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Teaching post reading recovery students who are accurate decoders, the R.I.D.E.R. strategy, enables them to scaffold their own learning and increase their reading comprehension.

Abstract

Reading comprehension continues to be a problem for students post Reading Recovery. This is possibly caused by Reading Recovery not explicitly teaching sentence comprehending strategies. This study examined the effect of visualisation instruction for second year students who had completed Reading Recovery and who continued to display reading comprehension difficulties. Four students who were underperforming on reading comprehension were taught to visualize and paraphrase each sentence after reading aloud and paraphrasing sentences in a narrative text. The instruction was conducted over 10 sessions and comprehension performance compared with a matched control group.

Results indicate support for the hypothesis, as the comprehension scores of all students in the intervention group showed a marked improvement in all areas. The R.I.D.E.R. strategy was used to explicitly teach visualising on narrative texts. This study reflects the findings of previous research, that mental imagery, whether it is spontaneous or by instruction, is known to have powerful effects on comprehension.

However certain conditions were needed when teaching students to use visualizing. Prompting and paraphrasing were needed, and varied according to the age of the students.

The results of this study suggest that explicitly teaching visualising to children during their time on reading recovery will improve their reading comprehension.

INTRODUCTION

Reading comprehension at the literal level continues to be a problem for some students post Reading Recovery. This is possibly caused by Reading Recovery not explicitly teaching sentence comprehending strategies such as visualising and paraphrasing during the Reading Recovery intervention/program. It is at the sentence level that literal comprehension is first accessed.

Comprehension is the process of making meaning from print and is the goal of all reading. Good readers are purposeful and active and use strategies before, during, and after reading to construct meaning (Armbruster, 2001; Johns, J. & Lenski, S. 2005 p. 344). The goal of comprehension strategy instruction is to develop metacognitive awareness over a set of strategies that students can use independently when reading text (Paris & Oka, 1986; Pressley, Johnson, Symons, McGoldrick, & Kurita, 1989 as cited by Gambrell & Jawitz 1993).

According to Munro, 'reading efficiency' is determined by how well readers integrate text information with the knowledge they have about reading.

In his MLOTP model of reading (Munro, 1985; cited in Munro 2011) when we read, we

- Tell ourselves the words and phrases in a text; we work at the word level
- We work out what the sentences mean; we work at the sentence level
- We link the concepts in the text into a network of ideas; we work at the conceptual level
- We link the ideas in the text with a category of knowledge we have; we work at the topic level
- We guess at what the writer wants us to believe; we work at the dispositional level.

Munro distinguishes comprehension from comprehending. Comprehending are all the actions we use while reading to link ideas at each of the levels. Comprehension is what we know after having read. Comprehension teaching may involve explicit instruction in the following comprehending strategies: activating background knowledge, making connections, predicting, setting a purpose, understanding the main idea, recalling important details, sequencing events, making inferences, visualising, drawing conclusions, summarising, using graphic and semantic organizers, answering and generating questions, recognising story and other text structures, and monitoring own understanding (Armbruster, 2001; Johns & Lenski, 2005, p. 344; Beer & Howell, 2003).

Tan and Nicholson (1997) emphasized the importance of word recognition instruction to the point of fluency.

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They found that students who had learned to recognise words to the point of fluency answered more comprehension questions. They believed that this kind of instruction resulted in the child's working memory being free to work on meaning. However the work of LaBerge and Samuels (1974) discovered that being able to decode words efficiently does not guarantee that the word will be understood. While fluent word-recognition skills do make a difference, good decoders can still have trouble making meaning.

According to Zwiers, (2004) as cited by Rader, visualising is the process of creating mental images and associations using previous knowledge. It is a skill that enables readers to

- a) form pictures in their mind that represent the content of what they have just heard or read,
- b) organize and store new information,
- c) form ideas and draw conclusions,
- d) retrieve information,
- e) explain what they understand to others by turning the pictures or images back into words.

When investigating the sentence level strategy of visualising, was there any evidence that good readers actually use visualising?

Neilson Hibbing & Rankin-Erickson (2003, p759) observed that "creating a mental image of what is read is a natural process for more proficient readers. In fact, when images do not come easily to proficient readers, they see it as a warning that there is a breakdown in comprehension and are aware of the need to use a fix up strategy (eg. reread, adjust rate of reading, refocus). Students who lack the ability to create visual images when reading often experience comprehension difficulties."

Does teaching visualising help reading comprehension? Sadoski, (1985) says that mental imagery, whether it be spontaneous or by instruction, is known to have powerful effects on comprehension. The research of (Gambrell & Bales, 1986; Long, Winograd & Bridge, 1989; Pressley, Borkowski, & Johnson, 1987; Pressley et al., 1992) also identified visualising as a powerful strategy for improving reading comprehension performance.

According to (Anderson, 1971), students who were directed to make images of events in sentences, learned two to three times as much as the students who read aloud the sentences repeatedly. There is evidence to show when children are taught to generate mental images as they read, they experience greater recall and enhanced abilities to draw inferences and make predictions and remember what they have read (Gambrell, 1981; Gambrell & Bales, 1986; Pressley, 1976; Sadoski, 1983,1985). The visualising of information through imagery helps readers to scaffold information and link ideas in text. (Munro 2003).

But can visualising or mental imagery actually be taught and if so, how can it be taught and to whom? Research by (Gambrell & Bales, 1986; Pressley, 1977; Sadoski, Paivio & Paivio 2001) demonstrated that students who created visual images before, during and after reading enhanced their comprehension. (Pressley, 1976) and (Gambrell, 1982) found that children as young as eight years old were successful at using visualising to improve reading comprehension after only twenty minutes of instruction. “There is an expectation that such instruction will affect 5-8 years dramatically in the short term and perhaps lead to the development of better comprehension skill over the long term” Pressley, (2000, p.6).

However certain conditions were needed when teaching students to use visualising. (Suzuki, 1985) found that students needed prompting when using imagery and paraphrasing, and the prompting varied according to the age of the students. The younger the learner, the more need there was for demonstrations while older students only required a verbal cue. With all students though, the effect on learning and remembering was powerful. Gambrell, (1981) also found that some students needed to be prompted repeatedly to focus on their images as a way to monitor comprehension. She went on to include the need to teach and model the fix-up strategies when their pictures became fuzzy or parts of the picture were missing.

Rader’s research on children with speech and language delays showed they benefited from a visualisation and oral language training program. Rader used the work of Nanci Bell, (1991) who developed a set of nine questions to help students organize their verbal descriptions, to explain to themselves and others, the messages they were trying to convey. These nine questions and oral language training provided scaffolding for SLD students so they could experience greater recall, improve their ability to make inferences and make predictions.

Finally, Clark, Deshler, Schumaker, Gordon and Warner, (1984) worked with learning disabled students using visual imagery and self-questioning strategies to improve comprehension of written text. In their work, a visual imagery strategy and a self-questioning strategy were taught. The visual imagery strategy R.I.D.E.R. was devised to facilitate comprehension by creating visual images of the content of what was read. The students followed these procedures:

- 1. READ.** Read the first sentence/paragraph.
- 2. IMAGE.** Try to make a picture in your mind.
- 3. DESCRIBE.** Describe your picture.
- 4. EVALUATE.** Check your picture has as much of the information as possible.
If information is missing, adjust your picture/image.
- 5. REPEAT.** Read the next sentence and repeat Steps 1 through 4.

