to paraphrase. According to the Online Academy (2008) paraphrasing is a skill that involves taking information from a text and rephrasing the information in one's own words in a way that personalizes the information. This can facilitate one's ability to understand and remember the information. Therefore, paraphrasing is not rewording a sentence or passage word for word, rather it is taking the main ideas from a text where students put it into their own words.

Paraphrasing incorporates skills for reading, writing, speaking and listening. The link between reading and writing has been known to strengthen comprehension (Fish & Hurst, 2003). This is a common classroom practice as many teachers will provide a writing task in order to think about a text. Paraphrasing allows students to interact with a text by:
1. Hearing a text read aloud.
2. Reading it themselves and taking notes.
3. Rewriting in their own words.
4. Talking about the paraphrased text with peers.   (Fisk & Hurst, 2003).

According to Fisk and Hurst (2003), when students are taught paraphrasing strategies they are able to better comprehend texts. They refer to a number of researches that found that paraphrasing is an effective strategy for students to use in order to increase their reading comprehension. They summarise this by saying, "Paraphrasing for

comprehension is an effective strategy that helps students to process and comprehend what they are reading and learning. " (p.184).

Lee and Van Colln (2003) also discuss positive effects that paraphrasing has on reading comprehension. Their research into cognitive strategy instruction looked at "how an individual thinks and acts during planning, carrying out and evaluating [reading] performance"(p.4). They referred to previous studies conducted by other researchers and found that teaching paraphrasing is an effective strategy. However, due to the few studies that have been previously undertaken they suggest the results should be taken with caution and that more study needs to occur using students from a variety of backgrounds.

Katems and Harris (1997) found that teaching paraphrasing also increased reading comprehension of students at risk and those who are not. Their studies showed that the more students paraphrased the higher their comprehension level was.

As Katems and Harris (1997) found that teaching reading strategies in an inclusive classroom was effective, the present study will follow their lead as it too will investigate the effect of teaching the paraphrasing strategy to students at risk within a whole class setting. There will be a focus on synonyms which will aim to further assist students with paraphrasing. This will enable students to develop skills to identify important words within a text.

Munro (2008) has identified paraphrasing as a useful strategy for students with reading difficulties. When referring to his Multiple Levels of Text Processing (MLOTP) model, reading develops through various stages and it is evident that the paraphrasing strategy could be used throughout each of these levels. Following this structure, students would begin paraphrasing individual words, sentences and then extending this with larger texts. Munro (2006) has developed a paraphrasing teaching sequence beginning by paraphrasing as a whole class, in groups and then individually. This approach will be adapted for this study.

The hypothesis is that explicit teaching of paraphrasing improves inferential comprehension for accurate text decoders.

Method

Design
The study uses a case study OXO design, in which the gain in paraphrasing and reading comprehension following teaching of synonyms and the paraphrasing strategy are monitored for upper primary students who have varied reading abilities.

Participants
The 10 participants were selected students from a class of grade five and six students. All participants attend a Catholic primary school. Their ages range from 10 to 11 years old. Students come from various backgrounds from being Australian-born to being born in India. Of the 10 students only Student E and Student H had taken part in the Reading Recovery program ran at the school.

Students at risk as well as those with varying abilities were chosen to part take in this study. Students were chosen based on their scores in the DART testing which took place during pre-testing for the study. Students were required to complete cloze exercises following the reading of DART Reading C Danny's Egg. Results from the paraphrasing pre-test were also considered.

A control group of 9 students was also chosen from a different grade five and six class. Students undertook the same pre-assessment and were chosen based on their abilities, matching those of the teaching group.

It must also be noted that this school is beginning to implement the Catholic Eduaction Office's reading initiative, Reading to Learn, which could have some effect on the post-testing.

