

Teaching grade three students paraphrasing skills improves their comprehension of non fiction texts

Abstract

Comprehension is a skill that all literate people must have. Research indicates that poor comprehension is a cause of poor academic achievement (Cain and Oakhill 2006). In the middle school this presents a significant challenge as students in grades three and four are moving from the skills of learning to read, into reading to learn (Harlaar, Plomin & Dale 2007). The purpose of this study was to ascertain the effectiveness of teaching a paraphrasing strategy as an aid to comprehension. Fourteen grade three students were involved in the study. The students were all of mixed age, sex and ability. Seven formed the teaching group and seven formed the control group. Of the fourteen only one had been involved in Reading Recovery.

To test the hypothesis that “Teaching grade three students paraphrasing skills improves their comprehension of non fiction texts”, a total of twelve lessons were taught with a focus on paraphrasing by sentence, then by paragraph, using synonyms and the R.A.P. mnemonic (Lee, S Colin, Von Colin, T. 2003) -*Read the sentence, Ask yourself what words can you change but still keep the meaning the same, Put the words into the sentence*- as aids to paraphrasing. Post test results indicated gains by all students with the most dramatic results being those of the students who scored lowest in the pre testing. This suggests that the paraphrasing strategy can assist students who paraphrase effectively and those who can not. However this strategy is most beneficial when used with students who experience difficulty with comprehension.

Introduction

As adults we read with purpose, all reading is undertaken with the tacit knowledge that we will understand what is written. What we do with the information gained- ponder, act, store the information for later use, or maybe discuss it- is up to us. Comprehension is a skill that all literate people must have, indeed comprehension is inherent in all that we as adults pick up and look at from the newspaper to the Corn Flakes box. So what happens when a person has difficulty comprehending what is written?

Cain and Oakhill (2006), state that “Poor comprehenders are at risk of generally poor educational attainment” The comprehension of text in the middle school is a major concern for middle school educators and the explicit teaching of paraphrasing strategies should assist students to comprehend and use texts in a meaningful way. Many students in middle primary are excellent decoders of text and while this is fantastic it leaves out the very function of text - to communicate a message. Whilst students are able to decode text at an age appropriate level they are often unable to respond in a literal or inferential way, for example looking at key ideas within the text and reorganizing information in an answer.

Paraphrasing for comprehension is a skill that is used right through our school lives and into our adult lives. Sue Shirley (2004) argues that “effective paraphrasing is the most difficult of the research writing skills they [students] must learn and demonstrate”. Many older students are unable to paraphrase and as such the skills of paraphrasing to aid comprehension must start in primary school. Paraphrasing has many other functions besides comprehension although this is the main area in which we use the skill whilst educating. Robert J Garmston (2006) states that in the workplace “paraphrasing is used to seek clarity, communicate an effort, to understand, acknowledge another persons thoughts and feelings, and create psychological safety”.

Many studies have been done regarding the link between paraphrasing and comprehension, Cain and Oakhill (2006) stated that “children with reading comprehension difficulties show impairments on a range of language tasks.” This points to a lack of comprehension ability being a major consideration when educating. There may also be a link between the verbal orthographic skills and comprehension ability as Cain and Oakhill also state that “If verbal ability is causally related to reading comprehension, one would expect the low ability group to show a more severe comprehension deficit than their peers.”(Cain and Oakhill, 2006) This secondary hypothesis of the link between verbal orthographic skills and comprehension will be looked at briefly in addition to the main hypothesis to determine the extent of the link between the two skills.

When students are unable to comprehend the textual information that they are given they disengage and receive little to no education during this time. Combining self scripts and acronyms will assist in the retention of the strategy and empower students to understand what they read. In the middle school we must concentrate on comprehension to prepare our students and arm them with the skills they will need later in their education careers. A study was undertaken to determine the extent of the link between paraphrasing and comprehension in a non fiction setting.

Method: The present study aims to confirm the link between paraphrasing and comprehension as well as look at the correlation between the student's verbal orthographic skills and their comprehension ability. The study aims to show that by explicitly teaching paraphrasing skills at the sentence level the student's comprehension ability will improve. The study will attempt to instruct student's on how to paraphrase and then support them with the strategies and skills. This will be via synonym generation and the self script of **READ** the sentence or paragraph, **ASK** yourself, what words can I change but still keep the meaning the same? and **PUT** the words into a sentence with the same meaning. (Lee,S Colin, Von Colin, T. 2003 see Appendix 2 –resources used) referred to as 'R.A.P' to enable the students to paraphrase and comprehend what they have read in a non fiction text.

Design: This study uses OXO design in which the gains in comprehension accuracy following the explicit teaching of paraphrasing strategies is measured in grade three students who have a range of decoding ability but an overall level of poor comprehension.

Sixteen students were assessed for comprehension accuracy using the Tests Of Reading Comprehension (TORCH) determining their comprehension ability. Word reading accuracy and orthographic skills were assessed using BURT. Paraphrasing ability was assessed using Munro's Group Administration Paraphrasing Task, prior to beginning the lessons.

The students were divided into two groups of seven, a control group and a teaching group. The control group received no intervention teaching for the duration of the study. The teaching group was taught paraphrasing using an adaptation of Munro's 'Teaching a Paraphrasing strategy' lessons. These lessons included teaching of explicit strategies to articulate the methods of paraphrasing and also the skills of synonym selection and a mnemonic for the students to recall what they were supposed to do.

When the series of lessons were completed both control and teaching groups were assessed again using TORCH, BURT and Munro's Group Administration Paraphrasing Task.

Participants

The participants were fourteen grade three students with varying text decoding ability. They were chosen for the study via a grade administering of the TORCH test and their TORCH raw scores used, the teaching group was situated in one of the two grade 3/4 classrooms. The control group was taken from the other grade 3/4 thus ensuring that no 'accidental' teaching occurred. All students are non English as a Second Language (ESL) and come from middle class working families.

Teaching Group	Gender	Age in MONTHS	Reading Recovery	TORCH raw score PRETEST
Student a	F	106.8		19
Student b	M	102.4		17
Student c	M	109.2		15
Student d	F	96		15
Student e	F	97.2		10
Student f	F	97.2		7
Student g	F	85.32		3
Student h	M	106.8	1	1

Teaching Group: consisted of seven students with TORCH raw scores ranging from 1 to 19 the cohort was of mixed gender and aged between 85.3 months to 109.2 months. One student has completed Reading Recovery however this aid has ceased as the student has moved into the middle grades.

Control Group	Gender	Age in MONTHS	Reading Recovery	TORCH raw score PRETEST
Student AA	F	96		17
Student BB	M	100.8		17
Student CC	M	98.4		15
Student DD	F	102		14
Student EE	F	97.2		10
Student FF	F	99.6		10
Student GG	F	104.4		5
Student HH	M	97.2		10

Control Group: consisted of seven students matched to the teaching group as closely as possible by gender and with similar TORCH raw scores. Their TORCH scores range from 9 to 18 the cohort was of mixed sex and aged between 96 months to 104 months. No students here have completed Reading Recovery.

