

The explicit teaching of a paraphrasing strategy to year three and four students who have comprehension difficulties, will improve in their overall literal and inferential comprehension.

Abstract

From my teaching experience and from research which I have cited in this project it is quite reasonable to note, that many students in the three and four year level may experience reading comprehension difficulties despite being able readers in terms of decoding and fluency. In my sample group, consisting of the Intervention and Control groups, this is certainly the case, as all the students have a reading text level in the mid to high twenties yet their scores in reading comprehension as observed from the Torch Test were average to low average and some were in fact below the 25th “at risk” percentile rank.

The objective of the present study was to investigate the effectiveness of explicit teaching of a paraphrasing strategy to year three and four level students in my class who displayed comprehension difficulties. The paraphrasing strategy used was taken from John Munro’s “Teaching a paraphrasing strategy” (2006) which entailed children learning to do and to express the following steps:

1. The first step in paraphrasing is to read a sentence.
2. The second step is to change as many words as you can while keeping the meaning the same.
3. The third step is to say the sentence again in your own words.

This research study spanned over approximately five weeks and the following steps were taken:

1. The students in both the intervention and control groups were selected and matched according to independent variables such as their year level, age, gender and entry scores, obtained from school required testing in the area of literacy.

2. Both groups were then tested on John Munro's paraphrasing test, "Paraphrasing task: Group administration (2005). This test required the students to read sentences and to re-write them in their own words, substituting as many words as possible but without changing the meaning.
3. The paraphrasing strategy was taught to the whole class for all the sessions but within these sessions the intervention group was given more focused and guided assistance. The material(factual texts) used for reading and paraphrasing was adapted from "Teaching a paraphrasing strategy" and "Teaching a Reading Strategy" John Munro (2006).
4. At the completion of the teaching sessions both groups were retested on the same paraphrasing test and also on a different text from the Torch Comprehension Test.

The results of this study supported the hypothesis that the explicit teaching of a paraphrasing strategy to year three and four students who have comprehension difficulties, will improve in their overall literal and inferential comprehension. All students in the intervention group improved in all their posttest scores and most importantly 80% of the group who were in the critically low percentile for Torch reading comprehension, had scored above this percentile in the posttest.

The research which I have cited in my project report is highly supportive of teachers using paraphrasing strategies, especially cognitive based paraphrasing strategies, as excellent s tools in helping students to improve their reading comprehension by being better able to identify the main idea, supporting ideas and the author's voice when reading and understanding text. Some of the research shows that this is even the case for students in inclusive classrooms and for the arguably more difficult yet important skill of comprehending factual texts.

Introduction

Even though most students by the grade three and four year levels can read competently, they still have difficulty with comprehension, in particular with inferential comprehension. I believe that this difficulty with comprehension occurs due to the fact that children at the middle level are more competent at decoding print and reading fluently than with comprehending strategies. Children in this level require the explicit teaching of comprehending strategies such as visualizing and paraphrasing in order to assist and improve their comprehension. In this research the strategy of paraphrasing was used to improve comprehension and implicit in that strategy is the development of vocabulary and synonyms.

It is important to qualify what is meant by the term paraphrasing in relation to reading and comprehension. In Fisk and Hurst (2003), they state that paraphrasing is genuine rewriting, which involves students being able to express the main ideas of a passage or text in their own words and not a word-for-word translation. They also suggest by referring to the work of Vacca and Vacca (1999) that when all the areas of literacy, that is reading, writing and oral language are integrated students have greater success at learning and retaining information.

In order to assist students to become independent thinkers and to be able to apply the paraphrasing strategy on their own in various reading and comprehending situations, they would benefit greatly from being able to verbalise the reasons why this strategy is useful and how it will assist them in their reading. Their ability to do this independently and automatically will also help to improve their self-efficacy. In their research Fisk and Hurst (2003) state that “Students will benefit from knowing why paraphrasing is helpful and when they will use it.”

They also state that “Helping students see practical applications of accurately restating another person’s ideas will motivate them to use paraphrasing.”

In their paraphrasing for comprehensions procedures they outline four simple steps as their strategy used. The first step refers to the initial reading of the text where the teacher asks questions and vocabulary is clarified. The students are asked to identify the main idea and to examine the author’s voice so as to become familiar with the text. The second step involves the students re-reading the text on their own and taking notes on an entire paragraph ensuring that they substitute as many of their own words as they can. The third step involves a written paraphrase where students are asked to re-write the passage using their own notes and to ensure that the original meaning and voice of the author is conveyed. The fourth step involves sharing the paraphrases in pairs and making comparisons.

Fisk and Hurst refer to the work of Wilkinson (2002, p.2) which states that paraphrasing for comprehending is a strategy which gives students a reason to read and which encourages them to “keep reading and keep learning together” In summary Fisk and Hurst note that the strategy of paraphrasing for comprehension is an effective tool to be used in classrooms which has the potential to increase students’ comprehension of text.

In their journal on “Improving the reading comprehension of middle school students in inclusive classrooms”, Katims and Harris (October 1997) in reference to Deshler & Schumaker, 1986, discuss the importance of cognitive strategy training and how this can affect students’ effectiveness in the way they understand and process information. They make reference to (Duffy et al., 1987; Haller, Child, &Walberg, 1988; Palincsar&Brown, 1985) who state that studies in the effectiveness of teaching cognitive strategies to readers, assists reading

comprehension in average and low-achieving students. They also state that “Gains in student reading comprehension have the potential for even greater growth when all teachers actively support the use of instructional interventions that include cognitive and behavioural elements”. This last statement is critical in equipping students with appropriate learning strategies which will assist them to process information more thoroughly and explicitly. It was very apparent from my own research study that the students who had the paraphrasing sessions not only improved in their reading comprehension but they were also empowered with a strategy which altered the way they approached the reading tasks. They expressed positive self talk and engaged in relevant discussion with the group.