Table 1 – Student details and pre-test scores

Name	Teaching/Control Group	Age in YEARS	Age in MONTHS	Gender Boy = 1 Girl = 2	ESL ? Yes=1 No=2	Earlier Intevention? Yes=1 No=2	Para PRE	DART Score PRE
Student A	TG	10	120	2	2	2	17	17
Student B	TG	10	124	1	2	2	11	9
Student C	TG	10	126	2	2	2	13	20
Student D	TG	11	132	2	2	2	11	7
Student E	TG	10	123	1	2	1	14	8
Student F	TG	10	125	2	2	2	3	5
Student G	TG	10	120	2	1	2	18	13
Student H	TG	10	124	1	1	1	13	3
Student I	TG	11	139	1	2	2	15	10
Student J	TG	11	141	1	2	2	5	9
Student K	CG	10	125	2	2	1	6	6
Student L	CG	10	130	2	2	2	25	18
Student M	CG	10	127	1	1	2	14	11
Student N	CG	10	130	1	1	2	14	14
Student O	CG	11	142	1	2	1	21	12
Student P	CG	10	122	2	2	2	5	15
Student Q	CG	11	138	1	2	1	19	14
Student S	CG	11	142	2	2	1	18	14
Student T	CG	11	122	2	2	2	11	10

Materials
Materials used include the following:
Assessment: Pre and post assessment was undertaken using DART Reading C Danny's Egg and Paraphrase Task: Group Administration (Munro, 2005).
Synonym word tasks: Game – Taboo, Computer Task Card, Using Synonyms (Worksheet)
Paraphrasing Tasks: Individual Students Booklet

Texts Used: The Life of Abraham Lincoln (www.teachervision.com), Mum Shirl (Fren & Lewellyn, 2004), The Anzac Story (Hope, 1980) and Recollections of Gallipoli (Woods, 2003).

Procedure
In pre-testing for this study students were assessed using DART (Wu et al, 1997). Whilst DART is an assessment tool for reading, writing, speaking, listening and viewing, students only undertook the reading aspect for the purpose of this study. This resource assesses students' ability to make meaning from a variety of written text types. Students were also assessed using John Munro's (2005) Paraphrase Task: Group Administration. This resource determined students' abilities to paraphrase and with further analysis showed knowledge of synonyms.

The teaching sequence was conducted during a four week period with two to three lessons being taught per week. Lessons were taught to the whole class and took approximately 40 minutes. Texts were chosen according to the current inquiry topic and ANZAC day due to the timing of the lessons. Four non-fiction texts were chosen that were each used for two or three lessons in order to enable students to become more familiar with the text. The Smog Readability Procedure was used to ensure the texts were age appropriate. Students were each given a copy of the text.

Text	Smog Readability Age
Abraham Lincoln	7 years
Mum Shirl	11 years
ANZAC story	8 years
Recollections of Gallipoli	8 years

The teaching procedure was adapted from John Munro's (2005) Comprehension – Paraphrasing strategy. The teaching tasks began with a synonym focus. The first lesson was prepared to tune students into paraphrasing in a fun way using a variety of activities. The subsequent lessons each followed a similar structure for the explicit teaching of paraphrasing.

Prior to the beginning of the second lesson in the teaching sequence, students were given a paraphrasing workbook. The workbook contained a page for each lesson where students would list key words, synonyms, paraphrasing attempts and a self-reflection for the lesson. This would enable the teacher to monitor progress throughout the sequence of lessons.

Each lesson would then begin with the teacher identifying the strategy prior to introducing the text. The teacher would begin by modeling the strategy by finding keywords and synonyms. In doing so, students were asked to locate these in their texts and highlight: one colour for key words that could not be changed and a different colour for possible synonyms. As a class there would be discussion of how they could incorporate the key words and the synonyms into a paraphrase. Once the class had decided on the sentence, it would be recorded on the board. Students would then follow this sequence to paraphrase a section of the text either in groups, pairs or individually. The sections students paraphrased would then be recorded into their books. Students were

encouraged to use a thesaurus and to access Microsoft Word on the computers to assist with developing their word knowledge of synonyms. At the conclusion of each lesson, students would write a self-reflection on their progress. See Appendix for a detailed lesson sequence.