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The self-questioning strategy **R.A.M.** was designed to improve reading comprehension, by students asking themselves questions as they read, to enhance recall.

The aim of this study is to examine the effect of using the R.I.D.E.R. strategy to explicitly teach visualising to a group of post reading recovery students, to improve their literal comprehension. These students are able to decode text at an age appropriate level fluently, but have difficulty recalling accurately, the facts and events of the text and making the connections required for inferential comprehension. The hypothesis is that teaching post reading recovery students who are accurate decoders, the R.I.D.E.R. strategy, enables them to scaffold their own learning and increase their reading comprehension.

METHOD

Design

This study uses a case study OXO design (assess, teach, assess). Gains in reading comprehension, following the explicit teaching of visualisation using the R.I.D.E.R. strategy, are monitored for a group of post Reading Recovery Year Two students still experiencing difficulties with literal comprehension. This study compares two groups of students, a control group and an intervention group.

Participants

All students chosen to participate in the study are currently in Grade Two and range between 88-100 months of age. Eight students were chosen to participate; four students in the control group and the remaining four in the intervention group. The students are from two classrooms and both groups contain males and females. These students were selected because of their history with reading difficulties and after reading recovery, still had some ongoing difficulties with literal comprehension. These particular post reading recovery children were identified by their classroom teachers using their Pre-Test PAT-R reading comprehension score. They can all read up to text level 26 fluently. Three students are from non English speaking backgrounds, two are funded SLD students and the remaining three students are from backgrounds where another language is spoken as well as English. The two groups have been organized to match as closely as possible: each group has an SLD student, an ESL student and students who scored similarly on the Reading Progress Test. Students A-D forms the intervention group and students AA-DD, the control group.

Name	Control = 0 Teaching=1	Age in MONTHS	Gender 0=Male 1=Female	ESL No =0 Yes = 1	LNSLN funding 1=SLD	Earlier Intervention No=0 RR=1 Bridges=2 ERIK=3	Years of Schooling
A	1	95	0	0	0	1	3 years
B	1	93	1	0	1	1	3 years
C	1	93	0	1	0	1	3 years
D	1	92	0	0	0	1	3 years
AA	0	100	0	0	1	1	3 years
BB	0	98	1	1	0	1	3 years
CC	0	92	0	0	0	1	3 years
DD	0	88	0	1	0	1	3 years

Table 1 Profile of students.

Procedure

All students were pre-tested using Munro's Visualising Task: Individual administration to establish a baseline level of competency in visualising. The Reading Progress Test and Spontaneous and Cued Retelling were used to establish a baseline level of comprehension. The Reading Progress Test was administered to the group and the Spontaneous and Cued Retelling was individually administered and taped. (See Table 2)

A self-efficacy questionnaire was completed by each student to determine how they perceived themselves as learners.

Name	Visualizing Individual Pre- Test (0-32)	Spontaneous/ Cued Retell Pre-Test (0-18)	Reading Progress Test Pre-Test (0-38)	Self-Efficacy Questionnaire (0-66)
Intervention				
A	18	6	26.2	50
B	18	13	28.9	57
C	15	5	31.6	58
D	26	7	35.5	48
Average Score	19.25	7.75	30.55	53.25
Control				
AA	19	5	28.9	56
BB	11	12	32.9	59
CC	18	10	40.9	56
DD	17	11	43.3	44
Average Score	16.25	9.5	36.5	53.75

Table 2 Pre-post test scores of all students.

Ten teaching sessions with the Intervention Group were conducted over a period of three weeks. The duration of the lessons was between 30-40 minutes. The group was withdrawn from the classroom. Whilst it was hoped all lessons would be conducted during the morning session of school, this was not possible due to the Specialist timetable and special school events, such as character parades and rehearsal times for the school concert. Unfortunately some sessions were taken in the afternoon.

Each session involved:

- The children getting their knowledge ready (GKR) *before* they read the new book.
- New vocabulary was also introduced at this point.
- The R.I.D.E.R. Strategy was introduced in the *while reading* stage.
- Here the teacher modeled:
 1. Reading the first sentence.
 2. Making a picture in her mind.
 3. Describing what she saw in words.
 4. Checking with the text that all the information matched.
 5. The teacher's thinking was verbalized in order for the students to understand what was going on in her head.
 6. Read the next sentence and repeat steps again.
- During the initial lesson, the children drew their images then moved to verbally describing their images.
- *After* reading the children would reflect on the steps taken and how useful these had been in helping them read with understanding. They would then retell the story in their own words as accurately as possible.

The teaching procedure was based on John Munro's (2011) Comprehension – Visualising teaching strategy.

The control group continued with their regular classroom program. Unfortunately the post testing of both the control and intervention groups could not be undertaken immediately after the intervention, due to two weeks of school holidays.

Materials

Assessments:

1. Reading Progress Test 2 ©1996 Hodder & Stroughton Ltd.
Adapted and reprinted by ACER.
2. Visualising Task: Individual administration (Munro 2011 lecture notes.)
3. Assessing Story Grammar- Spontaneous and Cued retelling (Munro 2011 lecture notes.)
4. "Don't Break the Eggs" Text level 22 WINGS Literacy Assess Pack.(Appendix 3)
5. Tape Recorder for retell assessment.

6. Self-Efficacy Questionnaire (Munro 2011 lecture notes)
7. Comprehension-Visualising Strategy (Munro 2011 lecture notes).
8. Text-“I Won’t Say Please” by Mij Kelly & Ruth Palmer Koala Books 2002.
 “Everybody Feels...Scared” by Jane Bingham, QBE Publishing 2006
 “The Gizmo’s Trip” by Paul Shipton, Level 17 Rigby 2000
 “The Gizmo’s Party” by Paul Shipton, Level 23, Rigby Literacy 2000
9. Cue/Prompt cards for R.I.D.E.R. strategy (E.R.I.K.)
10. R.I.D.E.R. Bookmarks (adapted from cue cards).
11. Paper and grey lead pencils for drawing visual images.

RESULTS

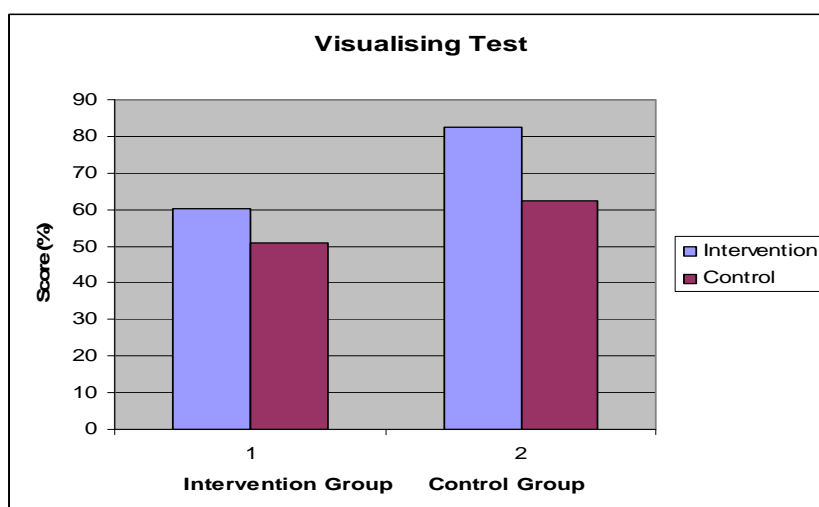
The results indicate support for the hypothesis that explicit teaching of visualising using the R.I.D.E.R. Strategy to Year Two post reading recovery students increases their reading comprehension. The comprehension scores of all the students in the Intervention group show an improvement in all areas except for one student who maintained their pre test score. The opposite applies to the Control group where only one student has improved in all areas.

Visualising Test

Post-testing results of the Visualising Test show improvement for all students from both groups, however the increase in the amount of detail recalled correctly was greater in the Intervention group. (See Figure 1)

The following graph depicts the gains made by students in both the Intervention and the Control groups. In pre-testing, the average result for the Intervention group was 60.2% and for the Control group 50.8%. The Intervention group performed 9.4% better. In post-testing, the Intervention group has an average of 82.3% and the Control group 62.5%. The Intervention group improved overall by 22.1% and the Control group improved by 11.7%. This indicates that after the ten intervention lessons the difference between the two groups has now jumped from 9.4% to 19.8%.

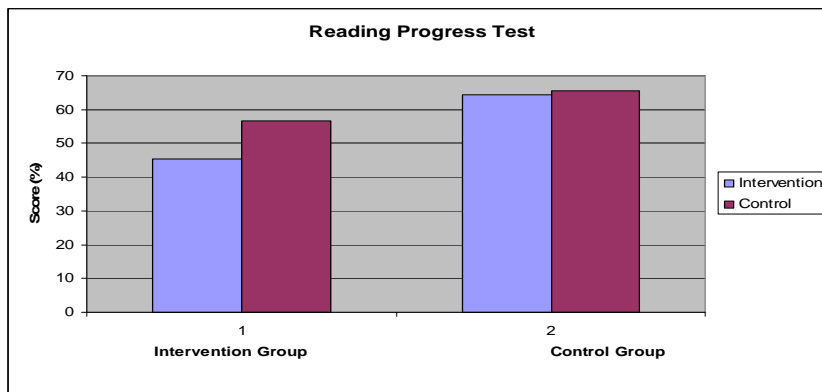
Figure 1



Reading Progress Test

The results of the Reading Progress Test show there was no difference in the average amount of improvement made by both groups. However, all students in the Intervention group did make gains. In the pre-test, the Intervention group had an average score of 45.42% as compared with the Control group who had an average score of 56.6%. At this stage there was a difference of 11.2%. After the ten lessons, the Intervention group had an average score of 64.5% depicting an improvement of 19.1%. Without receiving the ten lessons, the Control group's average score was 64.5% showing an improvement of 7.9%. Interestingly, the improvement in the Control group is due to the score of the only student in the group who actually improved from their pre-test score. Two of the remaining three students maintained their pre-test score and the fourth student dropped slightly.

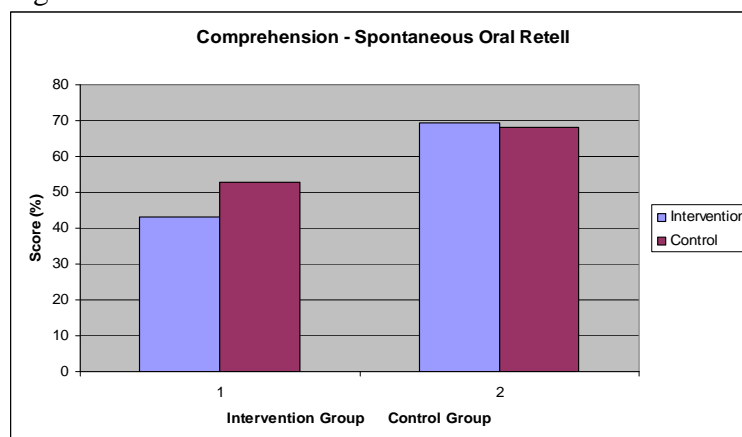
Figure 2



Comprehension-Spontaneous Oral Retell

The results of the Spontaneous Oral Retell (see Figure 3) show that the Intervention group had an average score of 22.2% on the pre-test and 51.4% on the post-test. This was an improvement of 29.2%. The Control group had an average score of 34.7% on their pre-test and 50% on their post-test results. This was an improvement of 15.3%. With the exception of one student in the Intervention group who remained the same, the other members of the group improved as much as 50% after the ten lessons. This is a considerable gain for them.

Figure 3



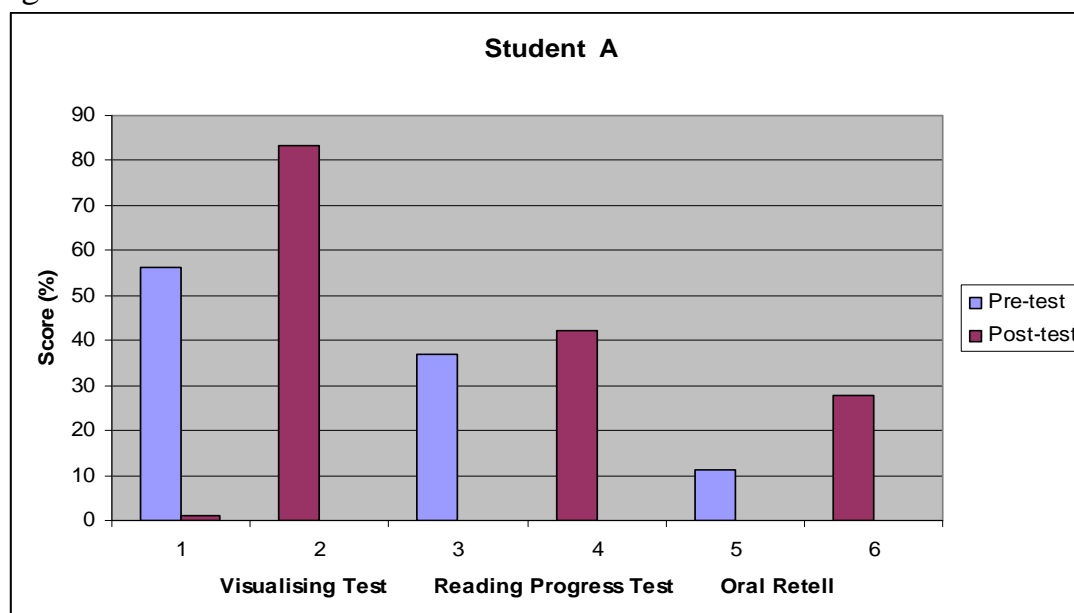
While Student A is continuing to improve with his decoding and is reading fluently, his teacher has concerns about how much of what he reads, Student A really understands. In the classroom he is easily distracted and loses focus and finds it difficult to recall information.

Student A's results (see Figure 4) indicate a 27.1% improvement in the visualising test. His answers contained more accurate details; he no longer included information that wasn't directly linked to the text. His visualising score was 18/32 recording the full two points for five of the statements, one point for 8 statements and 0 for three statements. In his post-test (27/32), 11 statements earned the full two points and the remaining five, one point each. This has been an impressive improvement.

Student A had a raw score of 16/38 on the Reading Progress Test. He only made a 5.3% improvement on the post-test. The format of this test was a challenge for this student.

The Spontaneous Oral Retell showed a 16.6% improvement. Sentences were more accurate, better in construction with up to three event sentences recorded. The student made several changes during the retelling which indicates that he was monitoring what he was remembering, and not going off on tangents triggered by particular words read. This was also a great improvement for this student.

Figure 4



Student B is currently funded for a Severe Language Disorder and works with a teacher one-on-one twice a week. She was assessed as SLD whilst on Reading Recovery. Student B's results (see Figure 5) show improvement right across the board.

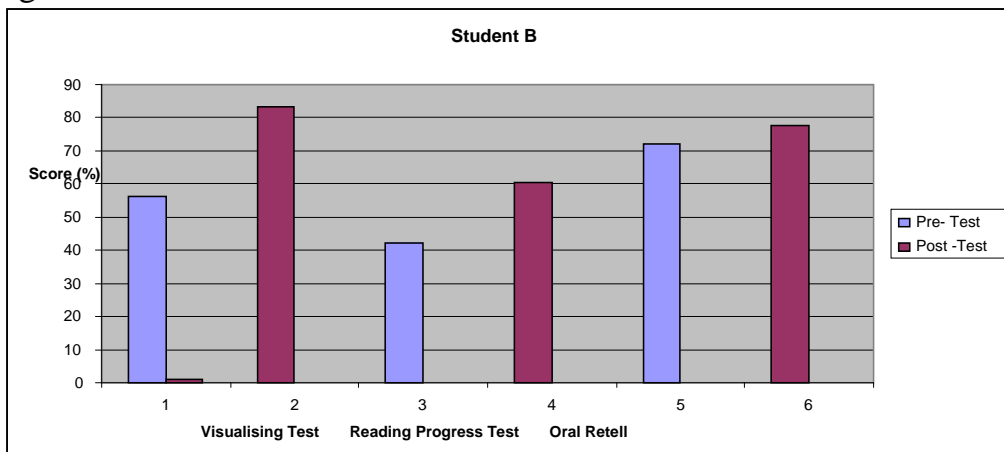
Her visualising score was 18 out of 32, recording two points for six statements and zero for four statements. In her post-test, two points were recorded for 11 statements and there were no zero points awarded. This is a 27.1% improvement. On the pre-test, terms like 'narrow' and 'twisted' were substituted with 'thin' and 'fat', but in the post-test, these same terms were replaced with 'small' and 'twisty like a snake', which are more appropriate synonyms.

Student B's pre-test score on the Reading Progress Test was 42.1% which was the second lowest score in both groups. After the ten lessons her post-test score jumped to 60.5%. This is an improvement of 18.4%. She scored well on most of the inferential questions which demonstrates she is making links with the story in new ways.

On the Spontaneous Oral Retell, Student B went from a score of 5/18 on her pre-test to 10/18 on the post-test. She improved her raw score by 50%. Holding and recalling information from the story had been difficult for this student but, after the ten lessons she retold events confidently.

Student B's teacher and I had not anticipated such a level of improvement on all three tests for this SLD student.

Figure 5



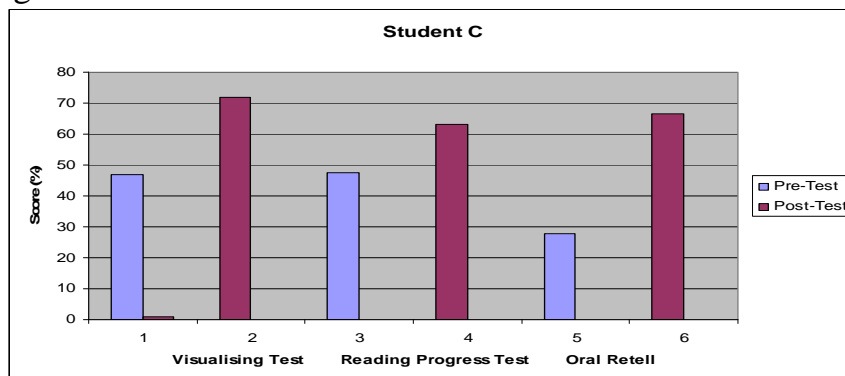
Student C is from an ESL background. His parents are from two different cultures and prefer to speak to their son in their individual mother tongue. During his time on Reading Recovery both parents reported that he could only respond to them in single words, not even simple sentences and used a mixture of words from the different languages. His Record of Oral Language score was 14/42. According to Clay, a student scoring below 13 is likely to experience difficulty in understanding all but the simplest of instructions, or following the threads of a story. He also had no sound correspondence for any of the letters he could recognise. When he began this intervention, Student C was able to read the texts fluently but unlike the other students, he had to read everything aloud.

Student C's results are displayed in Figure 6. He scored 15/32 on the visualisation pre-test. He earned two points on four statements and zero points on five statements. At times he was offering information that was the exact opposite to what was contained in the statements. After the ten lessons, he obtained 23/32 on the post-test. This was an improvement of 25%. Now he received two points on nine statements but still received zero points on two statements. The two zero points still contained the opposite information; if the bike was speeding up he said it was slowing down. There is further teaching to be done here on word meanings and developing synonyms.

Student C did well on the Reading Progress Test. He went from 47.4% to 63.2%. He also found the format a little challenging, but reading the story aloud seemed to help him focus. I thought this may have been distracting for the other students, but they did not seem to notice. Some inferential questions were answered correctly but these were generally more difficult for him to answer.

He showed the most improvement on the Spontaneous Oral Retell (38.9%). On the pre-test he called the main character Jody not Cody. He used a lot of pronouns, some of them incorrectly. This made his retell hard to follow. He could only recall a few events. On his post-test all events were recorded and characters called by their correct names. This was also unexpected and such an improvement was very pleasing. Unfortunately there was no improvement on the inferential questions.

Figure 6



Student D is a capable student but experiences bouts of anxiety regularly. Any new teacher or setting is enough to unsettle him. He appeared to enjoy the ten lessons; participating readily. This I think may have had something to do with working in a small group as opposed to one-on-one. During the post-testing, he was overwhelmed only on one day, so I returned him to the room. I collected him the next day and he completed the assessments happily.

Student D's results can be seen in Figure 7. Progress was made in all areas. In the Visualising Test, Student D scored 26/32. He was articulate and rephrased statements very well. The post-test showed a further improvement and he scored 29/32. I wonder if he had been creating images in his mind before he started this intervention. I think also with this student, that a lot of what he can do is masked by his anxiety.

The most dramatic improvement by this student can be seen on the Reading Progress Test. He jumped from a raw score of 21 out of 38 to a score of 35 out of 38. This is an improvement of 36.8%. This is a great result, especially considering he was not on text until sometime into first term last year. This is also reflected in his self-efficacy result (see Table 4).

The pre-test result for the oral retell was 2 out of 18 and the post-test result was 11 out of 18. This was an improvement of 50% which was also quite a considerable leap for Student D.

Figure 7

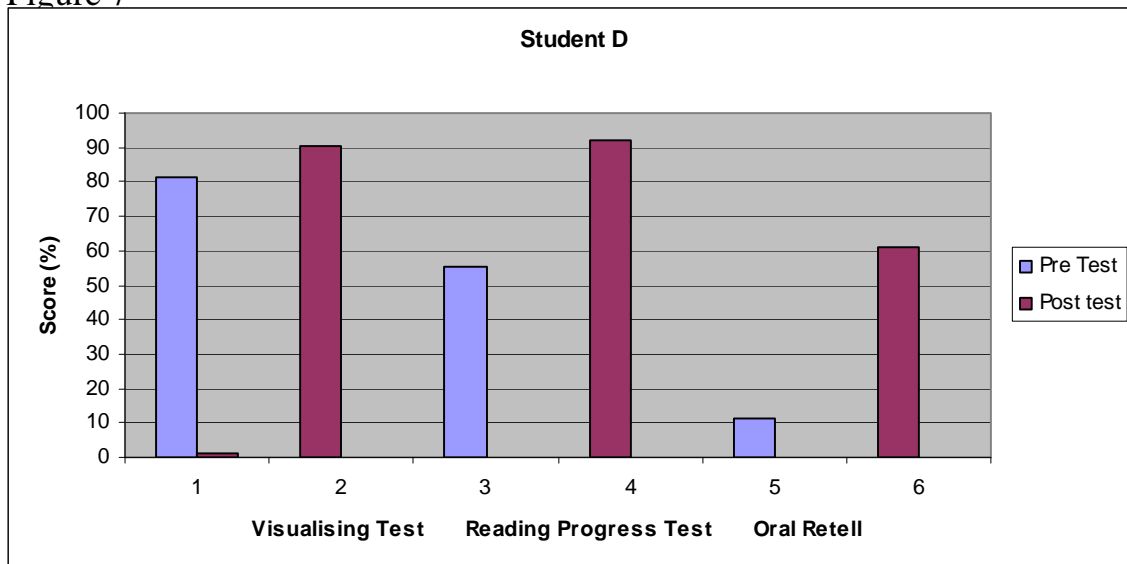


Table 4. Pre and Post scores (%) for both Intervention and Control Groups.

NAME	PRE-VIS	POST-VIS	PRE-RPT	POST-RPT	Pre Oral Retell	Post Oral Retell	Pre Self Efficacy	Post Self Efficacy
Intervention								
A	56.3	83.4	36.8	42.1	11.1	27.7	75.8	92.5
B	56.3	83.4	42.1	60.5	27.7	55.6	86.4	98.5
C	46.9	71.9	47.4	63.2	11.1	61.1	87.9	89.4
D	81.3	90.6	55.3	92.1	11.1	61.1	72.7	89.4
<i>Average score</i>	60.2	82.3	45.4	64.5	15.3	51.5	80.7	92.5
Control								
AA	59.4	68.8	42.1	76.3	16.6	61.1	84.8	98.5
BB	34.4	46.9	50	50	44.4	27.7	89.4	72.7
CC	56.3	75	65.8	65.8	38.9	72.2	84.8	90.9
DD	53.1	59.4	68.4	65.8	38.9	38.9	66.7	72.7
<i>Average score</i>	50.8	62.5	56.6	64.5	34.7	49.9	81.4	83.7

Discussion

The results of this study support the hypothesis that explicitly teaching sentence comprehending strategies such as visualising to post-reading recovery students, does improve their literal comprehension. These results also support the findings in the research referred to in the introduction of this study. The data collected for the students in the intervention group provides clear evidence of progress, in some cases up to 50% improvement (see Table 4 and Appendix 2 for percentage of improvement for individual students).

It has been rewarding to see the changes in the self-efficacy scores of the students. The Intervention Group on average jumped 11.8%. This reflects the scores across all tests. The Control Group increased by an average of 2.3% (see to Table 4 and Appendix 2-Table 5).

After the first teaching session, I had only to appear at the classroom doors and the students would jump up excitedly and rush to me. They began to look forward to the teaching sessions and eventually began to manage sessions for themselves. I think they enjoyed working in a small group as opposed to the one-on-one situation of the reading recovery room. Their conversations were lively and their enthusiasm was almost palpable. Only Student D was quiet and waited to be asked for his images.

He made the least amount of improvement on the Visualizing Test (9.3%) but made great gains on the Reading Progress Test (36.8%). I thought this may have been due to the fact that he was the only introvert in the group, definitely less of a risk taker than the others, and that he preferred the individuality of the Reading Progress Test. His ability to learn is often affected by how anxious he is feeling in situations. He made a 50% gain on his spontaneous oral retell. His retelling was confident and it was as if he was retelling a program he had watched on television.

For the first few lessons the students referred to the R.I.D.E.R. cue cards constantly. Then over the sessions, they were given a bookmark with the acronym but would verbally refer to the terms, not needing to use the cards/bookmarks anymore. They were taking the scaffolding away themselves. I had not planned for this to happen so soon. After reading a sentence Student A started to say "I'll describe my picture." After each student talked about their images, Student C would move everyone to the next step by saying "now let's evaluate them". I had not anticipated any of this. Student C also improved by 50% on his spontaneous oral retell. His sentences were more complex and more accurate detail was recalled.

Student B was the only female and other SLD student. She is a cheery, outgoing child who made great gains, particularly on the visualising (27.7%) and spontaneous oral retell (27.9%). Previously she would go off on a tangent but during the post-testing her account of the story stayed true to the book.

Student A made the least amount of progress on the Reading Progress Test (5.3%) and I assume it was due to the challenge of the format.

The ten intensive lessons explicitly teaching students to use visualising have provided the right conditions for the intervention group to adopt the R.I.D.E.R. strategy. The SLD, ESL and the anxious student all improved. However in the Control group, the two ESL students made the least progress and in two tests regressed on post-testing scores. The group developed a happy, safe and supportive environment where the ESL children heard good modeling from the teacher and other students.

The discussions that followed provided opportunities to further develop vocabulary. In talking about their images, the students could see there were other ways to express the same things. This raised the nature of synonyms and we had a little fun with this. The students would adopt new vocabulary from the story that amused them. Student C asked me one morning if I had seen the way he had 'flounced' into the room. This could explain the increased use of synonyms in the post-visualisation test and the post-oral retell.

The results of this study also supports the findings of the work of (Gambrell & Bales, 1996; Pressley, 1976; and Sadoski, 1983, 1985). When children are taught to generate mental images as they read, their ability to draw inferences and make predictions and remember what they have read are enhanced.

What I cannot explain is the dramatic improvement in Student AA (control group) in all areas but particularly in the Oral Retell: from 16.6% to 61.1%. Excluding Student AA the control group on average made progress while working in the classroom setting, but nowhere near the size of improvement made by the Intervention group.

The remaining three students in the Control group made some improvement on one or two of the tests, or sometimes showed no improvement on their post-test, and in a few instances showed decreases in their post-test scores. Student AA is the other SLD student and was in the gifted range on non-verbal tasks when assessed last year. According to his teachers, nothing out of the normal routine occurred during the time of the research project.

I believe that because of the amount of increase in the post-testing scores, the students in the intervention group have internalized the strategy and apply it independently. This must be the end goal of any instruction. Clay refers to “a self-extending system” where students continue to learn more about reading every time they read.

Although the results of this study are persuasive, they are only based on the performance of four students. It would be interesting to replicate the study with a larger group of post-reading recovery students and see if the results of the study are also replicated.

There must also be some caution exercised here because not all post-reading recovery students continue to have difficulties with comprehension. There are confounding variables within reading recovery: students come in with a range of starting points, their time for instruction is finite, experience and the quality of the teacher, all have an impact.

Implications for teaching practice

The findings of this study show that students who are able to visualise make many gains. Certainly the amount of information they can recall and the accuracy is clearly demonstrated by their results. The R.I.D.E.R. strategy has also given them a schema which they now apply independently of the teacher. It is hoped that they will continue to learn more about reading and the strategy every time they read (Clay's 'self-extending system').

This study also finds that visualising works for a range of students: SLD, ESL and LD. This study also demonstrates that explicit instruction is critical, or else how could students have made this amount of progress over just ten lessons?

There have also been certain advantages for working in a small group setting as opposed to one-on-one. Not only do the students have the modeling from the teacher but also from their peers, which in many ways can be even more powerful. One-on-one teaching can sometimes be very intense and daunting for some students. However, when a student cannot recognize letters, has poor phonemic knowledge and so on, perhaps interventions like reading recovery are more appropriate until the student reaches a certain level of decoding efficiency and ready fluency, and can then move to the next intervention, working within a small group.

Possible directions for future research

A suggestion for further research is to investigate how reading recovery could be adapted. Perhaps using visualising and paraphrasing during the introduction of the new book at the end of the lesson, and a scored retell the next day after the running recording, could work without affecting the integrity of reading recovery, which is a powerful intervention in its own right.

Another suggestion is to investigate the differences between the students who discontinue from the reading recovery and do not have a continuing problem with literal comprehension, and those who do. What is it that they have in place that the other students do not? Can 'it' be identified and will it make the difference for those who do, while they are still on the reading recovery?

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Appendix 2

Table 5 Differences between groups (pre and post) in percentages.

Visualizing	Pre Test	Difference between gps	Post Test	Improvement	Difference between gps
<i>Intervention</i>	60.2 %	9.4 %	82.3 %	22.1 %	19.8 %
Control	50.8 %		62.5 %	11.7 %	
RPT					
<i>Intervention</i>	45.42 %	11.2%	64.5 %	19.1 %	0 %
Control	56.6 %		64.5 %	7.9 %	
Oral retell					
<i>Intervention</i>	22.2 %	12.5 %	51.4 %	29.9 %	14.6 %
Control	34.7 %		50 %	15.3 %	
Self Efficacy					
<i>Intervention</i>	80.7 %	0.7 %	92.5 %	12.5 %	8.8 %
Control	81.4 %		83.7 %	2.3 %	

Table 6 Improvement made by individuals

NAME	Visualising Test	Reading Progress Test	Spontaneous Oral Retell	Self-Efficacy
A	Improved by 27.1 %	Improved by 5.3 %	Improved by 16.6 %	Improved by 16.7 %
B	27.1 %	18.4 %	27.9 %	12.1 %
C	25.0 %	15.8 %	50.0 %	1.5 %
D	9.3 %	36.8	50.0 %	16.7 %
Average				
AA	Improved by 9.4 %	Improved by 34.2 %	Improved by 44.5 %	Improved by 13.7 %
BB	12.5 %	0 %	-16.7 %	-16.7%
CC	18.7 %	0 %	33.3 %	6.1%
DD	6.3 %	-2.6 %	0 %	5.5 %
Average				

Appendix 3

COMPREHENSION - SPONTANEOUS AND CUED RETELLING

Title of selected story/passage: **Don't Break the Eggs. Lv 22**

Characteristic of retelling	Ideas in the story (To be determined and written in the space provided, by the teacher, prior to the student's retell)	No of ideas/ points	Student's score, Spontaneous retell		Student's score, for cued retell	
			Score		Score	
Setting	Cody's home/neighbourhood.	1				
Main characters	Cody, his mum, Mr. Miller, man & his dog, and Joan.	5				
Theme of story	A boy, Cody, has to go to the shop to buy eggs for his mother.	1				
Plot of the story	Cody must get the eggs home in one piece.	1				
Events of the story	1. Cody's mum wanted eggs for dinner. 2. Cody rode on his bike to buy the eggs. 3. On the way home he fell off his bike and the eggs broke. 4. Joan gave Cody her eggs to take home. Joan made them vegetable soup for dinner.	1				
1. Initiating event		1				
2. Attempt (Action taken)		2				
3. Consequence		2				
4. Ending (resolution)						
Inferential ideas (infer, predict, explain, read between the lines)	<ul style="list-style-type: none"> • Why does Cody go to the shop? • Why did Cody only eat tinned soup every night? • What lesson do you think Cody learnt? (Even though he was careful with the eggs they still broke.) • Why didn't Cody tell Joan they were sick of eating soup? 	1 1 1 1				

Adapted from John Munro's Spontaneous & Cued retelling notes 2011 lecture notes

Appendix 4

Lesson One

Duration: 30-40 minutes.

Materials: R.I.D.E.R. cue cards, a grid on A4 paper, grey lead pencils

Text: I Won't Say Please! By Mij Kelly and Ruth Palmer. (Picture Story book)

Session 1	Task Description
<i>Before Reading</i>	<p>Explain to the students that over the next ten lessons I am going to teach them a strategy that will help them remember and understand what they read. It is called visualising. It means we are going to read a sentence, learn to make a picture in our mind and explain what our picture is like.</p> <p>Introduce target words: leapt, fetch and frowned. Establish students' understanding of these words e.g. Who has told their dog to fetch a stick?</p>
Introduce the R.I.D.E.R. acronym	<p>Introduce and display the R.I.D.E.R. cue cards. Explain each part of the acronym.</p> <p>Read Read a sentence or paragraph</p> <p>Image Make a picture in your mind</p> <p>Describe Tell us about the picture you have made in your mind.</p> <p>Evaluate Check that you have all the information and see if it is accurate.</p> <p>Read On Keep reading and repeat the above steps.</p>
Introduce the text	<p>Introduce "I Won't Say Please!" G.K.R. Look at the cover of the book and discuss what you think the character is doing/feeling. Ask them to recall a time when they or a sibling have ever thrown a tantrum. What did they do? What did the people around them do? Etc.</p>
<i>While Reading</i>	<p>Teacher reads the first sentence and explicitly models how to use R.I.D.E.R. strategy. The teacher quickly sketches her image of the information of the first sentence in the first grid on the A4 paper.</p> <p><i>"When I close my eyes I can see.... This is what it looks like...I will describe it for you. Do you think I have forgotten anything from the sentence?"</i> Match the picture with the text. Highlight what is correct, what has been left out or what is incorrect and make adjustments. This is a good time to stress that the picture is only to help us remember details and it is not meant to be perfect. <i>(Hopefully this will be clear when they see my drawing.)</i></p> <p>Have students close their eyes while the teacher reads the next sentence. Now ask them to draw a quick sketch in their grids with only grey lead pencils. Each student is then asked to describe their drawing as I modeled. Highlight what is correct, what has been left out or what is incorrect and make adjustments. Continue for several more sentences.</p>
<i>After Reading</i>	<p>Revisit the target words. How do they understand them in light of how they are used in the story e.g. The Queen said, "Fetch me my clothes." The students are asked to reflect on what they have learnt. Invite them to share their thoughts. Focus on what has been helpful, what was not helpful and what else might be helpful.</p>

Lesson Two

Duration: 30-40 minutes.

Materials: R.I.D.E.R. cue cards, a grid on A4 paper, grey lead pencils

Text: I Won't Say Please! By Mij Kelly and Ruth Palmer. (Picture story book)

Session 2	Task Description										
<i>Before Reading</i>	<p>Review what was covered yesterday. Ask students to recall what they remember about the story. Could they retell the story in the correct sequence? Did they use their own words or did they adopt some new vocabulary from the story? Did they use appropriate synonyms? Did they include adjectives to create clear images? Introduce target words: shan't, flounce and growled. Establish students' understanding of these words e.g. Demonstrate what flounced looks like.</p>										
Review the R.I.D.E.R. acronym	<p>Take note which parts of the acronym they can recall or what parts are difficult to remember. Check the sequence. Display the R.I.D.E.R. cue cards and review each part of the acronym.</p> <table border="0"> <tr> <td>Read</td> <td>Read a sentence or paragraph</td> </tr> <tr> <td>Image</td> <td>Make a picture in your mind</td> </tr> <tr> <td>Describe</td> <td>Tell us about the picture you have made in your mind.</td> </tr> <tr> <td>Evaluate</td> <td>Check that you have all the information and it is accurate.</td> </tr> <tr> <td>Read On</td> <td>Keep reading and repeat the above steps.</td> </tr> </table>	Read	Read a sentence or paragraph	Image	Make a picture in your mind	Describe	Tell us about the picture you have made in your mind.	Evaluate	Check that you have all the information and it is accurate.	Read On	Keep reading and repeat the above steps.
Read	Read a sentence or paragraph										
Image	Make a picture in your mind										
Describe	Tell us about the picture you have made in your mind.										
Evaluate	Check that you have all the information and it is accurate.										
Read On	Keep reading and repeat the above steps.										
<i>While Reading</i>	<p>Teacher reads the first sentence and explicitly models how to use R.I.D.E.R. strategy and quickly sketches her image on the grid on the A4 paper following on from yesterday. "When I close my eyes I can see.... This is what it looks like...I will describe it for you. Do you think I have forgotten anything from the sentence?" Match the picture with the text. Highlight what is correct, what has been left out or what is incorrect and make adjustments. Have students close their eyes while the teacher reads the next sentence. Now ask them to draw a quick sketch in their grids. Each student is then asked to describe their drawing. Highlight what is correct, what has been left out or what is incorrect and make adjustments.</p>										
<i>After Reading</i>	<p>The students are asked to reflect on what they have learnt. Invite them to share their thoughts. Focus on what has been helpful, what was not helpful and what else might be helpful. What was easier today? What is still difficult?</p>										

Lesson Three

Duration: 30-40 minutes.

Materials: R.I.D.E.R. cue cards, a grid on A4 paper, grey lead pencils

Text: I Won't Say Please! By Mij Kelly and Ruth Palmer.(Picture story book)

Session 3	Task Description
<i>Before Reading</i>	<p>Review what was covered yesterday. Ask students to recall what they remember about the story. Could they retell the story in the correct sequence? Did they use their own words or did they use some new vocabulary from the story? Did they use any of the target words? Did they use appropriate synonyms? Did they include adjectives to create memorable images? Introduce target words: annoyed, stormed and roared. Establish students understanding of these words e.g. Imagine a lion roaring and now a teacher/parent roaring. Discuss any experiences of either.</p>
Review the R.I.D.E.R. acronym	<p>Take note which parts of the acronym they can recall or what parts are difficult to remember. Check the sequence. Display the R.I.D.E.R. cue cards. Ask students to explain each part of the acronym.</p> <p>Read Read a sentence or paragraph Image Make a picture in your mind Describe Tell us about the picture you have made in your mind. Evaluate Check that you have all the information and it is accurate. Read On Keep reading and repeat the above steps.</p>
<i>While Reading</i>	<p>Teacher reads the next sentence and explicitly models the stages of the R.I.D.E.R. strategy, quickly sketching the image on the grid. "When I close my eyes I can see.... This is what it looks like...I will describe it for you. Do you think I have forgotten anything from the sentence?" Match the picture with the text. Highlight what is correct, what has been left out or what is incorrect and make adjustments.</p> <p>Have students close their eyes while the teacher reads the next sentence. Now ask them to draw a quick sketch in their grids with only grey lead pencils. Each student is then asked to describe their drawing as I modeled. Highlight what is correct, what has been left out or what is incorrect and make adjustments. Continue with the text.</p>
<i>After Reading</i>	<p>The students are asked to reflect on what they have learnt, and to share their thoughts and focus on what has been helpful, what was not helpful and what else might be helpful. Ask each of them to talk about how they think they are doing with the strategy.</p>

Lesson Four

Duration: 30-40 minutes.

Materials: R.I.D.E.R. bookmarks

Text: Everybody Feels..... Scared by Jane Bingham (Picture story book)

Session 4	Task Description
<i>Before Reading</i>	Review what was covered yesterday. Ask students to recall what they remember about the story. Could they retell the story in the correct sequence? Did they use their own words or did they use some new vocabulary from the story? Did they use any of the target words? Did they use appropriate synonyms? Did they include adjectives to create concise images?
Review R.I.D.E.R. acronym-starting to hand over responsibility	<p>Replace R.I.D.E.R. cue cards with bookmarks which they will bring to each session. Students to take over reviewing the acronym. This is preparing the students to take over the responsibility for internalizing the strategy.</p> <p>Read Read a sentence or paragraph Image Make a picture in your mind Describe Tell us about the picture you have made in your mind. Evaluate Check that you have all the information and it is accurate. Read On Keep reading and repeat the above steps.</p>
Introduce the text	<p>G.K.R. Teacher starts with sharing some times she has been scared and how she felt, what she did and then encourage the students to share their experiences.</p> <p>Introduce target words: shaky, recess, curl up.</p> <p>Establish students' understanding of these words.</p>
<i>While Reading-moving to paragraphs</i>	<p>Teacher reads the first paragraph and talks about her image. "When I close my eyes I can see.... This is what it looks like.... Do you think I have forgotten anything from the paragraph?" Match the picture with the text. Highlight what is correct, what has been left out or what is incorrect and make adjustments.</p> <p>Students close their eyes while the teacher reads the next paragraph. Now ask them to describe their image with only words. Highlight what is correct, what has been left out or what is incorrect and make adjustments. Continue with the text.</p>
<i>After Reading</i>	The students are asked to reflect on the difference between drawing their images and just describing them with words. Ask them to share their thoughts and focus on what was easy and what was difficult. Ask each of them to talk about this change with the strategy.

Lesson Five

Duration: 30-40 minutes.

Materials: R.I.D.E.R. bookmarks

Text: Everybody Feels....Scared by Jane Bingham (Picture story book)

Session 5	Task Description
<i>Before Reading</i>	Review what was covered yesterday. Ask students to recall what they remember about the story. Could they retell the story in the correct sequence? Did they use their own words or did they use some new vocabulary from the story? Did they use any of the target words? Did they use appropriate synonyms? Did they include adjectives/adverbs to create concise images? Introduce target words: vanished, comfort, usually. Establish students' understanding of these words. Use their experiences to get their knowledge ready.
R.I.D.E.R. acronym	Use R.I.D.E.R. bookmarks until students no longer feel they need to refer to them.
<i>While Reading</i>	Teacher reads the first paragraph and describes her image. "When I close my eyes I can see.... This is what it looks like...? Do you think I have forgotten anything from the paragraph?" Match the picture with the text. Highlight what is correct, what has been left out or what is incorrect and make adjustments. The teacher reads the next paragraph and asks them to share their picture with the person next to them. That person then checks with them what is correct, what has been left out or what is incorrect and helps them make adjustments. Continue with the text.
<i>After Reading</i>	Ask students to reflect on working with a partner. Were they able to evaluate each other's images? Ask each of them if they think they are remembering and understanding more of the stories they read.

Lesson Six

Duration: 30-40 minutes.

Materials: R.I.D.E.R. bookmarks

Text: Everybody Feels..... Scared by Jane Bingham (Picture story book)

Session 6	Task Description
<i>Before Reading</i>	Review what was covered yesterday. Ask students to recall what they remember about the story. Could they retell the story in the correct sequence? Did they use their own words or did they use some new vocabulary from the story? Did they use any of the target words? Did they use appropriate synonyms? Did they include adjectives to create accurate images?
Review R.I.D.E.R. acronym	Use R.I.D.E.R. bookmarks until students no longer feel they need to refer to them.
<i>While Reading</i>	Teacher reads the first sentence and explicitly models how to use R.I.D.E.R. strategy. “When I close my eyes I can see.... This is what it looks like...I will describe it for you. Do you think I have forgotten anything from the sentence?” Match the picture with the text. Highlight what is correct, what has been left out or what is incorrect and make adjustments. Each student is then asked to describe their image. Highlight what is correct, what has been left out or what is incorrect and make adjustments. Continue with the text.
<i>After Reading</i>	The students are asked to reflect on what they have learnt, and to share their thoughts and focus on what has been helpful, what was not helpful and what else might be helpful. Ask each of them to talk about how they think they are doing with the strategy.

Lesson Seven

Duration: 30-40 minutes.

Materials: R.I.D.E.R. cue cards

Text: The Gizmos’ Trip by Paul Shipton, Rigby Level 17

Session 7	Task Description
<i>Before Reading</i>	Review what was covered yesterday. Ask students to recall what they remember about the story. Could they retell the story in the correct sequence? Did they use their own words or did they use some new vocabulary from the story? Did they use any of the target words? Did they use appropriate synonyms? Did they include adjectives/adverbs to explain their images?
Review R.I.D.E.R. acronym	Use R.I.D.E.R. bookmarks until students no longer feel they need to refer to them.
Introduce the text	Introduce “The Gizmo Trip”. Explain what a teleporter is and ask students what they would do if they had one. Where would they go? What could go wrong if you had one of these? And so on. Introduce target words: invention, sighed and teleported. Establish students’ understanding of these words.
<i>While Reading- further releasing of responsibility to the students.</i>	Students work in pairs and take turns to read paragraphs. They share what they see when they read and help each other to evaluate their images making adjustments where necessary.
<i>After Reading</i>	The teacher (as an observer) gives feedback to the students on helpful or not so helpful things they were doing during the session with their partners.

Lesson Eight

Duration: 30-40 minutes.

Materials: R.I.D.E.R. bookmarks

Text: The Gizmo Trip (used in Lesson Seven)

Session 8	Task Description
<i>Before Reading</i>	Review what was read yesterday. Students to recall what they remember about the story with a different partner.
R.I.D.E.R. acronym	Have R.I.D.E.R. bookmarks on the table and observe if any students still refer to them.
<i>While Reading</i>	Introduce target words: crackle, view and dessert. Establish students' understanding of these words. Students work in pairs and take turns to read paragraphs. They share what they see when they read and help each other to evaluate their images making adjustments where necessary.
<i>After Reading</i>	The teacher (as an observer) gives feedback to the students on helpful or not so helpful things they were doing during the session with their partners.

Lesson Nine

Duration: 30-40 minutes.

Materials: R.I.D.E.R. bookmarks

Text: The Gizmos' Party by Paul Shipton. Rigby Level 23

Session 9	Task Description
<i>Before Reading</i>	Review what was read yesterday. Students to recall what they remember about the story with a different partner.
R.I.D.E.R. acronym	Have R.I.D.E.R. bookmarks on the table and observe if any students still refer to them.
Introduce the text	G.K.R. Share stories about times when we have been embarrassed. Talk about times when as a child I was embarrassed particularly by my mother. How I wanted my parents to be cool like other parents seemed to be.
<i>While Reading</i>	Introduce target words: hologram, gadgets and hobbies. Establish students' understanding of these words. Students work in pairs and take turns to read paragraphs. They share what they see when they read and help each other to evaluate their images making adjustments where necessary.
<i>After Reading</i>	The students are asked to reflect on what they have learnt, and to share their thoughts and focus on what has been helpful, what was not helpful and what else might be helpful. Ask each of them to talk about how they think they are doing with the strategy.

Lesson Ten

Duration: 30-40 minutes.

Text: The Gizmos' Party (used in lesson 9)

Session 10	Task Description
<i>Before Reading</i>	Review what was read yesterday. Students to recall what they remember about the story with a different partner.
<i>While Reading</i>	Introduce target words: amazement, shocked and aliens. Students work in pairs and take turns to read paragraphs. They share what they see when they read and help each other to evaluate their images making adjustments where necessary.
<i>After Reading</i>	Ask students to swap feedback with the person they worked with today. Discuss the previous nine lessons. Do they think these lessons (the R.I.D.E.R. strategy) have been helpful in making them better readers? Do they now remember more and better understand what they read? If so can they explain what they do to remember and understand more? Do they think they will continue to use this strategy back in the classroom?