Katims and Harris (1997) selected the paraphrasing strategy (Schumaker, Denton, & Deshler, 1984) for their study which entails three steps (Read a paragraph, Ask yourself questions about the main idea and details, and Put the main ideas and details into your own words using complete sentences) and is a complex strategy which uses the acronym RAP. They found that the use of the cognitive strategy by the experimental group improved the students’ reading comprehension from pre- to the posttest as was demonstrated by the overall results of the study. In fact, they state that the cognitive strategy used in their study was indicative of improvement in reading comprehension scores for all students in both the LD and non-LD experimental groups.

Like Katims and Harris (1997), Parker, Hasbrouck and Denton (2002) also state that the paraphrasing strategy (Schumaker, Denton and Deshler, 1984) is an effective strategy in improving students’ comprehension. This strategy teaches students how to learn and it incorporates the teaching of synonyms which assists students to comprehend key words.

In my investigative study, I am predicting that teaching the paraphrasing strategy to middle level students who have difficulty with reading comprehension, will lead to an improvement in their overall comprehension ability. This present research investigates the effectiveness of teaching the paraphrasing strategy to the whole class and specifically to the Intervention group in order to assess whether this will have an impact on their reading comprehension. The results were compared between the intervention and control groups pre and post testing in order to arrive at an analysis of their scores. All students in both groups have achieved a high level of reading texts in terms of decoding and fluency but their difficulty was in their ability to comprehend effectively.

Method

Design

This study uses a case study OXO design, in which the gain in paraphrasing and reading ability of middle level students is monitored and compared as a result of teaching a series of lessons on paraphrasing.

The study compares two groups of ten students in the form of a control group and an intervention or teaching group.

In the selection of the sample group for this case study, data consisting of independent variables such as age, year level, ESL, earlier intervention, and pre intervention scores were considered.

Participants

The students selected to participate in this study were grade 3 and 4 children. The ten children in the teaching group were from my class and the ten matched children in the control group were selected from three other grade 3 and 4 classes.

All children concerned were selected by looking at the results of their Torch Test which was administered early on in the year (February, 2007). Children who had low to average results in the Torch Comprehension Test (stanine 1 to 4) were included for this study. In the grade three sample group there were six boys and four girls. In the grade four sample group, there were only two boys and eight girls.

Many of these students have been involved in some form of literacy intervention in previous years. Seven out of the twenty children undertook the Reading Recovery Program in Year 1.

The children at our school mainly come from middle class backgrounds where English is the main spoken language.

The participants in this study were matched according to their age, year level, gender and Torch test score as shown in Table 1.

Table 1 Case study Group

Teaching Group				Control Group			
Student/ Gender	Age	Year Level	Torch Stanine	Student/ Gender	Age	Year Level	Torch Stanine
A M	8.2	3	1	K M	8.5	3	3
B M	7.11	3	2	L M	8.0	3	3
C M	9.1	3	3	M M	8.7	3	4
D F	8.4	3	3	N F	8.8	3	4
E F	8.1	3	3	O F	8.2	3	2
F M	9.9	4	4	P M	9.5	4	3
G F	9.9	4	4	Q F	9.8	4	4
H F	9.9	4	3	R F	9.9	4	4
I F	9.10	4	3	S F	10.5	4	3
J F	9.6	4	2	T F	9.6	4	2

Matching of students – establishing teaching and control groups.

Independent Variables considered: age, gender, year level and results from Torch Comprehension Test.

Materials

As part of our school requirements we test the children at the beginning of the year. Therefore most of the pre test results were obtained in February and the Pre Paraphrasing test was conducted in March (2007). In February we administered:

1. The Torch Comprehension Test (year 3 Grasshoppers and year 4 Lizards Love Eggs), to ascertain the children's reading comprehension ranging from literal to inferential comprehension. We don't analyse further than using the Torch stanine and percentile score for intervention programs- remedial and extension but using John Munro's notes on monitoring reading progress (Using the Torch to monitor reading progress 2.4.1), it would be beneficial to also analyse the errors in terms of the children's comprehending ability.
2. Burt Word Test results which give a score and a reading age range,
3. The P.A.T vocabulary test which gives a raw score, a percent and stanine.
4. Reference to their PM Benchmark Reading Level (end of 2006), which requires children to read a text silently and then to orally answer questions ranging from literal to inferential. It is noted whether children are at an Easy, Instructional or Hard level of difficulty on a given text.

The paraphrasing lessons used were adapted from John Munro's (2006) Teaching a paraphrasing strategy as shown in Appendix 5. The paraphrasing test used for pre and post testing was John Munro's (2005) Paraphrasing task: Group administration. There were sixteen items on the test and I gave a score out of two for each item, thus giving a total score out of thirty-two. Appendix 4 shows all children's entry scores as described above.

From these results we can see when comparing the averages that the Intervention group has lower averages to begin with in Torch comprehension and Burt Word Test scores.

Procedure

The Paraphrasing tests were administered to both the teaching and control groups in the same week. The series of paraphrasing lessons were conducted to the entire class and then more specific teaching and guidance was given to the Intervention group. Each session was introduced to the whole class (about 3 sessions per week), where children were involved in discussion and feedback and group activities (approx 20 min), such as dictionary work to locate meanings and to find synonyms. Then children were required to paraphrase sections of the text either individually or in small groups and I would take the Intervention group on the floor to specifically monitor and observe their progress. Then we would all gather to share the completed paraphrasing work.

With my Intervention group I was able to pair children accordingly to their progress and their level of knowledge or understanding of the text. Some grade three children found certain concepts quite difficult to grasp therefore they needed extra assistance either from me or their peers. I was able to make anecdotal notes on the children's progress as the sessions progressed and I could gauge at each session how much text was appropriate for them to paraphrase without becoming too frustrated. Also for some sessions I was able to extend the children because they were very engaged and responsive to the activity, equally some had to be cut short due to the degree of difficulty and the children's interest level. The 13 paraphrasing sessions went for about one hour each on average.