After the ten lessons were taught, students in the teaching group and the control group were then re-assessed using the same pre-assessment materials.

Results

Results generally indicate support for the hypothesis that explicit teaching of paraphrasing improves comprehension for accurate text decoders when reading factual texts. The comprehension scores for most of the students in the teaching group showed improvement. Students were pre and post tested with DART using the exact same text. When comparing the average DART results (see Figure 1) for comprehension, gains made in the teaching group were larger than those in the control group. It is interesting to note that the average DART result of the control group decreased during this period whilst, that of the teaching group improved. It needs to be noted that a different teacher marked the tests each time.
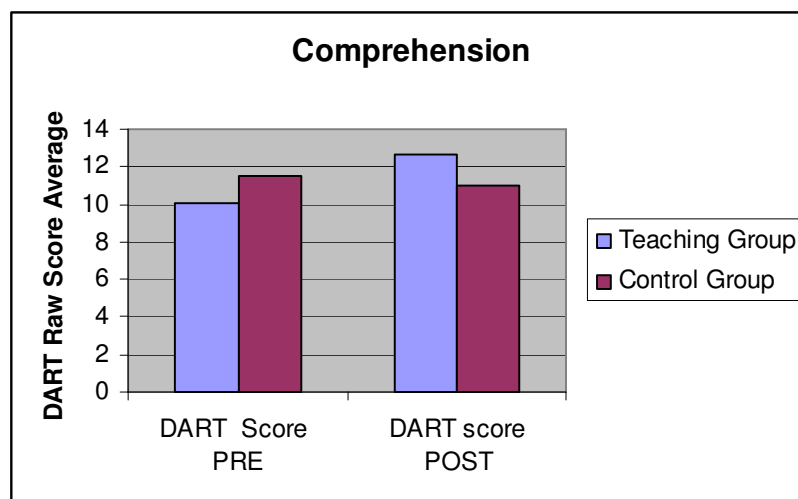

Figure 1   Average Reading Comprehension Scores

When comparing the paraphrasing skills, it seemed that there was a pleasing improvement made by all but one student in the teaching group. Ongoing assessment of the teaching group demonstrated that there were slight improvements made from lesson to lesson. The average raw score of students in the control group also indicate a slight improvement. When looking more closely at the individual results (See Figure 3) of students in the paraphrasing test, three of the 10 students decreased in score.
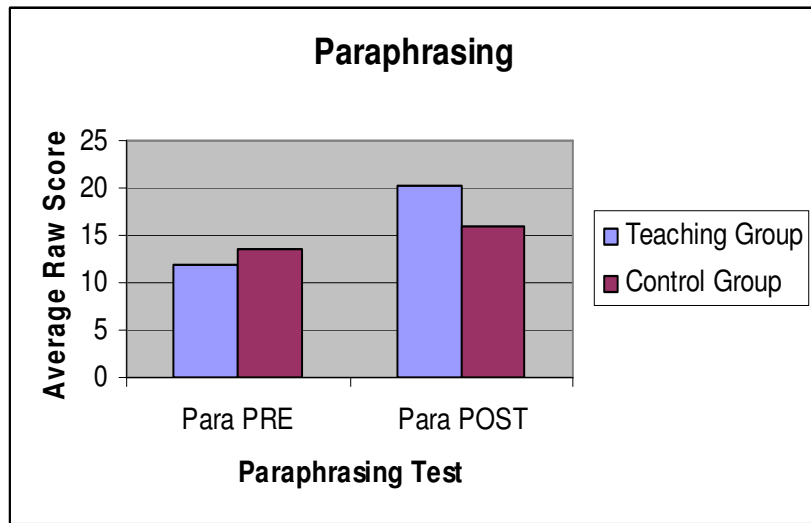
Figure 2   Average Paraphrasing Scores