Materials

Assessment Materials Used

Assessment materials were used both prior to the intervention and after to gain a measure of how the students have improved.

- ✂ **TORCH-** this was used to determine the student's comprehension of a text
- ✂ **Munro's Group Administration Paraphrasing Task** – to determine the paraphrasing ability of the control and teaching groups.
- ✂ **BURT** – to determine the decoding ability of the students at a word level.
- ✂ **Session assessment sheet** – to track student's progress, this was not used every session.

Teaching Materials Used

Lessons based on Munro's 'Teaching a Paraphrasing strategy' lessons.

Articles

The Jaguar: A great cat

It's not a rat, its not a cat, it's a ...

Our forests have gone to keep up warm

The energy we use: Fossil fuels or renewable energy

Energy from fossil fuels

Other types of energy

Energy from the sun

Book

Teeth by Greg Pyers

Other Resources

RAP Poster

Student Answer sheet- (example provided in appendix 2)

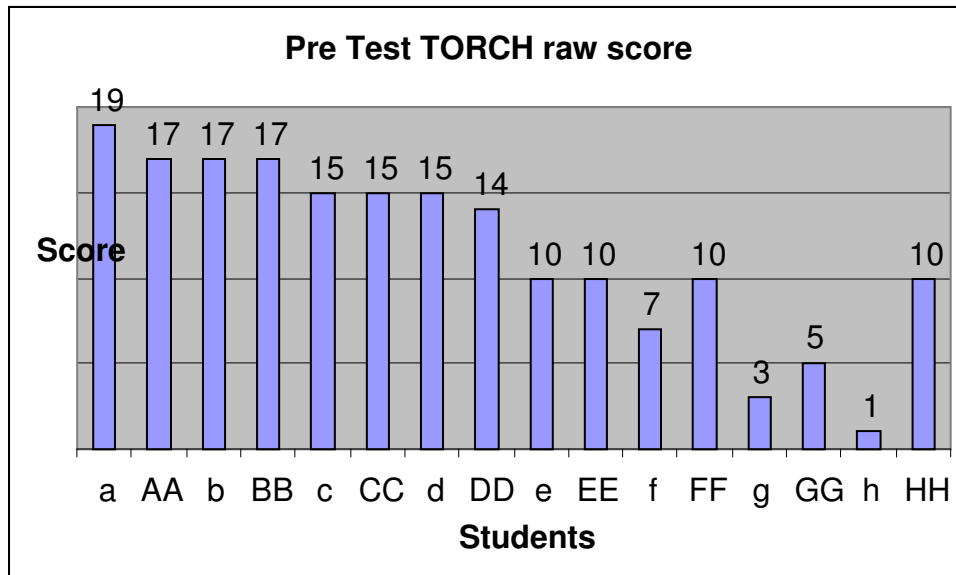
Pencils

Blank paper for recording ideas

Whiteboard and markers

Procedure

Seven students were identified and chosen for the teaching group of the study via the TORCH testing raw score. The levels of comprehension in this group varied and the students were chosen for a group of mixed ability. The Control group was selected to match the teaching group's TORCH scores as closely as possible; this control group was selected from another grade to ensure no 'accidental' teaching of strategies. See graph 1 below:



Graph 1

In this graph we can see how the students were matched with their TORCH raw scores, here the teaching group is represented by the single lowercase letter (a) and the control group is denoted by the double capital letters (AA). Their raw scores are shown on the top of the column and are closely matched until we get to the lower end of the scale where student h was matched using gender and age as well.

The students were tested using TORCH, Munro's Group Administration Paraphrasing Task and the BURT word test. The following series of lessons were taught in the classroom by the classroom teacher with normal activities continuing around the group as it worked. Twelve sessions were taught over four weeks with the April school holidays in between. The group worked together three times a week over the four weeks. The lessons ran for approximately forty minutes a session. Monitoring of student progress was carried out during the intervention teaching and lessons were modified accordingly.

This sequence of lessons was based on Munro's 'Teaching a Paraphrasing strategy' lessons with modifications created as they went, to assist the current group of students to internalise the strategies. The students were then tested again using TORCH, Munro's Group Administration Paraphrasing Task and the BURT word test.

Lesson Outlines

For the full teaching unit see appendix 1

The first three sessions followed this basic format

1. Teacher introduces the text
2. Short discussion on what the text is about, recalling prior knowledge
3. Group reads paragraph with the teacher
4. Oral Paraphrasing
5. Record of attempts on group whiteboard (see appendix 2)
6. Teacher recaps the lesson and explicitly states benefits of paraphrasing.

The next three lessons modified this format somewhat

1. Teacher introduces the text
2. Short discussion on what the text is about, recalling prior knowledge
3. Group reads paragraph with the teacher
4. Oral Paraphrasing and listing of appropriate synonyms (see appendix 3)
5. Record of attempts individually in books (see appendix 2)
6. Teacher recaps the lesson and explicitly states benefits of paraphrasing

The next three lessons modified this format yet again

1. Teacher introduces the text
2. Short discussion on what the text is about, recalling prior knowledge
3. Teacher introduces the R.A.P. strategy as a way of remembering what to do
4. Group reads paragraph with the teacher
5. Written Paraphrasing
6. Record of attempts individually in books
7. Teacher recaps the lesson and students explicitly state the benefits of paraphrasing and go over the R.A.P strategy, prompted by the teacher

The last three lessons modified this format even further.

1. Teacher introduces the text
2. Short discussion on what the text is about, recalling prior knowledge
3. Teacher reminds students of the RAP strategy
4. Group reads paragraph in pairs
5. Written Paraphrasing
6. Record of attempts individually in books, orally and on whiteboard depending on need
7. Teacher recaps the lesson and students explicitly state the benefits of paraphrasing and go over the R.A.P strategy, prompted by the teacher

Results

An analysis of the overall group results and then individual results follow. Overall both groups' results improved, however the teaching group's results were slightly higher than the control group's results.

Correlations

When we look at the correlation between the control pre testing and post testing Paraphrasing and Torch scores and the teaching group pre testing and post testing Paraphrasing and Torch scores we can make some interesting observations.

Correlations between the Paraphrasing and Torch RAW Scores				
		Paraphrasing	Torch	Correlation
Control PRE	Mean	4	11	0.297
Control POST	Mean	14	13.5	0.330
Teaching PRE	Mean	5.875	10.875	0.725
Teaching POST	Mean	16	14.583	0.893

Table 1

Given that the closer the correlation is to 1 the more significant the result is, we can see:

- ☞ The control group's correlation only improved by .032
- ☞ The teaching group's correlation improved by .167
- ☞ We can surmise that the teaching group results were significantly higher than the control group.
- ☞ And that there **is** a relationship between a student's comprehension ability and their paraphrasing skills.