Overall the children expressed satisfaction with their improvement and this empowered them with the necessary skills to continue to succeed in their paraphrasing ability.

Post testing included the same paraphrasing test administered to both groups after the completion of the teaching sessions and a different text for the Torch Comprehension post test (Year 3

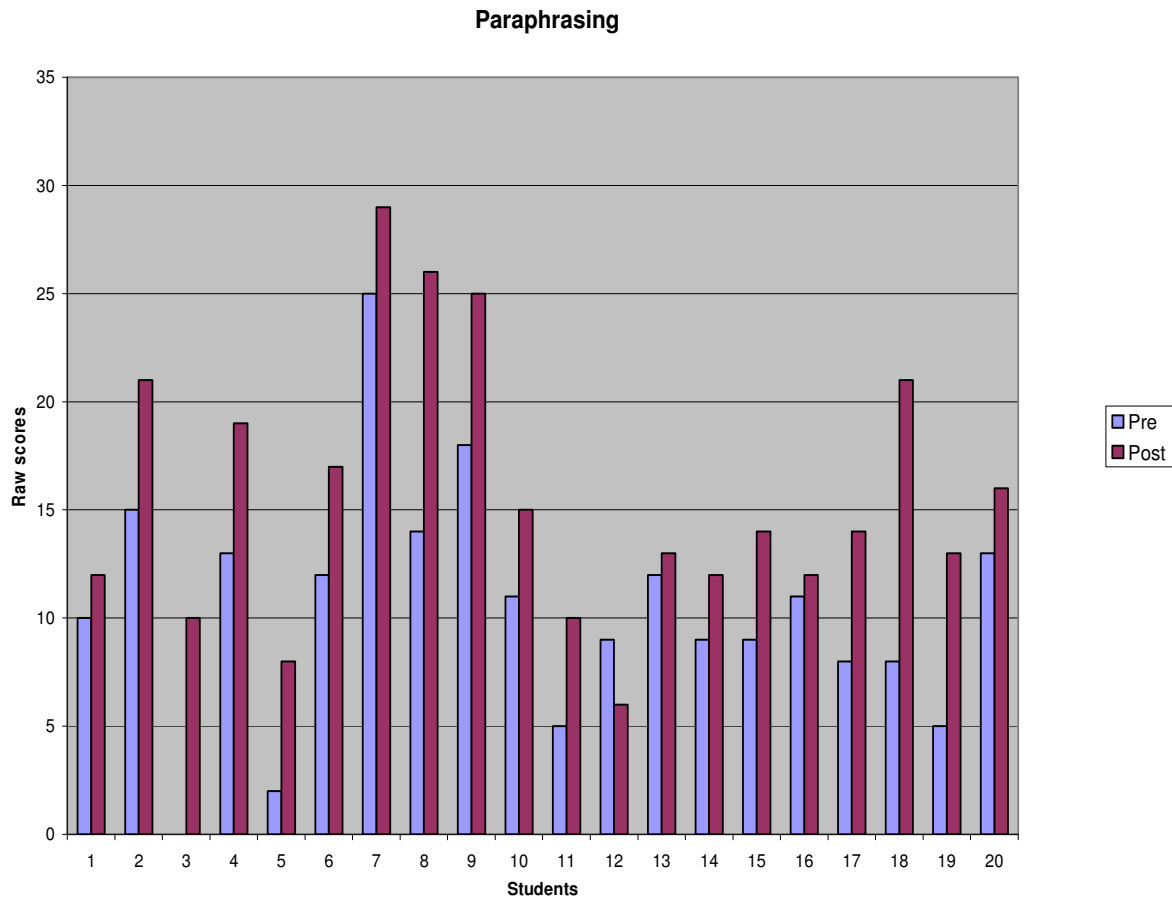
Lizards Love Eggs and Year 4 Grasshoppers). Burt Word Post Test was also given to all students to observe if any significant changes in isolated word recognition occurred in the Intervention Group compared to the Control Group as a result of work done with vocabulary extension and synonyms in the Teaching group.

Results

The results indicate that all children who took part in the paraphrasing teaching sessions improved in both their ability to paraphrase and to comprehend. There was also improvement in nine out of the ten Control Group children's paraphrasing scores. This would be attributed to the fact that the control group are naturally progressing via the literacy lessons conducted in their own classes, which is what one would expect.

All children in the Intervention Group improved in all tests which support the hypothesis that the explicit teaching of comprehending strategies such as paraphrasing to grade 3 and 4 students, will lead to an improvement in children's ability to comprehend.

Figure 1 shows the improvement in all students paraphrasing scores. It was obvious from the sessions that the children were continually improving in their ability to paraphrase first one sentence, then two and build up to a paragraph. I was concerned whether this positive effect would actually have a significant impact on their comprehension scores because of the nature of the Torch Test being a cloze activity.



**Figure 1 Pre and Post Paraphrasing scores of all students
(1-10 Intervention, 11-20 Control)**

Figure 1 shows that all students in the intervention group improved in their post paraphrasing test. If we refer to the averages from figure 2 we note that from the pretest average of 37.5% to the posttest average of 56.8% there was an improvement of 19.3% for the intervention group. The improvement in the control group was less; there was an improvement of 13.1% from the pretest average of 27.8% to the posttest average of 40.9%.