Figure 3 – Pre and post test results for teaching and control groups.

| Name	Teaching/Control Group	Para PRE	Para POST	DART Score PRE	DART score POST
Student A	TG	17	24	17	14
Student B	TG	11	24	9	16
Student C	TG	13	28	20	24
Student D	TG	11	15	7	13
Student E	TG	14	16	8	6
Student F	TG	3	14	5	9
Student G	TG	18	25	13	6
Student H	TG	13	12	3	11
Student I	TG	15	18	10	12
Student J	TG	5	27	9	16
Student K	CG	6	8	6	3
Student L	CG	25	22	18	14
Student M	CG	14	12	11	6
Student N	CG	14	16	14	10
Student O	CG	21	24	12	15
Student P	CG	5	10	15	12
Student Q	CG	19	16	14	10
Student S	CG	18	20	14	16

Comprehension - Teaching Group
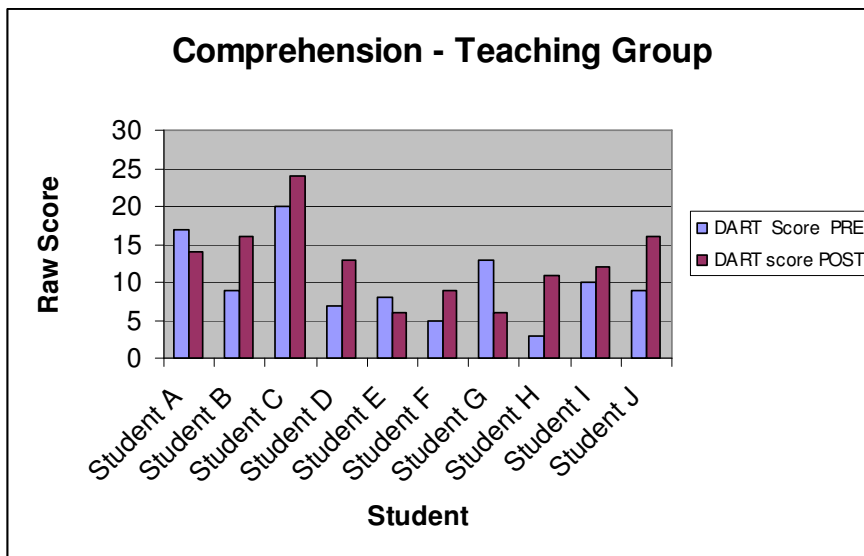
Figure 4   Student DART Scores

During pre and post testing of paraphrasing skills, students were asked to complete John Munro's (2005) Paraphrase Task: Group Administration. Tests were scored depending on the student's ability to paraphrase less than half or more than half of the sentence. If they paraphrased less than half of the sentence they scored 1 and if they paraphrased more than half the sentence they scored 2. During pre-testing it was found that many of the students were keeping the same words but rearranging the word order. If that was the case, they scored nothing. Considering this and further analyzing of the test, it was determined that students needed to become familiar with synonyms.