Another way to relate the whole group data is by looking at the correlation between the BURT and the TORCH RAW score.

		BURT	TORCH	Correlation
Control Pre	Mean	59	11	0.699
Control Post	Mean	67	13.5	0.582
Teaching Pre	Mean	52.687	10.875	0.639
Teaching Post	Mean	59.625	14.583	0.842

Table 2

Given that the closer the correlation is to 1 the more significant the result is, we can see:

- ☰ The correlation reduced between the results of the control group between the pre and post testing.
- ☰ The correlation for the teaching group was closer at the completion of the intervention teaching
- ☰ There appears to be a correlation between orthographic skills and comprehension

Paired Samples Test t-test for Equality of Mean'

In order to ascertain whether the student's pre test score were the same as their post test scores a t-test for equality of mean was carried out. The means and standard deviation for the teaching and control groups for both before and after teaching, and the t-value for the difference between the two times, is shown in the table below

	Pre (N=8)		Post (N=8)		t-value (df =7)
	Mean	Std. Deviation	Mean	Std. Deviation	
Teaching group					
paraphrase	5.8750	4.88255	16.0000	8.34951	-6.573**
Torch raw score	10.8750	6.68554	13.8750	4.15546	-1.939
Torch score	32.3875	16.98331	39.7000	11.62964	-1.846
BURT score	49.3750	24.92238	59.6250	19.16796	-1.907
Control group					
paraphrase	12.8125	9.18826	19.6250	6.94751	-4.818**
Torch raw score	12.2500	3.29231	14.6250	1.16401	-4.771**
Torch score	34.6750	9.10192	40.8500	8.9174	-8.477**
BURT score	56.0000	14.96663	61.3750	18.25954	-3.769**

* Significant at the .05 level.

** Significant at the .01 level.

In this table we can see that:

- The teaching group improved its paraphrasing skill but did not improve their reading comprehension
- The control group improved their paraphrasing skill and their reading comprehension scores.
- The teaching group had a higher standard deviation so the teaching group didn't show the level of improvement the control group did because their results deviated further from the mean.

Independent Samples Test t-test for Equality of Mean

In this table the teaching group scores are compared with the control group scores, the difference is shown in the right hand column.

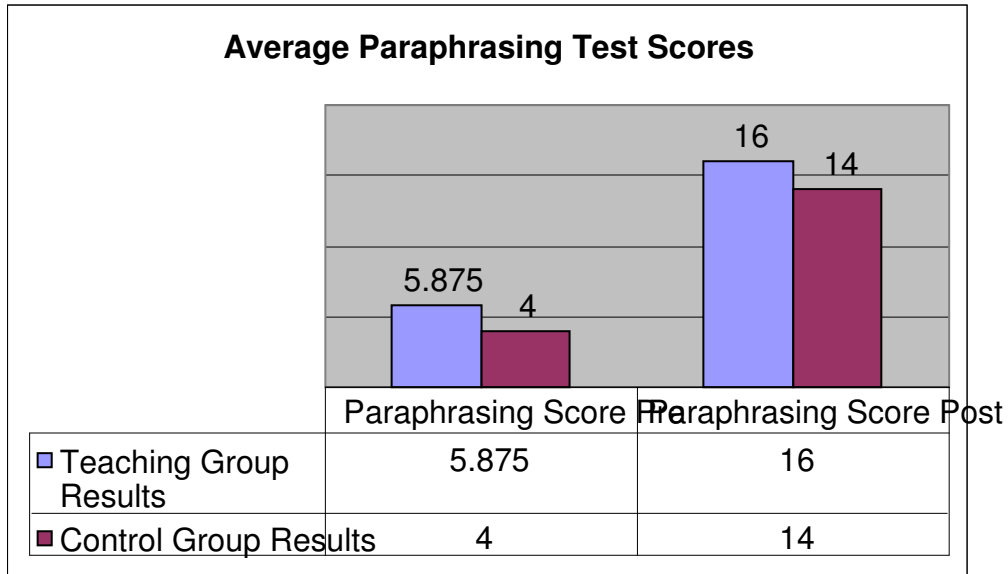
Test	T (df = 14)
PARAPRE	1.886
PARAPOST	.944
TORAWPRE	.493
TORAWPOS	.400
TOTOPRE	.336
TOTOPOST	.222

In this table we can see that:

- The teaching group did not differ from the control group either in paraphrasing skill or in reading comprehension before or after teaching.
- We must look closer at the individual results to ascertain whether any gains at all have been made.

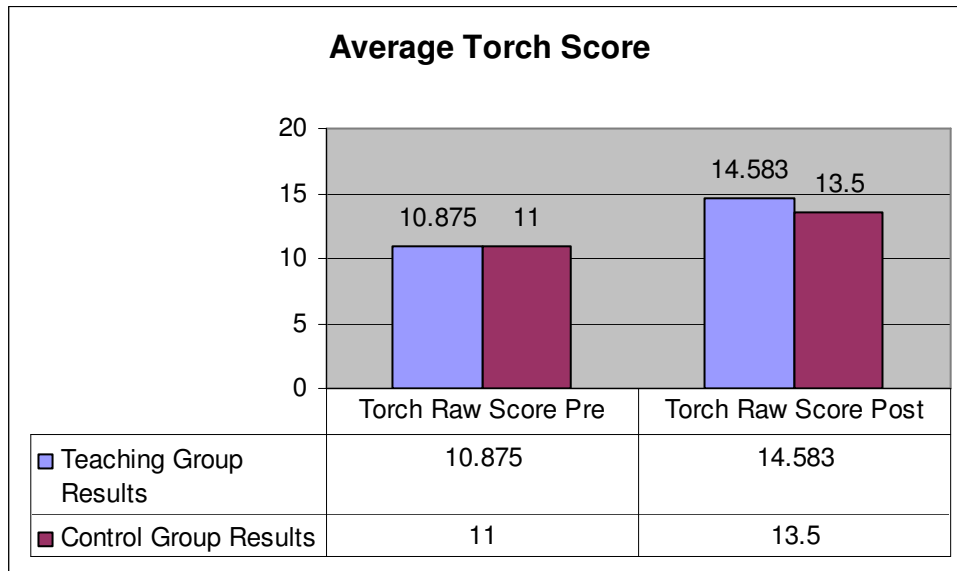
Overall Test Results

Looking at the tests individually we can see that the Teaching Group overall gained better results than the Control Group in both the TORCH and Paraphrasing Tests, however in the BURT word test the Control group gained better results.