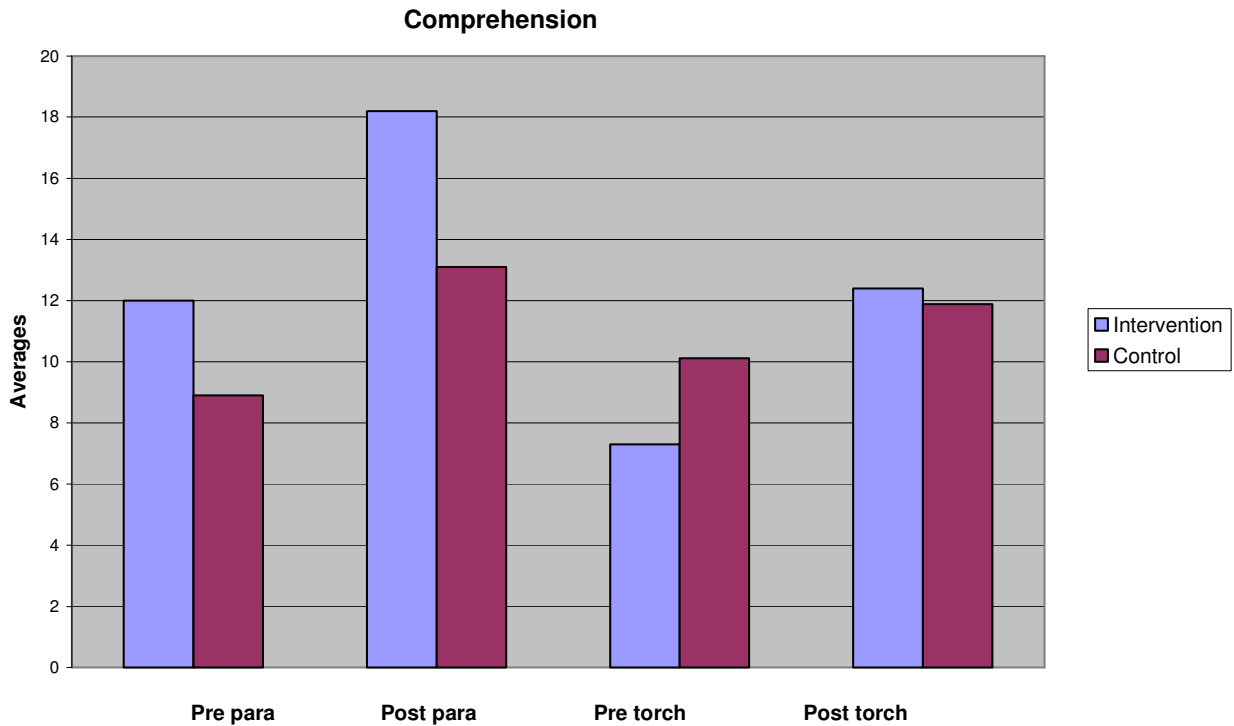


Figure 2 Average Comprehension Scores

Figure 2 shows that the average scores are higher in both post testing situations and for both groups. The Intervention group average is higher than the Control group in the Pre paraphrasing test, so they have a greater chance of improvement as a group.

The Intervention group average in the Post Paraphrasing test increased by 6.2 compared to the Control group average which increased by 4.2. The Intervention group average for Pre Torch test was lower than the Control group average by 2.8; therefore their improvement is more significant than the Control group's because they started at a lower average. The Intervention group average for the Torch test increased by 5.1, whereas the Control group average increased by 1.7.

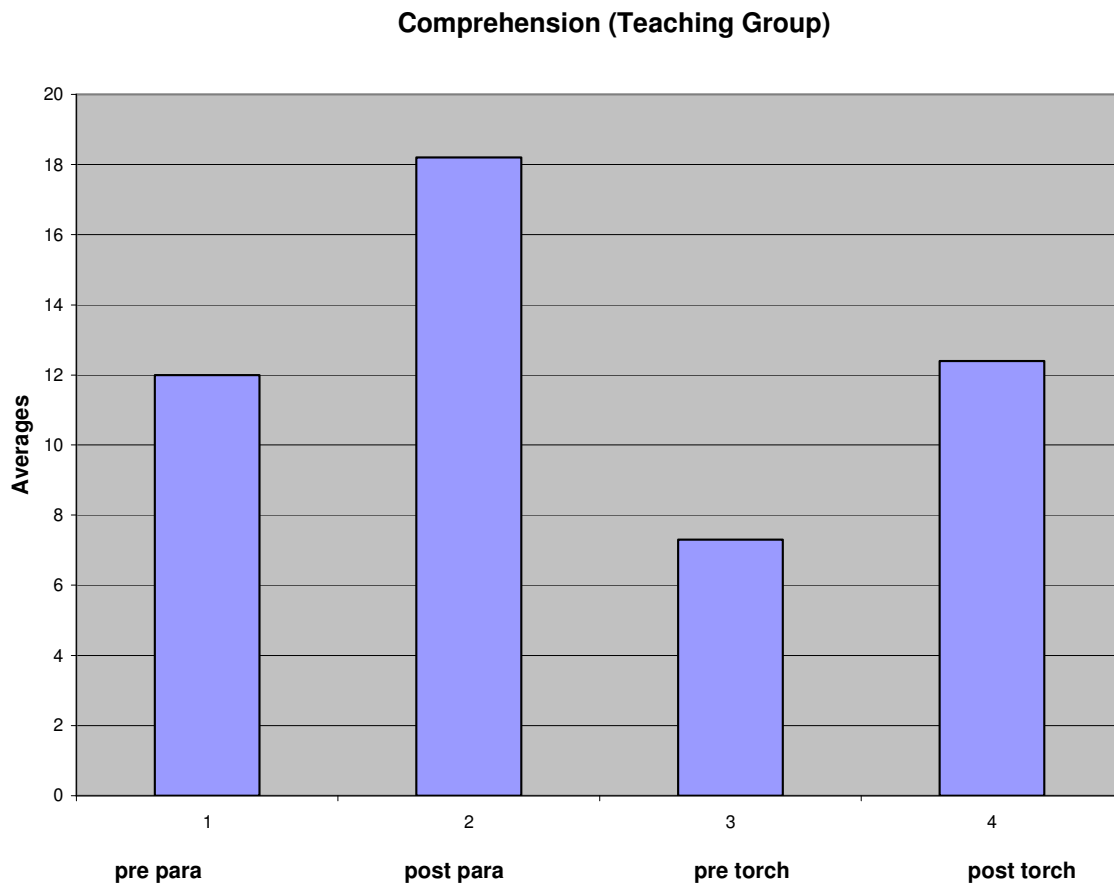


Figure 3 Average Pre and Post Scores (Intervention Group)