The Paraphrasing Test was scored out of 32. If you look at Student F and Student J they made that biggest improvement. However, it needs to be considered that they did not finish their pre-paraphrasing test but were able to in the post-test. It is immediately thought that this happened as their confidence improved. Looking more closely at their tests, of the 10 sentences Student J paraphrased in the pretest she scored 5. In the post-test just looking at the first 10 sentences, she scored 17. Of the 10 sentences Student F paraphrased in the pre-test he scored 3. In the post-test just looking at the same sentences, he scored 10. Both these students then showed improvement with their reading comprehension.
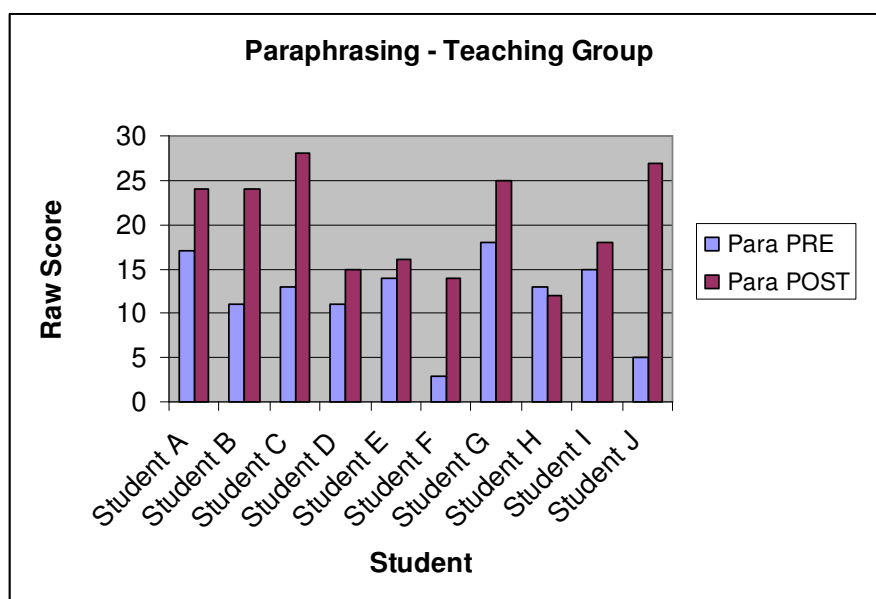
Figure 5   Student Paraphrasing Scores

Students A, E and G all scored lower in their DART post test than they did in their pre test. However, they all showed improvement in their paraphrasing skills. The conditions of which they sat each test were slightly different. When sitting the DART pre-test the whole class completed it under test conditions, but the target students later completed the post-test in the classroom whilst other students were working quietly on a writing activity. It is also interesting that Student A and Student G actually sit next to each other in the classroom. During some of the lessons, even some of the later lessons, Student A was seen to be looking at Student G's work when given an independent task. It must be noted that when looking at their post-test, sentences are different. Therefore, Student A's paraphrasing results indicate that she is capable of using the paraphrasing strategy.

Students A and C were chosen for this study as their DART pre-test scores were in the class average. The purpose of including them was to see whether teaching the paraphrasing strategy to the whole class would benefit all. This theory did not work for Student A, although it has worked for Student C. Student C has shown improvement in both areas of paraphrasing and comprehension. Whilst Student A increased paraphrasing skills, she showed a decreased ability to comprehend texts.

Student D generally shows little interest in reading, hence from discussions with him, does not appear to take the time to read a novel at home. When working in a group, he will sit back and let the others do the work. During tasks that required working in pairs, he worked with a more capable student. Some observations saw him contribute to little of the discussion, as his partner was quite dominant. It is pleasing to see that despite this he has made improvement in both his paraphrasing and reading comprehension.

Student I showed slight improvement in both paraphrasing and reading comprehension. When analysing her paraphrasing post-test, it is evident that she is able to paraphrase part of a sentence.

9

Students B and H each began with a low DART score and had some skills in paraphrasing as each began with a paraphrasing score above 10. Student B made significant improvement in both areas. Student H made pleasing improvements in reading comprehension but scored a point lower in the paraphrasing test.

<u>Discussion</u>

In analyzing the gains of the students in the teaching group through the scores in DART, it is observed that of the ten students participating in this study three students decreased in their reading comprehension. Therefore, in reflecting on the results of this study there is generally support for the hypothesis and research that explicit teaching of paraphrasing improves comprehension for accurate text decoders when reading factual texts. Despite this, all but one student improved in their synonym and paraphrasing abilities. Thus, the intervention would need to be extended over a longer period of time to bring about more change; however there was an overall positive result. Therefore, it is still evident that paraphrasing is an effective strategy that improves reading comprehension.