Graph 2

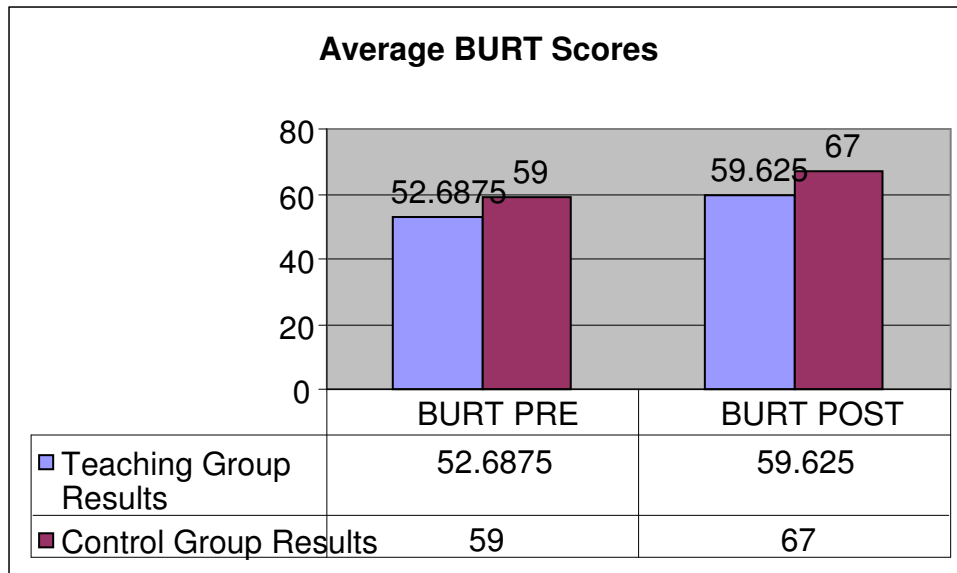
In graph 2 we can see the differences between the average score's for the teaching and control groups. In this case the Teaching Group has moved further than the Control Group, with the control group lifting their post results by 10 points and the teaching group lifting their results slightly higher by 10.125. This result may be due to grater ability to paraphrase.



Graph 3

In graph 3 we can see the differences between the average raw TORCH scores both before (Pre) and after (Post) the intervention. Results indicate that for this cohort of students while the comprehension level for the Teaching group was slightly lower to begin with their comprehension skills moved father than the control group gaining

3.708 points overall. The Control group started slightly higher and did not progress as far only gaining 2.5 points, these results reflect positively on the study indicating the effectiveness of the intervention.

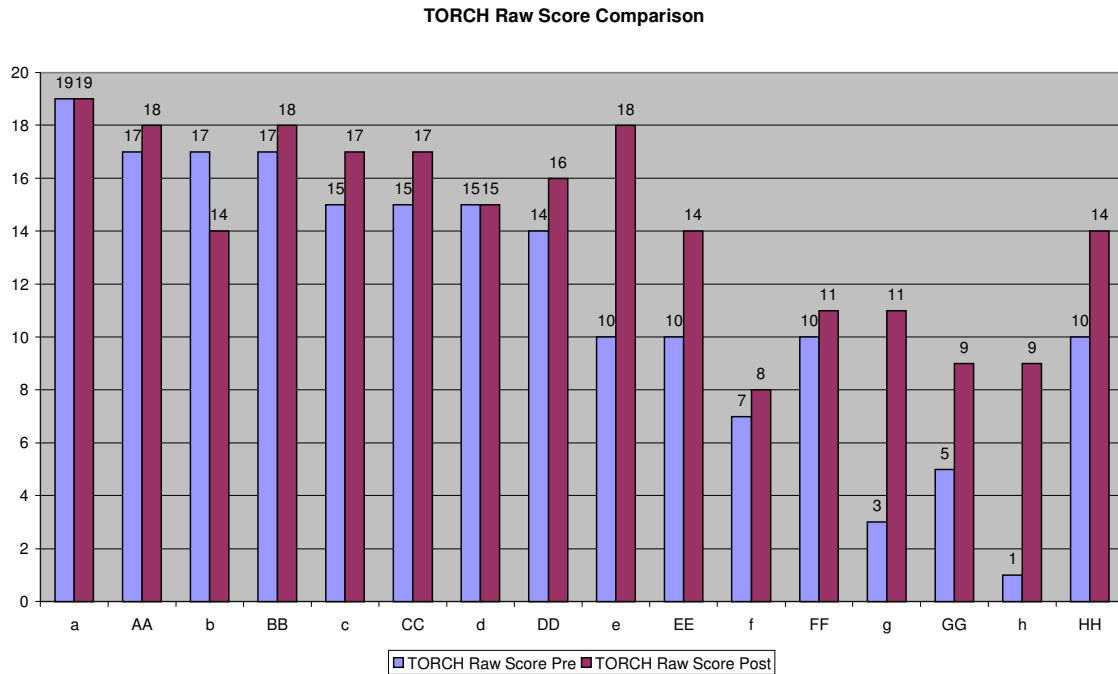


Graph 4

In graph 4 we can see the results of the BURT word test administered both before (Pre) and after (Post) the intervention; results indicate that for this cohort of students the control group made a gain of 8 whilst the teaching group made a gain of 6.938. This does not reflect positively on the overall research and raises a question on the link between orthographic skill and comprehension ability. This anomaly may be due to work undertaken in the other classroom.

Individual Test Results

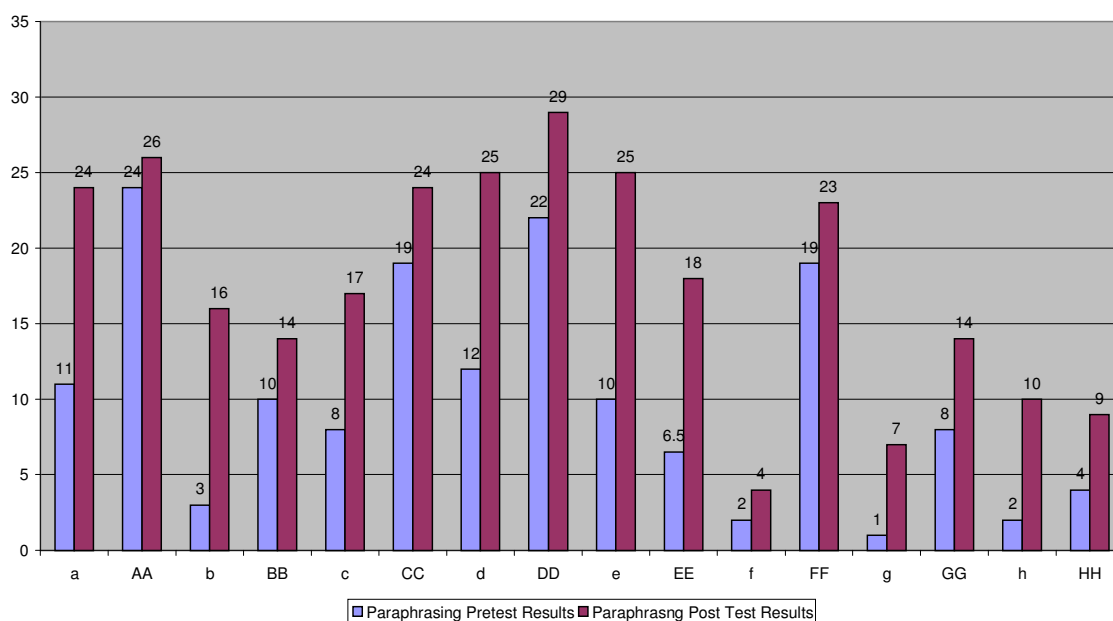
For the next three graphs the teaching group is denoted by the lowercase letter (a) and the control group is denoted by the uppercase letters (AA) the students with the same individual letters are the matched students (a is matched with AA).