Figure 3 shows that the paraphrasing lessons had a highly positive effect on the Torch Comprehension results. All the students improved in their paraphrasing ability and there was a significant increase in the average Torch scores from 7.3 to 12.4, an increase of 5.1.

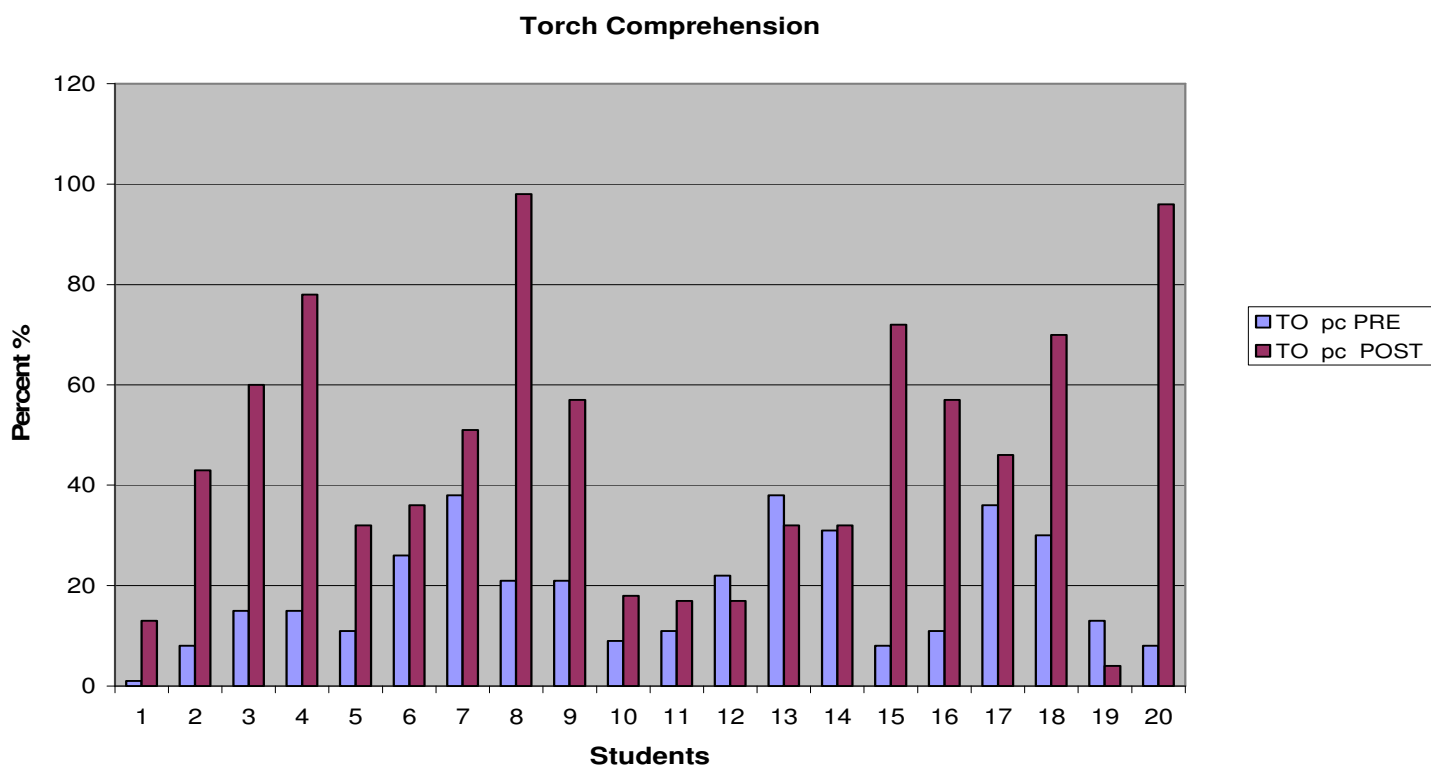


Figure 4 Individual scores for both groups

Student A (Figure 4 No. 1) found the paraphrasing sessions quite difficult as he generally has difficulty in the literacy area. Therefore his improvement of 12% in comprehension was very significant.

Student B (Figure 4 No. 2) also made significant improvement. He has similar difficulties to student A, and they often worked together in the paraphrasing lessons. They are both slow to complete tasks and require much guidance and encouragement.

Student D (Figure 4 No. 4) made tremendous progress and although she found the paraphrasing tasks difficult especially to begin with, she is a hard worker who gave 100% of herself and it

obviously paid off. Similarly was the case with student H (Figure 4 No. 8) who applied herself thoroughly to the sessions and gave lots of input. She is also in grade 4 so I would expect that the gain would be greater.

Student J (Figure 4 No. 10) was a little disappointing. She is in grade 4 and tried very hard in the paraphrasing lessons. She was attentive, worked well and gave lots of input. Her improvement in both the post paraphrasing test and the post Torch Comprehension were not significant. I cannot attribute any reasons for her lack of significant progress but it would be worthwhile to note whether her scores are better at the end of the year. It might be the case that she requires more time to consolidate and apply what she has learnt.

All but three students in the control group, improved in their comprehension as shown by the Torch post test results. It is to be expected that some children would improve just from their own development in general classroom work in literacy and also because they had potential which they have now utilized with the progression of time since their comprehension test in February.

Torch Scores

Intervention		Control	
Student	% increase	Student	% increase
A	12	K	6
B	35	L	-
C	45	M	-
D	63	N	1
E	21	O	64
F	10	P	46
G	13	Q	10
H	77	R	40
I	36	S	-
J	9	T	88
Total	321%	Total	255%

Improvement in Torch scores for each matched student in the Intervention and Control Groups

It is also important to observe not only the improvements in terms of raw scores, averages and percentages but also to note how these results are spread, that is the standard deviation.

In the paraphrasing pre test for the Intervention Group, 7 students fall within 1 standard deviation (students F,D,H,B and I within +1SD and students A and J within -1SD) from the mean of 12. In the paraphrasing post test for the Intervention Group the mean has been moved to 18.2, so the group has improved overall and 6 students were within 1 SD from the mean, which indicates that the spread is still fairly great. In actual fact the SD only improved by 0.1. Individual students improved and some did really well such as student C, who went from a score of zero to ten and student H who went from a score of 14 to 26.

In the paraphrasing pre test for the Control Group 6 students are within +1 and -1 SD from the mean of 8.9. In the paraphrasing post test for the Control Group the mean has moved to 13.1 and 8 students fall within +1 and -1SD from the mean. Student S improved significantly by going from a score of 8 to 21 and Student L had a decrease in the post test score from 9 to 6. The SD actually increased in the Post Para Test by 1.2 but in comparing both groups , the Teaching group had a much higher SD to begin with (7.2 compared to 2.6). The SD decreased slightly in the Teaching group and it increased slightly in the Control group.

In comparing the Torch Pre and Post Tests for the Intervention Group, the SD increased by 0.6 and the SD was higher in the Intervention group to start with, 3.6 compared to 2.3 in the Control group. In the Control group the SD increased by 2.5. Therefore the spread is almost the same; the only positive result is the shifting of the mean and raising the overall standard. The Intervention group pre Torch, had a SD of 3.6 and 7 students were within +1 and -1 from the mean of 10.9. In the Post Torch, there were still 7 students within that range but 5 students were in the +1 SD as opposed to 2

in the Pre Torch. In the Control group Pre Torch, the SD was 2.3 which increased by 2.5 (from 2.3 to 4.8) in the Post Torch and there were 7 students in the +1, -1SD range in both Pre and Post Torch but only one student moved from the -1SD to the +1 SD. (Appendix 1,2,3)

Range of scores

	Pre Para	Post Para	Pre Torch	Post Torch
Teaching group	0-25 (25)	10-29 (19)	1-13 (12)	4-19 (15)
Control Group	5-13 (8)	6-21 (15)	5-13 (8)	5-18 (13)

The range of scores between the two groups was significantly greater in the pre paraphrasing test.

The fact that the range was similar in the post paraphrasing test indicates the greater improvement which occurred in the intervention group.

Discussion

In summary the results were not as positive as they could have been because although the average increased in all cases and most individual students increased their scores, in terms of the Standard Deviation there wasn't significant change. The results do indicate though that the Paraphrasing sessions did begin to make a difference to the student's comprehension as shown also by the fact that the SD was decreasing and it would be feasible to predict that with continued sessions on paraphrasing the students will continue to improve. That is the mean will increasingly become higher and more students will fall within +1 or +2 SD from the mean.

It is also noteworthy to mention that developing synonyms and thus extending vocabulary has a positive impact on the student's ability to paraphrase which will ultimately improve comprehension.

From the results of this present study and from the research, it is fair to state that the paraphrasing strategy does in fact improve comprehension. In terms of what Fisk and Hurst (2003) state that paraphrasing is genuine rewriting. I would say from my observation of the students during the paraphrasing sessions that many were truly on the way to developing this skill. They were also very competent in expressing the steps involved in the paraphrasing strategy and also how this would assist them. They were able to state the three steps used when paraphrasing, that is to read a sentence, then to change as many words as possible while keeping meaning and finally to say the sentence again in own words. John Munro (2006).

The student's ability to incorporate all the aspects of literacy in their paraphrasing attempts was extremely impressive. They engaged in productive oral language and vocabulary development as well as reading and writing.

From my observations during the teaching sessions I noted the student's progress in their development and use of synonyms as well as their ability to write effective paraphrases. I also noted that the student's were keen to have a go and often made positive comments such as "I'm getting better at paraphrasing", "Paraphrasing helps you a lot", "I like paraphrasing" and sometimes from those who struggled a little, "Paraphrasing is hard". Even though at times they found paraphrasing difficult, they were still keen to read and learn together. This notion of working, reading and learning together, is supported by Wilkinson (2002) as referred to by Fisk and Hurst (2003).

Despite the fact as mentioned that some students did experience difficulty with paraphrasing, the results indicate from their post paraphrasing test that they all improved. Figure 4 shows the percent increase for individual students and in analysis of this the overall percent increase for the intervention group is considerably higher than the control group.

Comparison of results in relation to gender, year level and age are as follows:

- Grade three boys in the intervention group had much greater success than the grade three boys in the control group.
- The grade three girls in the intervention also did better than the grade three control, although the difference wasn't as great as with the boys.
- The grade four boy (student F) in the intervention did not do as well as the grade four boy student P in the control group. Knowing the way student F operates because he is in my class, I believe he scored poorly because he tends to rush his work in order to finish quickly. He is quite capable and should have done better as I observed that he was doing very well in the paraphrasing sessions.
- The grade four girls in the intervention scored almost the same in total as the grade four girls in the control group. As has already been mentioned, student J in the intervention scored poorly in relation to other girls in both groups. She is not strong in the literacy area and although she tried very hard her scores were poor even after having experienced the teaching sessions.

In general terms the paraphrasing strategy is very effective and I believe that all teachers should incorporate it as a tool in their literacy teaching. I like how it is stated in Fisk and Hurst (2003) that paraphrasing for comprehension as an effective tool for classroom teaching has the “potential to increase students’ comprehension of text”. I guess that quote sums it up, in that there is potential and I believe that anything that has potential to assist students and to help prevent student is essential and necessary to be implemented in schools.

In terms of this present study, in light of the results and the research, I will be sharing my findings with the three other grade three and four teachers so that they too can implement the paraphrasing

strategy within their classrooms. I will also continue to use the paraphrasing strategy with my own class. I have observed that students are still using the term paraphrasing even after the sessions have terminated. Recently some students were on the computer doing some research and they told me that they weren't going to just copy the information but they were going to paraphrase it. This is what is indicative of an effective strategy, when students continue to see the benefit and to apply it across all curriculum areas.

Appendix 1 – Data Analysis

Name	Teaching=1 Control Group=0	Grade	Age in MONTHS	ESL	Earlier Interventio n 1=Y 0=N	EMA	/32 Para PRE	Para POST	TO raw PRE	TO raw POST	TO to PRE	TO to POST	TO pc PRE	TO pc POST	BURT PRE /110	BURT POST
A	1	3	98	N	Y	N	10	12	1	4	1	3	1	13	44	51
B	1	3	95	N		N	15	21	4	10	2	5	8	43	54	62
C	1	3	109	N		N	0	10	6	13	3	6	15	60	63	63
D	1	3	100	N		N	13	19	6	16	3	7	15	78	37	42
E	1	3	97	N		N	2	8	5	8	3	4	11	32	44	50
F	1	4	117	N		N	12	17	11	13	4	4	26	36	71	86
G	1	4	117	N		N	25	29	13	15	4	5	38	51	47	54
H	1	4	117	N		N	14	26	10	19	3	9	21	98	63	
I	1	4	118	N		N	18	25	10	15	3	5	21	57	55	59
J	1	4	114	N		N	11	15	7	11	2	3	9	18	54	63
K	0	3	101	N		N	5	10	5	5	3	3	11	17	47	52
L	0	3	96	N		N	9	6	9	5	3	3	22	17	61	66
M	0	3	103	N		N	12	13	11	8	4	4	38	32	54	
N	0	3	104	N		N	9	12	10	8	4	4	31	32	81	84
O	0	3	98	N		N	9	14	7	15	2	6	8	72	62	67
P	0	4	113	N		N	11	12	10	15	3	5	11	57	58	58
Q	0	4	116	N		N	8	14	13	14	4	5	36	46	75	76
R	0	4	117	N		N	8	21	12	16	4	6	30	70	61	67
S	0	4	125	N		N	5	13	10	8	3	1	13	4	46	51
T	0	4	114	N		N	13	16	9	18	2	8	8	96	49	
Average of teaching group							12.000	18.200	7.300	12.400	2.800	5.100	16.500	48.600	53.200	58.889
Standard Deviation of teaching group							7.211	7.099	3.653	4.326	0.919	1.853	10.522	26.205	10.454	12.394

Name	Teaching=1/Control Group=0	Grade	Age in MONTHS	ESL	Earlier Intervention 1=Y 0=N	EMA	/32 Para PRE	Para POST	TO raw PRE	TO raw POST	TO to PRE	TO to POST	TO pc PRE	TO pc POST	BURT PRE /110	BURT POST
Average of control group							8.900	13.100	10.11	11.889	3.200	4.667	20.800	47.333	59.400	65.125
Standard Deviation of control group							2.644	3.872	2.319	4.872	0.789	1.958	12.007	29.216	11.520	11.370
Average of all students							10.450	15.650	8.450	11.800	3.000	4.800	18.650	46.450	56.300	61.824
Standard Deviation of the all students							5.520	6.150	3.203	4.526	0.858	1.881	11.207	27.101	11.169	11.986

Appendix 2 – Standard Deviation for Paraphrasing

		-3	-2	-1	mean	1	2	3
Teaching	pre	-9.63	-2.42	4.79	12.00	19.21	26.42	33.63
	post	-3.10	4.00	11.10	18.20	25.30	32.40	39.50
Control	pre	2.64	3.61	6.26	8.90	11.54	14.19	16.83
	post	1.49	5.36	9.23	13.10	16.97	20.84	24.71
Total	pre	-6.11	-0.59	4.93	10.45	15.97	21.49	27.01
	post	-2.80	3.35	9.50	15.65	21.80	27.95	34.10

Appendix 3 - Standard Deviation for Torch Comprehension

		-3	-2	-1	mean	1	2	3
Teaching	pre	-3.5	0.1	3.7	7.3	10.9	14.5	18.1
	post	0.5	3.8	8.1	12.4	16.7	21	25.3
Control	pre	3.2	5.5	7.8	10.1	12.4	14.7	17
	post	-2.6	2.2	7	11.8	16.6	21.4	26.2
Total	pre							
	post							

Appendix 4 - Entry scores of all students

Student	Torch pc	Burt raw/110	Word	P.A.T Vocab raw /35	PM Benchmark level (E) easy (I) instructional (H) hard	Pre para /32
Intervention						
A	1	44		9	27I	10
B	8	54		23	30I	15
C	15	63		25	30E	0
D	15	37		20	25I	13
E	11	44		21	30I	2
F	26	71		24	30E	12
G	38	47		26	25E	25
H	21	63		27	30I	14
I	21	55		27	30I	18
J	9	54		27	30I	11
Average score	16.5	53.2		22.9	n/a	12
Control						
K	11	47		20	28E	5
L	22	61		23	28E	9
M	38	54			30E	12
N	31	81		28	23E	9
O	8	62		29	30I	9
P	11	58			30E	11
Q	36	75			28E	8
R	30	61		27	25H	8
S	13	46		10		5
T	8	49		26	30I	13
Average scores	20.8	59.4			n/a	8.9

Appendix 5

Paraphrasing Sessions as adapted from John Munro's Teaching a paraphrasing strategy (2006)

Teacher dialogue in *italics*.

Session 1 Text: The Jaguar: A great cat

This lesson went for about 80 min due to the fact that it was the first session and thorough explanation was required.

About 30 min was spent on oral language work and about 50 min on paraphrasing in groups.

Discussion on text- *What do you think this text will be about?*
What kinds of words are we likely to find in it?
What do you know about this topic?

Make a list of vocabulary and discuss the meanings.

Introduce the strategy: *We are going to learn a way of helping us to remember what we read. This is called paraphrasing. It's what we did in the pre paraphrasing test, where we read certain sentences and then we tried to put them in our own words without changing the meaning.*

We will begin doing this first with sentences and then with paragraphs.

We are going to read about some of the big cats, like lions and tigers that live around the world. It is a factual text.

I will read the first paragraph aloud and then I will ask some people to reread certain sentences.

After the first paragraph has been read twice, then the teacher demonstrates how each sentence is paraphrased. Have a few sentences written on the board as an example.

Then invite children to offer their attempts at paraphrasing the same sentences until they get the idea.

Sentence read	Teacher paraphrases	Students paraphrase
This text is about some of the big cats, like lions and tigers that live around the world.	This is a story about some of the big cats that inhabit the Earth.	
When you hear the word 'cat' you probably think of the pets you have at home.	Hearing the word 'cat' might cause you to see in your mind the animals that live with us.	

Teacher reviews the action: *What did we do? Did saying the sentence in another way help you to understand it? Students give their responses. Now you are going to have a go at paraphrasing in pairs or small groups. You can select your own group or partner. Talk to your partner or group first before you do any writing.*

Give students the opportunity to practice in pairs or small groups. Give each group a paragraph to paraphrase and have written the number of sentences next to each paragraph to assist them. Encourage them to use the list of vocabulary that the class suggested to help with word substitutions. Students have a go at writing the suggested paraphrase. Tell them that we will be sharing some of these at the end of the session.

The ten children in the intervention group are asked to come to the front to do this task with teacher guidance.

I would like my group to come out to the front and we will try this together. Let's read the sentence all together. Can you tell me some of the important words in that sentence? Have a chat to your partner about changing some of the words. Let's see if any of these words we want are on the board. Who would like to have a go at paraphrasing the first sentence? Can we say it another way?

Sharing time: Gather all students and share different paraphrases, especially so that intervention group can hear good responses.

Reflection: *Let's discuss what steps we used to paraphrase.* Ask students to express what we did.

Have students write down what we do when we paraphrase, as follows:

1. The first step in paraphrasing is to read a sentence.
2. The second step is to change as many words as you can while keeping the meaning the same.
3. The third step is to say the sentence again in your own words,

Sessions Two-Thirteen

All sessions followed the format below:

Activity	Task Description
<p>Text Retelling Text from previous session Read the three paraphrasing steps. Revise synonyms from previous text.</p>	<p>Students retell passage from the previous session. They revise what actions we do when we paraphrase.</p>
<p>Text Reading Teacher reads entire text to the class As a class different students are asked to read from the text.</p>	<p>Students read new text and discuss concepts and vocabulary.</p>

Activity	Task Description
Vocabulary and synonym work. Display these on the board.	Children use dictionary and thesaurus to find substitute words for the text. They can work in pairs or small groups.
Paraphrasing Writing new sentences	Students reread the text and then attempt their own paraphrasing. Students are given a proforma to fill in. the sentences to be paraphrased are written in one column and they have a space to write next to it.
Intensive focus for Intervention Group	Intervention group come out on the floor and work together with the teacher. They can pair up to do the written work. Each sentence is reread and discussed. What are some words that we can change? Use synonym list. Paraphrase some sentences orally. Ensure all students have a go.
Sharing time Revise paraphrasing steps and how paraphrasing helps with reading.	Gather students together to discuss findings and share paraphrasing.

Session	Text
1	The Jaguar: A great Cat
2	It's not a rat, it's not a cat, it's a ...
3	Our forests have gone to keep us warm
4	Gave all my class a synonym test to gain insight into which students could substitute words effectively. They got a point for each correct response. John Munro (2005) Synonyms task.
5	The animals that live in the Earth's coldest areas ~half of text
6	The animals that live in the Earth's coldest areas ~ other half of text
7	The energy we use: Fossil fuels or renewable energy
8	Energy from fossil fuels(first four paragraphs)
9	Energy from fossil fuels(last four paragraphs)

Session	Text
10	Other types of energy(down to energy from the sun)
11	Other types of energy(down to wind power)
12	Wind power
13	Biomass energy

I found that the students especially in my intervention group, were finding the concepts in the texts quite difficult to grasp, therefore it was more practical to do some texts over two sessions. I also found it easier to give students a worksheet consisting of the sentences/paragraphs to be paraphrased. They were given a copy of the entire text to read first.

The scores of the Synonym task for the intervention group are as follows:

Student	Year	Score
A	3	23
B	3	32
C	3	10
D	3	18
E	3	12
F	4	34
G	4	27
H	4	32
I	4	43
J	4	14

There seems to be a correlation between synonyms, paraphrasing and comprehension. This also sheds some light for student J, who didn't make significant gains in post paraphrasing and comprehension scores. Implications for future teaching are to ensure that work on synonyms be incorporated in literacy sessions.

In comparison to the rest of the class, most of the other students had scores ranging from 20-62. Scores for the grade fours were mostly in the mid thirties to the score of 62, therefore student J from the intervention group scored very low compared to her peers in the class.

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