The results provide support for the work of Fisk and Hurst (1997), Katims and Harris (1997) and Lee and Colln (2003) who suggest that the teaching of paraphrasing will improve students' comprehension of text. As there appeared to be an overall positive effect on students' comprehension, further study is needed as mentioned by Lee and Van Colln (2003). This would particularly benefit students A, E and G.

Fisk and Hurst's (2003) approach of hearing the text, reading it for themselves, rewriting it in their own words and talking about the paraphrased text with peers worked well and students began to know the process and by the last lesson were confident in being able to do this independently. Students identified key works using highlighters and as each lesson was taught they were prepared with highlighters ready and were able to recall the steps involved in paraphrasing. During this study, this approach was further developed by using Lee and Van Colln's (2003) theory of evaluating reading performance. This was completed by the teacher and also students individually completed at the conclusion of each lesson.

During the first couple of lessons, students' attitudes towards paraphrasing were not so positive and individual reflections showed this. However, as the study progressed, students' reflections developed showing clear explanations of the paraphrasing strategy and there was evidence of confidence being gained. Reflections also indicated that it was easier to work in a group or with a partner. This supports Munro's (2006) paraphrasing lesson sequence that was used during this study. Consequently, students gained confidence from this.

In following Munro's (2006) teaching approach to paraphrasing, it was accommodating all students in an inclusive classroom. This allowed for students of diverse needs to be catered for. In doing so, observations of the whole class during lessons showed students of varying abilities being challenged. As with Katim and Harris' (1997) study of teaching in an inclusive classroom, there seemed to be positive effects in this study. Therefore, it

maybe accurate to say that students taught in an inclusive classroom will gain comprehension no matter what their ability level is.

Within the class setting, students were engaged in the use of the paraphrasing strategy. Students, who are capable readers, were frustrated with the whole class instruction as this was taking some time and they were keen to get in and have a go. Hence, to continue to encourage this enthusiasm, this instruction became shorter, but there was support for those students less able through having the opportunity to work with a more capable student, but also through teacher assistance during roving.

In finding appropriate texts for the group Smog Readability tests were carried out. In trying to cater for all abilities it was difficult, so texts were chosen at varying levels of difficulty from a Smog Readability of 7 years to 11 years. The only problem here was that due to the explicitness of the teaching, this text took longer than expected. Throughout the lesson sequence texts did vary to a grade six level and most students were able to cope with the increasingly more difficult texts.

As the school where this study was undertaken is also implementing the Catholic Education Office's initiative Reading to Learn, it was found that both the current study and Reading to Learn were both looking at the paraphrasing strategy, only that Reading to Learn takes it further into genre writing. It was great to see the connections that students in this study were making between the two programs. As both lessons were originally planned separately, it became apparent that they could be implemented as one. Therefore, lessons four to six were part of Reading to Learn although adapted slightly for the purpose of this study. Interestingly, the students in the control group are also taking part in Reading to Learn but decreased in their comprehension skills.

Throughout the lesson sequence it became apparent that some students have limited vocabulary. Having a broad vocabulary is an important aspect of developing reading comprehension. Often, when students ask what a word means without knowing teachers will use a synonym to describe it. Having access to a variety of resources was an important part of this study. In the first lesson, students were reintroduced to thesaurus' and using the computer as a tool to find synonyms. One particular task involved students using Microsoft Word to change words within a paragraph. It was pleasing to see that during the study students would be seen at the computer looking up words to assist them.

In conclusion, the explicit teaching of the paraphrasing strategy has been a valuable tool for the students involved. It has improved the comprehension of most students and will continue to through the implementation of the Reading to Learn program.