Graph 5

Here we can see the gains made by the students that were in the teaching group and the control group matched side by side. The results are more dramatic at the lower end of the scale. This leads to the conclusion that the poor comprehenders benefited most from the intervention while the excellent comprehenders did not or benefited little.

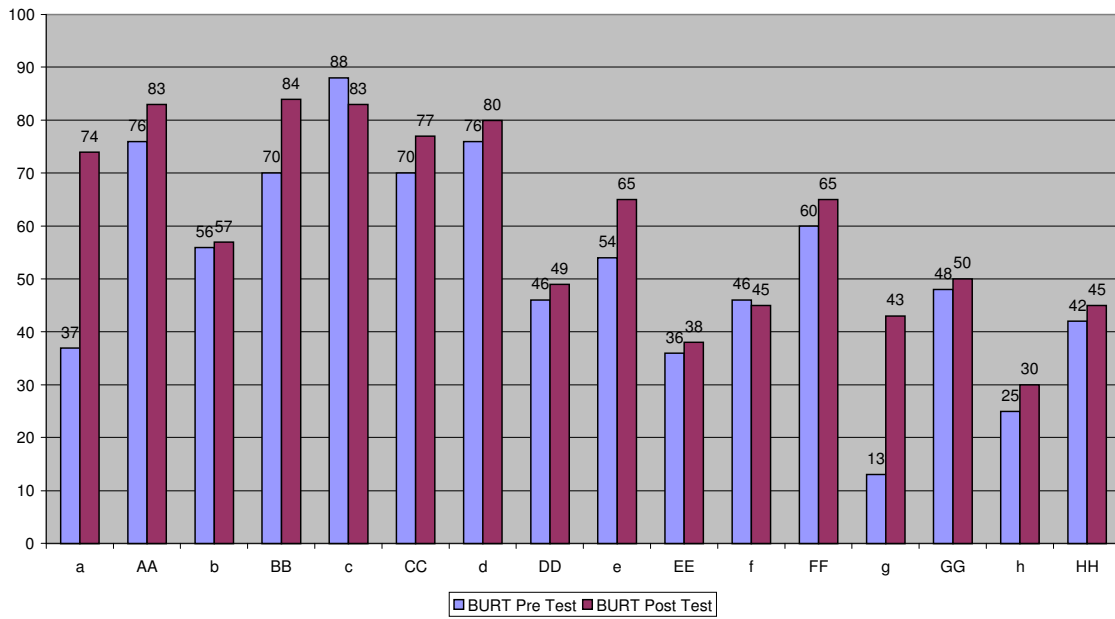
Paraphrasing Comparison of Results



Graph 6

This graph examines the gains made by the students in Munro's Group Administration Paraphrasing Task as the students were not matched using this criteria there is a greater variation of results across the board with the more dramatic gains made by the Teaching Group, which is to be expected as they received further instruction. The most worrying result here in terms of individual student is student 'f' whom only doubled their result the second time around and the most encouraging result is that of student 'g' who went from a score of one to seven.

BURT Comparison



Graph 7

This graph examines the gains made by the students in the BURT word test we can see that the results were uneven in nature with two students in the teaching group not making the expected gains. Student 'a' has made some pleasing progress here as they have in the Paraphrasing task, you will notice however that student 'a' received the highest mark in the TORCH test, the implications of this interesting result will be discussed in the appropriate section.

Discussion

The individual student data collected in this study supports the hypothesis that “Teaching grade three students paraphrasing skills improves their comprehension of non fiction texts.” With few exceptions students who received the instruction attained greater individual scores after the intervention.

Although the hypothesis was not supported by the cohort in the t’test equality of mean calculations the hypothesis was supported in particular by those students who had lower TORCH scores. Indicating that the intervention was the most effective for those students who have difficulty comprehending what they read. Results suggested that for the students who did not struggle with comprehension, paraphrasing lessons have little to no effect on their skills other than to increase the creativeness of their synonyms which could be attributed to the work surrounding synonym creation and not the work on paraphrasing. This result is positive in itself as it shows that students who already have the comprehension skills may also benefit in some way from being involved in the lessons as a whole class and should not be detrimental to those students who have already attained skills in the comprehension area.

The findings also suggest that teaching a group of seven students can be effective in transferring knowledge of skills and habits that good readers have. Even with a large group of seven the gains in the individual results of the student’s leads to positive outcomes for those students involved.

The concurrent positive results of the control group as shown in the paired samples test suggest that they may have received ‘accidental’ teaching whilst listening in on the small groups activity or through explicit teaching of other comprehension strategies such as visualizing and work surrounding vocabulary development, these elements were not fully in the researchers control as the control group came from a different class and may have received further instruction. While every effort was made to ensure that there was no accidental teaching during the course of the study there was some confusion on the part of other educators as to what and what they were not supposed to be teaching during this time. This lead to the students who were part of the control group being taught skills that could assist them during the comprehension task. The most obvious example of this is graph 4 the BURT word test where we can see the results of the control group outstrip the results of the teaching group.

Individual Anomalies

Individual anomalies are shown in the table below; the data discussed is shown in shaded form. This data is clearly shown in appendix 4 by the graphs for each student.

Student	Paraphrasing pre test result	Paraphrasing post test result	TORCH raw score pre result	TORCH raw score post result	BURT pre test Result	BURT post test Result
b	3	16	17	14	56	57
c	8	17	15	17	88	83
d	12	25	15	15	76	80
f	2	4	7	8	46	45
g	1	7	3	11	13	43
h	0	10	1	9	25	30

Student 'b' was the only student to have made no gain in their TORCH results; this may have been due to missing a large amount of lesson as the student was consistently late throughout the study. The students paraphrasing results however were remarkable, they went from a score of three to that of sixteen, this shows that although they may not have understood and performed well on the TORCH test (a new test to the school) the student was able to paraphrase and keep the meaning of the read text.

Student 'c's BURT results indicated that they went from a score of eighty eight to that of eighty three, in real terms this means that they were unable to read or made errors on five words. If we look at the above table we can see that student c made some positive gains with their TORCH and Paraphrasing Test. There seems to be no academic reason for this anomaly we can only suggest that the anomaly is caused by interesting behavioral traits such as inattention or other outside influences.

Student 'd' did not make any gain in their torch result thus showing no improvement in their comprehension ability this may have been due to the students reaction to testing in general. Student d usually takes 50% longer to complete any testing within the class, this shows that the student either does not understand the test – unlikely as they attained a score of fifteen out of a possible nineteen or that the student requires longer to process information and as they were stopped after 50 minutes of testing the student may not have had enough time to answer all the questions. The student's TORCH test is included in Appendix 3

Student ‘f’ has not made significant gains in their ability to paraphrase and comprehend texts. This is evidenced by the gain in their Paraphrasing and TORCH tests of two and one respectively. In class student f is attentive and shows active listening skills; however they also show little confidence in their ability to complete tasks adequately. The small gains that they have made leads to the conclusion that this student may need more repetition and practice of the skills involved.

Student ‘g’ has made some large gains in all areas of assessment, student g is a quiet child whose reserved manner often leads them to be overlooked when identifying at risk children. Student g would benefit from small group instruction regularly where they are called upon to use their knowledge and practice the skills being taught. In a small group situation when student g is called upon to demonstrate knowledge, without the added stress of demonstrating skills in front of a large class group. Student g’s results are excellent for supporting the intervention as they show the kinds of gains that are achievable in this environment.

Student ‘h’ attained the lowest pre testing scores so their post testing score reflect positively on both the intervention and the study in general. Student h is a consistent non achiever who struggles with decoding text at the best of times, whose confidence was raised by their success in this area of literacy development. The challenge for this student is to keep the gains happening and for them to consistently improve their skills in this area.

Explicitly teaching the skills of paraphrasing to aid comprehension is a valuable task for any who choose to focus on comprehension in the middle school. We must concentrate on this if we are to ready students for the change from ‘learning to read’ into ‘reading to learn’ in the senior school. In conjunction to this if we are to cater for all students and all modes of learning we must combine the skills of paraphrasing with that of visualizing and word development.

The data gathered in this study highlights the need for intervention strategies in relation to comprehension in the middle school. The individual student data supports the hypothesis “Teaching grade three students paraphrasing skills improves their comprehension of non fiction texts.” When we look at he individual student results we must be reminded of the individual needs of the students and it is these individual needs that we must cater for in our classrooms. This is no small task and the introduction of these intervention strategies give educators a good start to improving comprehension in the middle school.

How findings fit with those of other research.

In the conclusion of their study Steven Lee and Theresa Von Colin (2003) state that “Further research is needed with children of different ages, backgrounds and reading comprehension skills to enhance the generalizability of the Paraphrasing strategy” and this study would seem to concur with this statement. The material gained from these studies must go some way towards cementing in our minds the suitability of the paraphrasing strategy in the classroom and its practical applications. Fisk and Hurst (2003) state it best in the concluding line of their article *Paraphrasing for comprehension* “Paraphrasing for comprehension is an effective reading strategy that helps students process and comprehend what they are reading and learning”

Implications for further research

Further research in the area of paraphrasing and comprehension is required if we are to see the benefits of teaching the strategies mentioned here in a whole class setting. We can surmise that this approach works with the students who have difficulty comprehending, it would be interesting to see if the students who are capable decoders and who already have the comprehension and comprehending skills would benefit from this approach. The implications in this research study indicate that while their comprehension skills would not benefit greatly, their choice of words and vocabulary would broaden leading to creative writers who have still gained some benefit from the intervention lessons.

As the results of the paired and independent samples test show, we also need to look at the difference between the effectiveness of a small group of four to five students compared to a large group of seven to ten students as well as the effect the strategy has if used in a classroom and taught to all students.

Another area for research is the link between the orthographic nature of words and comprehension. The question is; were we to design an intervention around the orthographic features of words and teach to it would we see an improvement in comprehending and comprehension or only in decoding ability.

This study, like others has raised many questions and as usual more questions need to be investigated and reported on if we are to gain a definitive answer on the positive effects of comprehension strategies.

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Appendices

Appendix 1 – Teaching Unit

Appendix 2 - Resources Made and Used.

Appendix 3 - Work sample for student d Grasshoppers TORCH Answer Sheet

Appendix 4 – Student Results Comparison

Appendix 1

TEACHING UNIT

Teaching sessions were modified from John Munro's Teaching a Paraphrasing Strategy (2006).

Session	Lesson	Resources
1	Teacher introduces the text Short discussion on what the text is about, recalling any prior knowledge. Group reads sentence with the teacher Oral Paraphrasing Record of attempts on group whiteboard (see appendix 2) Teacher recaps the lesson and explicitly states benefits of paraphrasing.	The Jaguar: A great Cat (in a booklet with all the texts used) Whiteboard
2	Teacher re orients students to the text Short discussion on what the text is about, recalling prior knowledge. Group reads sentence with the teacher Oral Paraphrasing Record of attempts on group whiteboard Teacher recaps the lesson and explicitly states benefits of paraphrasing.	The Jaguar: A great Cat Whiteboard
3	Teacher introduces the text Short discussion on what the text is about, recalling any prior knowledge. Group reads paragraph with the teacher Oral Paraphrasing Record of attempts on group whiteboard Teacher recaps the lesson and explicitly states benefits of paraphrasing. Student's given two sentences and then the ongoing assessment sheet given out and a 'minitest' was conducted in the last five minutes of session	It's not a rat it's not a cat, it's a ... Whiteboard Student Answer Sheet (see appendix 2)
4	Teacher introduces the text Short discussion on what the text is about, recalling any prior knowledge. Group reads sentence with the teacher Oral Paraphrasing and listing of appropriate synonyms. Record of attempts individually in books (see appendix 2) Teacher recaps the lesson and explicitly states benefits of paraphrasing.	Our forests have gone to keep us warm Synonym list (see appendix 2) Student text's (see appendix 2)
5	Teacher introduces the text	The animals that live in the

	<p>Short discussion on what the text is about, recalling any prior knowledge. Group reads paragraph with the teacher Oral Paraphrasing and listing of appropriate synonyms. Record of attempts individually in books Teacher recaps the lesson and explicitly states benefits of paraphrasing.</p>	<p>Earth's coldest areas</p> <p>Synonym list</p> <p>Student text's</p>
6	<p>Teacher introduces the text</p> <p>Short discussion on what the text is about, recalling any prior knowledge. Group reads paragraph with the teacher Oral Paraphrasing and listing of appropriate synonyms. Record of attempts individually in books Teacher recaps the lesson and explicitly states benefits of paraphrasing.</p>	<p>The energy we use: Fossil fuels or renewable energy</p> <p>Synonym list</p> <p>Student text's</p>
7	<p>Teacher introduces the text</p> <p>Short discussion on what the text is about, recalling any prior knowledge. Teacher introduces the R.A.P. strategy as a way of remembering what to do. Group reads paragraph with the teacher Written Paraphrasing Record of attempts individually in books Teacher recaps the lesson and students explicitly state the benefits of paraphrasing and go over the R.A.P strategy, prompted by the teacher Students given a paragraph to paraphrase on the student answer sheet in the last five minutes of the session.</p>	<p>Energy from fossil fuels</p> <p>R.A.P. poster (see appendix 2)</p> <p>Student text's R.A.P. poster</p> <p>Student Answer Sheet</p>
8	<p>Teacher introduces the text</p> <p>Short discussion on what the text is about, recalling prior knowledge. Teacher reminds students of the R.A.P. strategy as a way of remembering what to do. Group reads paragraph with the teacher Written Paraphrasing Record of attempts individually in books Teacher recaps the lesson and students</p>	<p>Other types of energy</p> <p>R.A.P. poster</p> <p>Student text's R.A.P. poster</p>

	explicitly state the benefits of paraphrasing and go over the R.A.P strategy, prompted by the teacher	
9	<p>Teacher introduces the text</p> <p>Short discussion on what the text is about, recalling prior knowledge.</p> <p>Teacher reminds students of the R.A.P. strategy as a way of remembering what to do.</p> <p>Group reads paragraph with the teacher</p> <p>Written Paraphrasing</p> <p>Record of attempts individually in books</p> <p>Teacher recaps the lesson and students explicitly state the benefits of paraphrasing and go over the R.A.P strategy, prompted by the teacher</p>	<p>Energy from the sun</p> <p>R.A.P. poster</p> <p>Student text's</p> <p>R.A.P. poster</p>
10	<p>Teacher introduces the text</p> <p>Short discussion on what the text is about, recalling prior knowledge.</p> <p>Teacher reminds students of the R.A.P. strategy as a way of remembering what to do.</p> <p>Group reads paragraph in pairs</p> <p>Written Paraphrasing</p> <p>Record of attempts individually in books, orally and on whiteboard depending on need.</p> <p>Teacher recaps the lesson and students explicitly state the benefits of paraphrasing and go over the R.A.P strategy, prompted by the teacher</p> <p>Students given a paragraph to paraphrase on the student answer sheet in the last five minutes of the session.</p>	<p>'Teeth' by Greg Pyers</p> <p>R.A.P. poster</p> <p>Student text's</p> <p>R.A.P. poster</p> <p>Student Answer Sheet</p>
11	<p>Teacher re orients students to the text</p> <p>Short discussion on what the text is about, recalling prior knowledge.</p> <p>Teacher reminds students of the R.A.P. strategy as a way of remembering what to do.</p> <p>Group reads paragraph in pairs</p> <p>Written Paraphrasing</p> <p>Record of attempts individually in books, orally and on whiteboard depending on need.</p> <p>Teacher recaps the lesson and students explicitly state the benefits of paraphrasing and go over the R.A.P</p>	<p>'Teeth' by Greg Pyers</p> <p>R.A.P. poster</p> <p>Student text's</p> <p>Whiteboard</p> <p>R.A.P. poster</p>

	strategy, prompted by the teacher	
12	<p>Teacher re orients students to the text</p> <p>Short discussion on what the text is about, recalling prior knowledge.</p> <p>Teacher reminds students of the R.A.P. strategy as a way of remembering what to do.</p> <p>Group reads paragraph in pairs</p> <p>Written Paraphrasing</p> <p>Record of attempts individually in books, orally and on whiteboard depending on need.</p> <p>Teacher recaps the lesson and students explicitly state the benefits of paraphrasing and go over the R.A.P strategy, prompted by the teacher</p>	<p>'Teeth' by Greg Pyers</p> <p>R.A.P. poster</p> <p>Student text's</p> <p>Whiteboard</p> <p>R.A.P. poster</p>

Appendix 2 Resources Used

Paraphrasing Test – Used both for both pre and post testing.

Paraphrasing task: Group administration

Student work sheet

Student name: _____ Grade: _____ Date: _____

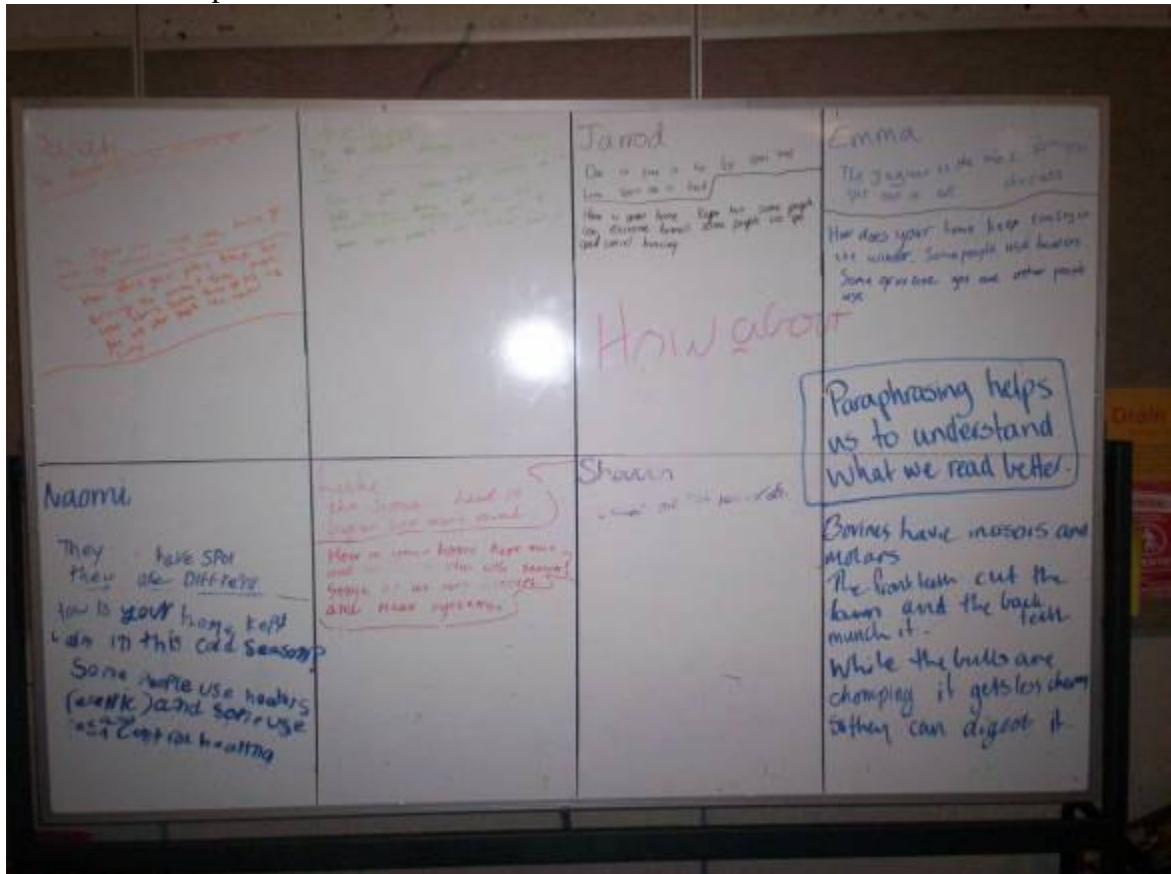
Sentence	Teacher	Your try
A toy maker went to live in another city	This person who makes toys moved to a new town.	
He wanted to find a place to live.		
He needs to get to know the city.		
After he bought a map he looked for a bus.		

	Sentences	Your sentences
1.	The young man and his friend rode on the bike.	
2	They were enjoying themselves.	
3	The birds were singing in the trees.	
4	The two friends chatted. They were not paying attention to anything.	
5	They were supposed to watch where they were going.	
6	The track became narrow and twisted.	
7	Suddenly it began to slope down and the bike sped up.	
8	People in the park watched and gasped as it went faster and faster.	
9	The two riders weren't smiling and chatting any longer.	
10	Now they were gripping the bike as tightly as they could, showing fear on their faces.	
11	People in the park had stopped what they were doing and started to yell "Stop" or "Be careful".	

12	All of a sudden the path goes around a sharp curve.	
13	Ahead they see in the middle of the path, a huge stone.	
14	The closer they get to it, the more enormous it becomes.	
15	As they fly towards it, their hearts are beating louder and louder and they try to take avoidance action.	
16	There is loud thud, the front wheel crumples and the young couple is airborne, flying over the obstacle to the grass on the side of the path.	

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Record of attempt on whiteboard



Synonym List – generated by students

Key Words

ENERGY

- electricity
- strength
- power

FUEL

- stuff that gives you energy
- petrol / oil
- gas / coal

FOSSIL

FOSSIL

dead plants & animals that we burn to make heat.

POLLUTANTS

- rubbish
- smoke / bits
- chemicals
- dead stuff

PROTECT

- save
- safe
- keep away
- look after
- careful

Lions

Feline } King of the jungle

Big cat }
huge cat }

Teeth

Fangs
chompers
pearly whites

Killing

making dead
murder
die

Eating

digesting eat
chomping
swallowing

Canine

(prey) food
Front or 'eye' teeth

Molar


Back teeth

Student Answer Sheet

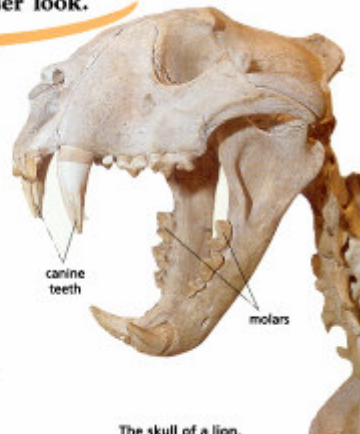
- Used in several sessions to assess ongoing learning
- Student Example Shown

Teacher Observation	Student Answer
	The Quokka baby climb into the mother's pouch and stayed there for about six months being fed and cared for.
	All of these things that help us feel warm.
	The calls The calls are very effective. They make energy without moving or making noise. Also, they do not make pollution.

Student Text
Teeth by Greg Pyers

 Let's take a closer look.

The lion uses its huge canine teeth to grip and kill its prey. The lion's molars are also very sharp. They work like huge scissors. The lion uses its molars to cut through skin, meat and bone.



Student text's -from John Munro's Teaching a Paraphrasing Strategy
- student example shown

Teaching a reading strategy 4

Other types of energy
~~We can use the term~~ ^{we can use the term} "energy source" to refer to the things from which we can get ^{five} energy. There are ^{many} several things that can give us energy that are cleaner than the fossil fuels. One source is the sun. We can try to collect the heat and light energy it produces. A second source is the wind. The wind carries energy. You know that a strong wind can blow you over. People can use this energy to turn wheels just like using steam. A third source is a fast moving river. Again, people can use the energy in the moving water to turn the wheels to make electricity.

These three sources of energy don't use up something like using coal or oil does. They are called 'renewable energy sources'. The sun is not likely to use up all of its energy soon. While winds blow around the earth, we will continue to have wind energy. While rivers continue to flow, we can use the energy in moving water. Renewable energy is a source of energy that is not running out. It can be replenished in a short period of time.

As well, renewable energy sources don't make the pollutants that come from burning fossil fuels. We don't need to burn things to get the energy from them. Their energy is already here. It is just that we haven't previously used them to give us much energy. In the following sections we will look at some of these types of renewable energy and how they can be used to help us. The five renewable sources used most often are from moving water, the sun, the wind, the earth geothermal and from trees and plants. We will look first at energy from the sun.

we can use the term energy source to refer to the things from which we can get fuel.

There are many things that can give us energy that are cleaner than dead @ plants and @

R.A.P Poster (Note the 'cool' rappers)



R

Read the sentence or paragraph first!

A

Ask yourself "What words can I change but still keep the meaning the same?"

P

Put the words into your own sentences.



Appendix 3

Work sample for student d Grasshoppers TORCH Answer Sheet

TORCH ANSWER SHEET

GRASSHOPPERS

By learning about grasshoppers we can find out how to catch them.

Grasshoppers like to lie in the sun because they 1
get energy from it. They don't jump about much 2
when it is cold because they don't have as 3
much energy. It is easier to catch grasshoppers 4
on days that are hot and cloudy because 5
they are out but they don't jump about. 6

Even when grasshoppers aren't moving you will still be able to find one because
they make a chirping ^{sound}. Most grasshoppers are 7
coloured brown and green just like 8
the grass which makes 9
them camouflaged. 10

You can use a jar or 11
a tube to trap grasshoppers, but you have to 12
move slowly so that they won't see you or hear 13
you and see you. 14

Grasshoppers can see all around them because their eyes
are on their sides and are very large. 15, 16

However, even though they can see all around them, they
cannot see the back or front their 17, 18
eyes and the picture a grasshopper sees is blurred. 19

If you are able to catch a grasshopper, you can look at it closely and then let it go again.

Appendix 4

Individual Student Graphs