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APPENDIX

Paraphrasing

Introduce the strategy: I am going to teach you something that you can do that will help you to remember what you read. It is called paraphrasing. This is what you do. After you have read each sentence, you say it in your own words. We will begin doing this with sentences, pairs of sentences and then with paragraphs.

Session	Student activity	Text
1	• Brainstorm meaning of synonyms. Students rotate through activities three activities: • Computer activity – students type a given paragraph into Microsoft Word. Particular words have been underlined. Students change these words using synonyms from the thesaurus. • Worksheet – Students identify two synonyms that are in one sentence. • Students play Taboo.	Computer Task Cards Game – Taboo Worksheet – Using Synonyms
2	• Teacher identifies strategy that will be used. • Teacher reads a section aloud. • Students highlight with one colour key words/main ideas. • Students highlight with another colour words that could be changed to another synonym. • Brainstorm synonyms. • Paraphrase each sentence as a class. • In small groups students paraphrase sentence by sentence – complete booklet.	The Life of Abraham Lincoln (www.teachervision.com)
3	• Review strategy from last lesson. • Teacher identifies strategy that will be used. • Teacher reads a section aloud. • Students highlight with one colour key words/main ideas. • Students highlight with another colour words that could be changed to another synonym. • Brainstorm synonyms. • Paraphrase each sentence as a class. • In small groups students paraphrase each sentence –	The Life of Abraham Lincoln (www.teachervision.com)

	complete booklet.	
4	• Review strategy from last lesson. • Teacher reads section aloud. • Highlight with one colour key words/main ideas. • Highlight with another colour words that could be changed to another synonym. • Brainstorm synonyms. • As a class paraphrase pairs of sentences.	Mum Shirl (Fren & Lewellyn, 2004, pp.14-15)
5	• Review strategy from last lesson. • Teacher continues to read Mum Shirl's biography aloud. • Highlight with one colour key words/main ideas. • Highlight with another colour words that could be changed to another synonym. • Brainstorm synonyms. • In a small group students paraphrase pairs of sentences.	Mum Shirl (Fren & Lewellyn, 2004, pp.14-15)
6	• Review strategy from last lesson. • Students read text aloud. • Highlight with one colour key words/main ideas. • Highlight with another colour words that could be changed to another synonym. • Brainstorm synonyms. • As a class paraphrase pairs of sentences. • In pairs students paraphrase pairs of sentences.	Mum Shirl (Fren & Lewellyn, 2004, pp.14-15)
7	• Review strategy from last lesson. • Students read text aloud. • Highlight with one colour key words/main ideas. • Highlight with another colour words that could be changed to another synonym. • List synonyms. • As a class paraphrase sentence by sentence. • Students individually paraphrase sentence by	The Anzac Story (Hope, 1980, p.27).

	sentence – complete booklet.	
8	• Review strategy from last lesson. • Students read silently. • Highlight with one colour key words/main ideas. • Highlight with another colour words that could be changed to another synonym. • List synonyms. • As a class paraphrase paragraph by paragraph. • In pairs students write a paraphrase for each paragraph – complete booklet.	The Anzac Story (Hope, 1980, p.27).
9	• Review strategy from last lesson. • Students read silently. • Highlight with one colour key words/main ideas. • Highlight with another colour words that could be changed to another synonym. • List synonyms. • As a class paraphrase paragraph by paragraph. • In pairs students write a paraphrase for each paragraph – complete booklet.	Recollections of Gallipoli (Woods, 2003, pp. 84-85).
10	• Review strategy from last lesson. • Students read silently. • Highlight with one colour key words/main ideas. • Highlight with another colour words that could be changed to another synonym. • List synonyms. • As a class paraphrase paragraph by paragraph. • Students independently write a paraphrase for each paragraph – complete booklet.	Recollections of Gallipoli (Woods, 2003, pp. 84-85).

Adapted from J. Munro, 2006

Paraphrasing Reflection Sheet

Text:

Key Words:

Synonyms:

Paraphrasing:

Reflection: