Explicit teaching of Year 2 children to use visualisation through the RIDER strategy improves reading comprehension.

Abstract

Many students have difficulty comprehending tests. Much research has confirmed that explicit instruction in comprehension strategies improves reading comprehension.

The hypothesis for this Action Research is that explicit teaching of Year 2 children to use visualisation through the RIDER strategy improves reading comprehension.

This study focussed on the following method. It compared two groups of children in Year 2. There were 4 students in the Intervention group and 3 students in the Control group. All of the 7 students had pre-tests. The Intervention group were instructed in 10 lessons on visualisation using the R.I.D.E.R. strategy. All of the 7 students then had post-tests.

The findings from the results of this study supported the hypothesis. 6 of the 7 students, involved in the study, improved their reading comprehension results. Overall, the comprehension results of the Intervention group showed a more significant improvement than the Control group.

The implications of this study support that of other researchers. It is important to explicitly teach reading comprehension strategies to students. The RIDER strategy is a beneficial strategy to help improve reading comprehension.

Introduction

Many Year 2 students are good text decoders but they struggle with understanding what they read. Many students are not good at comprehending what they have been reading. Partnership for Reading (2005) highlights that reading comprehension is the process of understanding a text that is read, or the process of gaining meaning from a text.

Teachers often discuss the fact that their students do not understand the text they have read. Teachers know that comprehension is the most important aspect of reading. That is why we read. (Klein, Hamilton, McCaffrey, & Stecher, 2000; Linn, 2000; cited in Scharlach 2008).

Bell (1991) noted that there are comprehension problems in our classrooms. Often we are aware of these problems but we don't know how to teach comprehension to our students. Teachers, who specialise in reading, are aware of the comprehension skills that need to be taught. These skills include main idea and inference. They also include conclusions, prediction and evaluation. These teachers, however, have not understood the way these skills have to be taught. Often students have just read material and then answered questions about the material. Occasionally this means students focus on answering questions at the end of a chapter or at the end of a paragraph. This is not the way to teach comprehension. It is the way to test comprehension.

"Although comprehension improves through extensive reading, researchers have concluded that comprehension could improve more if all readers were taught to use the comprehension strategies that good readers use." (Block, Gambrell, & Pressley, 2002; cited in Scharlach 2008, p.20).

".... despite all that we have learned about comprehension instruction, researchers have found that there is still very little comprehension instruction occurring in the classroom on a daily basis." (Pressley, 2006; Pressley, Wharton-Mcdonald, Mistretta-Hampston, & Echevarria, 1998; cited in Scharlach 2008, p.20)

In examining the research on reading comprehension there has been much focus on teaching comprehension strategies.

Readers who understand a text have grasped the fact that they need to read smarter and not harder. Students need a variety of strategies. They must have modelling of these strategies by

the teacher. Students need to become aware of the options they can make when they read. These options can be made aware to them through modelling, peer think alouds, visualisation, and journal keeping. Students can then become more strategic with their reading. (Penny A Bishop, Cynthia Reyes and Susanna W Pflaum, 2006,)

It has been noted by researchers that strategies in comprehension should be taught as students are involved in the reading process rather than at a separate time from reading. (Block et al., 2002; Keene & Zimmermann,1997; Pearson, Roehler, Dole, & Duffy, 1992; Pressley, 2002a; cited in Scharlach 2008). Good readers actively use strategies as they read. (Keene & Zimmermann,1997; cited in Scharlach 2008). Teacher modelling is part of the instruction needed in comprehension strategies. Teachers need to explain when to use these strategies and how to use them. Students need repeated opportunities for practice of these strategies and they also need independent reading time. (Guthrie, 2002; cited in Scharlach 2008).

Excellent readers: (1) activate prior knowledge, (2) make inferences, (3) use knowledge of text structures, (4) visualise, (5) generate and answer questions, and (6) retell and summarise. Students need to be taught how to apply these strategies and when to apply these strategies. They also need to be taught why they are necessary. They need to apply this to a variety of texts. (Anstey & Bull, 2004; cited in Mills 2009,)

A students' ability in reading comprehension is often related to prior experience, knowledge of the topic, genre or vocabulary. These factors are more important than a students' cognitive ability. For example, students with different backgrounds will have a different ways of relating their new knowledge from different texts. An effective way to improve comprehension is to activate students' prior knowledge of a subject before reading (Keene & Zimmermann, 2007; cited in Mills 2009).

John Munro (2010) has indicated that children use a variety of comprehending strategies while reading. They make decisions about which strategy to use at a certain time. Visualising and paraphrasing are very helpful in comprehension. Improvements in these strategies are excellent for sentence level comprehension.

Hagaman, Luschen and Reid (2010, p22) argue that "…. with much focus on fluency, reading comprehension may be overlooked. It's true that reading fluency is necessary for comprehension. Students who are able to decode and recognise words effortlessly are able to devote more of their cognitive resources to reading comprehension."

From this, readers who demonstrate fluency usually have better comprehension skills. (Fuchs, Fuchs, Hosp & Jenkins, 2001; cited in Hagaman et al., 2010).

"Up to 10% of students are fluent readers who struggle to understand what they read." (Meisenger, Bradley, Schwaneflugel, Kuhn & Morris 2009; Shankweiler, Lundquist, Dreyer &Dickenson, 1996; cited in Hagaman et al., 2010, p22).

These students can decode well but they are unable to comprehend what they have read. (Caccamise& Snider,2005; cited in Hagaman et al., 2010).

A way to improve comprehension is to teach comprehension strategies. Research shows that explicit instruction in strategies in reading comprehension improves student skill level. (Gajria, Jitendra,Sood & Sacks, 2007; Pressley, Brown, el-Dinary,& Allferbach, 1995; cited in Hagaman et al., 2010).

One strategy students could use to enable comprehension is visualisation of what they have just read. There have been many studies on the strategy of visualisation in comprehension.

Visualising incorporates mental imagery. This represents ideas. We can deal with much information through imagery. The image is a scaffold. We can then link our ideas on this scaffold. It also helps us retain thoughts in our short term memory. (Munro, 2006)

Bell (1991) identified the following problem. Many people have difficulty in creating mental images. They then have poor reading comprehension, poor oral language comprehension, poor verbal skills, and difficulties with critical thinking.

Oliver (1982; cited in Bell 1991) conducted three experiments to determine if an instructional set for visual imagery would help reading comprehension in primary school children. He found that teachers should try to help children develop their visual imagery as a strategy for improving their comprehension. Visualisation benefits comprehension.

It has been found that school-age readers recalled more and made more predictive inferences if they were instructed to image while reading. This was in comparison to the control group of school-age readers. The study highlighted the belief that imagery can be a comprehension strategy. (Kulhavy and Swenson ,1975 and Gambrell ,1982; cited in Bell,1991)

Bell (1991) also found, from research, that reading comprehension requires imaging in which different aspects are visualised and then brought together. Once more images are formed

there is a more detailed picture of the information read. Individuals without this ability have a reading comprehension problem that cannot be improved by just reading more information and answering questions.

Appleton (2004) believed that by encouraging activities that promoted visualisation students would most likely be able to visualise and then understand and remember more. They would then be more inspired to read.

Appleton (2004) also endorsed that more investigation into this area was necessary to gain a deeper understanding of visualisation. The research has made progress towards showing that if students are encouraged to visualise, then they could make considerable progress, in motivation and language learning.

Many students do not visualise or have a mental image of what they have just read.

Manning (2002) identified the following when she began teaching reading. Visualising is necessary for understanding any text. This can be enhanced by helping readers think about pictures they can make in their minds. A limited background knowledge, little attention to punctuation and phrasing and limited personal involvement with the text are all important factors that could limit the development of visualisation. Prior knowledge is beneficial because readers can't build a mental picture of an event or circumstance they don't understand. Some students see reading as a quick task to finish as soon as they possibly can. These students must slow down while reading so they can reflect on the pictures in their heads. Readers need to make sure they have personal involvement in the text. Discussions before reading the text are beneficial. Discussions are also helpful during and after the reading of the text. This helps the students make their own connection with what they have read.

'Research has shown that competent readers create pictures in their mind before, during and after reading to help them with their comprehension (Guerrero, 2003; Sadoski & Paivio, 2001 cited in Mills, 2002). The strategy of visualisation uses the mind's ability to imagine what is being communicated from the text. (Mills, 2002)

Reading comprehension is improved when both visual and verbal information is in the memory. Children, who have been encouraged to visualise and then discuss it, have a richer quality of what is remembered in their mind. (Woolley, 2010) "The implication is that positive literacy outcomes for readers with comprehension difficulties will result when visual

and verbal comprehension strategies are employed in a well coordinated reading intervention framework." (Woolley, 2010 p. 120)

The visualisation strategy improved the scores of fifth grade students. They learnt to understand the author's purpose and meaning of the story. The students also showed that they enjoyed reading more. (Nelson, 2005)

The RIDER Strategy includes imaging or creating pictures to assist in reading comprehension. It encourages students to image the whole picture. This may include imaging locations, people and their facial expressions. It also can include imaging factors in the surrounding environment. The students are then asked to describe what they see. (Whitehead, 1986)

The steps involved are as follows:

Read (or listen) first sentence, paragraph, episode, complete text

Image make a picture in your mind, think about what you already know and add this to your picture

Describe your image or 'picture'

Evaluate your image for its completeness by checking against the text

Repeat the process while you are reading (or listening)

This strategy is very appropriate for small groups or for a whole class to be involved in. Explicit teaching of visualisation, as students read, should help enhance their comprehension skills.

The present investigation aims to extend the earlier research by examining the effect of teaching visualisation through the RIDER strategy to Year 2 students. This will assist the students to develop their reading comprehension. The hypothesis is that explicit teaching of Year 2 children to use visualisation through the RIDER strategy improves comprehension.

Method

Design

This study uses a case study OXO (assess, teach, assess) design. It investigates the gain in literal reading comprehension following explicit teaching of visualising using the R.I.D.E.R strategy. It is monitored for Year 2 students in order to improve reading comprehension. The study compares two groups of students, a control group and an intervention group.

Participants

The participants are 7 second grade students who display varying abilities in comprehension. All students attend a Victorian Catholic Primary School in a bay-side suburb. Four students are in the intervention group and three students are in the control group. One of the students chosen has been involved in Reading Recovery. This ex Reading Recovery student is in the intervention group. The two groups of students were chosen based on the results of their running record results which took place at the beginning of the school year. These students were chosen in order that they could be compared as closely as possible due to the similar spread of results at the beginning of the year. It should be noted that this study had another ex- reading recovery student involved. This particular student was going to be in the control group so that the results could be compared with the ex-reading recovery student in the intervention group. Unfortunately, the results from this student in the control group were compromised in the Progressive Achievement Test in Reading Comprehension. The results would not have been valid so it was decided to not include this particular student's results.

Student A

This student is an ex reading recovery student. He has improved in his decoding of simple texts but often the meaning is lost as he progresses through the text. At times he struggles with decoding words of two or more syllables. He frequently loses meaning of the text after reading a few pages. This student has improved at the word and sentence level (MLOTP) multiple levels of text processing reading framework model (Munro, 2000). He still needs to improve in these two areas. He displayed difficulties at all levels of John Munro's MLOTP model. (Munro, 1985: cited in Munro 2011) His self efficacy is quite low.

Student B

This student is an excellent decoder but she has shown signs of wavering concentration. She has recently been given glasses and her reading expression and fluency has improved

dramatically. Frequently during guided reading sessions and during whole class instruction she is not focussing on the story. She is looking around the room.

Student C

This student is a very capable reader. He reads fluently and he comprehends quickly and accurately. His self efficacy is high.

Student D

This student reads fluently with expression and meaning. She is a very capable reader with a high self efficacy. At times her concentration wavers because she is focussing on all of the dynamics (e.g. other students who may need assistance or who are not concentrating on their work) within the group or classroom.

Student E

This student decodes most texts very well. She often has not completely comprehended what she has read. This has been evident during guided reading sessions.

Student F

This student is a very capable reader. She reads fluently and she comprehends quickly and accurately. Her self efficacy is high.

Student G

This student reads very well. He decodes accurately although, at times, his speech is difficult to understand. He has been seeing a speech therapist regularly this year. He frequently does not concentrate during the guided reading and whole class instruction time as he is day dreaming.

Their age and entry reading ability are shown in Table 1

Name	Control = 0 Teaching=1	Age in MONTHS	Gender 0=Male 1= Female	Years of Schooling	ESL No=0 Yes=1	LNSLN funding 0=SLD 1=ID 2=Asp	Earlier Intevention No=0 RR=1 Bridges=2 ERIK=3…	Alpha Assess Running record level	EMA No=0 Yes=1
A	1	97	M	2 years	0	0	1	14	0
B	1	92	F	2 years	0	0	0	20	0
C	1	100	M	2 years	0	0	0	28	0
D	1	92	F	2 years	0	0	0	27	0
E	0	98	F	2 years	0	0	0	21	0
F	0	91	F	2 years	0	0	0	27	0
G	0	98	M	2 years	0	0	0	21	0

Materials

Assessments   All students were pre and post tested using the John Munro (2005) Visualisation task.

 They were also pre and post tested with the Progressive Achievement Tests in Reading: Comprehension, Test booklet 2, Fourth Edition (2008). This can be abbreviated to PAT R test Level 2.

The **Visualisation** test finds out what images the students can create in their minds when a story is read to them, sentence by sentence. It assesses how much detail they can recall after the teacher has read each sentence to them.

In the Visualisation test the students were called up one by one and the teacher read them the story. It was read to them sentence by sentence and they had to explain what they could see in their mind after each sentence was read out to them. The instructions were as follows.

'Listen to each sentence. Make a picture of it in your mind. Then describe your picture in words.' The teacher then wrote the child's description on the sheet in the space provided, next to each sentence.

The **PAT R test Level 2** is a comprehension test aimed for Grade 2 children. It measures literal and inferential comprehension. It includes two narratives, one table and three factual

passages. The students read each passage and then choose the most appropriate answer from a multiple choice selection.

The teacher administered the PAT R test Level 2 test to all of the students in the study at the same time. Each student received their own test booklet and answer sheet. There was administration time to explain the procedure to the students. The teacher read the instructions to the students. The instructions were as follows.

'This is a test of how well you understand what you read. Carefully read each passage and then answer the questions about it before you go onto the next passage. There are four choices for every question. You choose the one answer that you think is best.'

The students did an example passage and then were given 40 minutes to complete the test.

The texts that the students used (during the teaching sessions) are as follows

Text A Bike for Alex by Elsie Nelley (PM Level 15 book)

Text The Big Red Apple by David Tunkin

Text Gregor the Grumblesome Giant by Allen Trussell-Cullen

Text The Fishing Trip (Erik program)

Text Chicken Pox (Erik program)

Text What a Day (Erik program)

Text Ross and Jack go Camping (Erik program)

Text A Day at the Beach (Erik program)

Materials

 RIDER prompt chart ERIK (Appendix 1), paper, pencil, white board and markers

Printed story train for students to record the beginning middle and end of the story (see Appendix 2).

Teaching Sequence – Ten 30 minute lessons were given to provide instruction on the learning of visualising through the R.I.D.E.R strategy. (See Appendix 3.)

Procedure

The first session introduced the acronym RIDER and the proceeding sessions revisited the acronym at the beginning of each lesson.

The first four lessons had the teacher modelling the RIDER strategy to the students. Lessons 5-10 had the students implementing the RIDER strategy independently. At the end of each task students were required to retell what they could remember from the story and state what they had learnt from the lesson. An outline of the lessons is shown below. Detailed lesson plans are in Appendix 3.

Lesson 1

Text A Bike for Alex by Elsie Nelley (PM Level 15)

Before Reading

They are introduced to the RIDER strategy.

Introduce the book 'A Bike for Alex'.

The teacher will then **model** the RIDER strategy based on the information gained from the book

The teacher describes what is drawn on the paper. The text is then brought back. Teacher evaluates picture. Teacher states what has been included.

The students are then given the opportunity to visualise the same picture. They draw what they can remember and describe their drawing.

The text and the picture are then brought back and they evaluate what has been included.

After Reading

 Each students then states what he/she has learnt from the lesson and/or share what they enjoyed.

Lessons 2 and 3

Text The Big Red Apple by David Tunkin

Before Reading

The RIDER strategy will be reviewed with the children.

Introduce the book. Look at the text and title with the children (for lesson 2), recap the story so far (for Lesson 3).

During Reading

The teacher **models** the RIDER strategy to the students. The children then go through the process of the RIDER strategy

After Reading

Children retell what has happened so far. They also say what they have enjoyed and learnt.

Lessons 4 and 5

Text Gregor the Grumblesome Giant by Allen Trussell-Cullen

Before Reading

The RIDER strategy will be reviewed with the children.

Introduce the book 'Gregor the Grumblesome Giant'. Look at the text and title with the children (for lesson 4). The story is recapped (for lesson 5).

During Reading

Teacher reads some pages of the text.

Teacher thinks out loud and models each step of the RIDER strategy.

The children then go through the process of the RIDER strategy.

The above process is repeated with different pages.

 After Reading

Children retell what has happened so far.

They also say what they have enjoyed and learnt.

Lesson 6

Text The Fishing Trip (ERIK program)

Before Reading

The RIDER strategy will be reviewed with the children.

Introduce text

During Reading

Teacher reads the text to the students.

After reading the first section, the students are encouraged to draw using RIDER.

The students each then describe what they have drawn on the paper. The teacher then brings back the text and evaluates the drawing details with the children.

This process will then be repeated with the rest of the story.

After Reading

Children retell what happened in the story.

They also say what they have enjoyed and learnt.

Lessons 7 and 8

 (A similar format to lesson 6 is used here with different texts from the ERIK program)

<center>**Lesson 9**</center>

Text <u>Ross and Jack go Camping (ERIK program)</u>

Before Reading

Teacher writes a letter for each word of RIDER.

Have each student describe or write down what each letter stands for, to the group

Introduce text, 'Ross and Jack go Camping'. Use the title of text and illustration to orient the students' prior knowledge about this topic.

During Reading

Students read the text independently.

After reading the first section, the students are encouraged to visualise using RIDER.

One chosen student will describe what he/she has visualised. The teacher then brings back the text and evaluates the visualised details with the student.

This process will then be repeated.

After Reading

Using a story train (Appendix 2) the students will write down as much as they can remember of the story.

They also say what they have enjoyed and learnt.

<center>**Lesson 10**</center>

Text <u>A Day at the Beach (ERIK program)</u>

(A similar format to lesson 9)

Over a period of two and a half weeks the 4 students in the intervention group were involved in ten lessons. The duration of the lessons was 30 minutes. Nine of the ten intervention lessons were taught away from the classroom. The sessions took place at different times prior to the students' lunch break. The 4 students in the control group participated in the normal classroom activities and were not involved in the intervention sessions. Once the teaching of the intervention group was completed, all students were assessed again with the same tests that were used prior to the intervention sessions.

Results

The results indicate support for the hypothesis that explicit teaching of Year 2 children to use visualisation through the RIDER strategy improves literal comprehension. The pre and post test raw scores are recorded in Table 2. The comprehension scores of all students in the intervention group indicate improvement in at least one area of testing, apart from Student C. See the table below. (full table is in Appendix 4)

Table 2

Comparison of Pre-test and Post-test Visualisation and Pat R Comprehension

	Attendance No. of sessions	Visualisation Test Raw PRE /32	Visualisation Test Raw POST /32	PAT R raw PRE /25	PAT R raw POST /25
Intervention					
A	10	9	19	2	13
B	10	11	21	5	9
C	10	17	14	19	19
D	10	26	22	13	18
Average		15.8	19	9.8	14.8
Control					
E	10	27	25	10	17
F	10	24	22	21	22
G	10	5	8	18	20
Average		18.7	18.3	16.3	19.7

The improvement in the results made by the intervention students was greater than those of the control group. This is shown in Figures 1 and 2.

Figure 1 demonstrates the gains made by students in the intervention and control groups in the Visualisation Test. In pre testing the average results for both groups are 49% for the intervention group and 58% for the control group. At this stage

the difference in scores between the groups was 9%. In post testing the

difference in average scores between the intervention and control group is 2%. The

intervention group has an average score of 59% and this is an improvement of 10%. The

control group has not shown improvement in this area. The post testing results for the control

group were 57% and this indicates a loss in this area by 1%. This

indicates that after completion of the 10 lessons the gap between the

two groups is 2%, with the intervention group overtaking the control group.

Visualisation Test
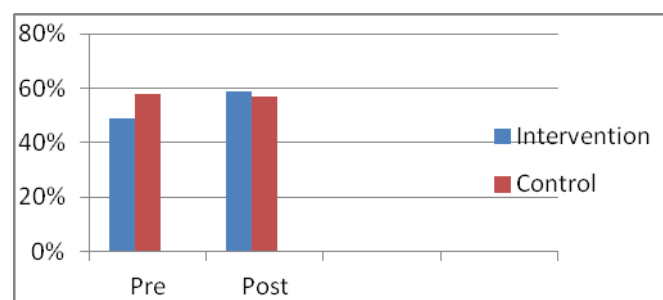
Figure 1 Average Visualisation Test Scores in Percentage

Figure 2 demonstrates the gains made by students in the

intervention and control groups in the PAT-R Comprehension Test. The PAT-R

Comprehension Test also demonstrated a greater increase in the intervention group than the

control group in post testing. In pre testing the control group had a greater average score of

65% in comparison to the intervention group's average score of 39%. This indicates a

difference of 26% between the control and intervention group. When the lessons were

completed the results had changed. The intervention group had a score of 59% and the

control group had an average score of 79%. The difference between the two groups had

narrowed to 20%. The increase to the average score of the Intervention group was 20%

compared to a 14% increase made by the Control group.
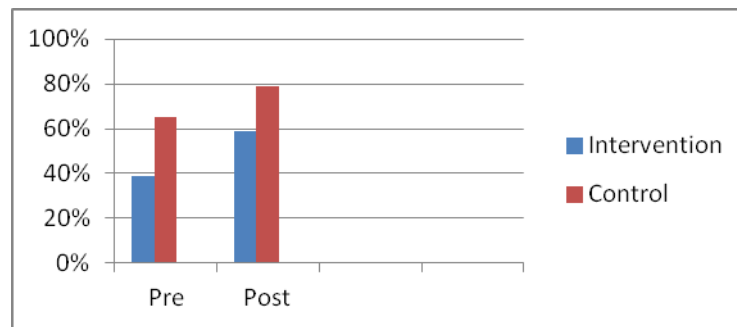
PAT-R Comprehension Test

Figure 2 Average PAT-R Comprehension Test Scores in Percentage

Student A (Intervention Group, ex-reading recovery student)

Student A's results indicate excellent gains in his visualising skills and in his overall comprehension. His results supported my hypothesis. Figure 3 represents his results in pre testing and post testing.

Student A correctly responded to 9 out of 32 questions (28%) in his **visualising** pre-test He did not score full marks (2 marks) for any of his statements in his- pre test. In the visualising pre-test Student A began many of his sentences with 'Maybe.....', For example a sentence read to the student in the pre-test was, 'The birds were singing in the trees.' Student A said, 'Maybe they were singing loud.' His post- test score was 19 out of 32 (59.3 %) in his visualising test. He scored full marks for 6 of the 16 items and his use of accurate visual description was evident. For example a sentence read to the student in the post- test was, 'The birds were singing in the trees.' Student A said, 'I see birds singing in the trees and it's sunny.' In the visualising post-test Student A began many of his sentences with 'I see......'
The results for Student A's **comprehension** test also indicated a pleasing gain.
 In his pre testing results he scored 2 out of 25(8%). He made an improvement and this was indicated in his post- testing result where he scored 13 out of 25 (52%). 10 out of the 13 points gained were in the first 12 questions in the test. (each question was worth 1 mark). After the 10 lessons, student A's attitude toward the comprehension post- test altered. He concentrated on the comprehension passages and slowly worked through the questions. He was always reading his test and not looking around the room at what others were doing.
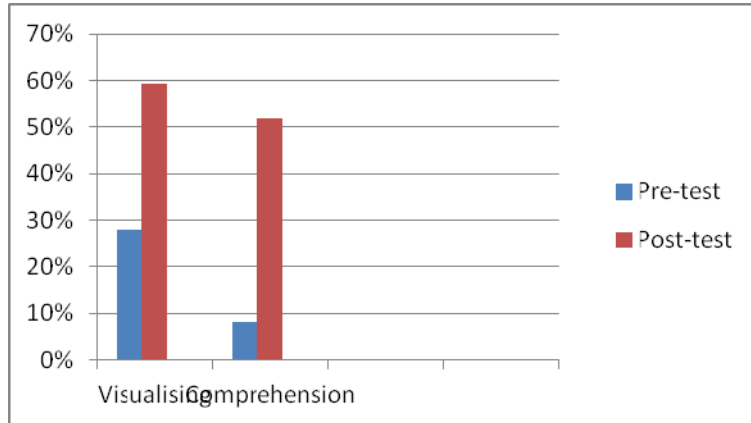
Student A

Figure 3 Test scores of Student A in Percentage

Student B (Intervention Group)

Student B's results indicated gains in her visualising skills and in her overall comprehension. Her results supported my hypothesis. Figure 4 represents her results in pre testing and post testing.

Student B correctly responded to 11 out of 32 questions (34%) in her **visualising** pre-test Her post testing score was 21 out of 32 (66 %) in her visualising test. She scored full marks for 6 of the 16 items. She scored full marks for the first 4 items.

The results for Student B's **comprehension** test also indicated some gain.

In her pre- testing results she scored 5 out of 25 (20%). In her post- testing results she scored 9 out of 25 (36%). 8 out of the 9 points gained were in the first 14 questions in the test.

Overall, in both of the post-tests, Student B demonstrated a higher accuracy in the first few questions.
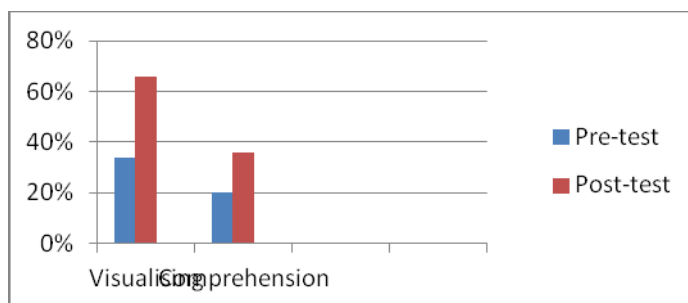
Student B

Figure 4 Test scores of Student B in Percentage

Student C (Intervention Group)

Student C' indicated a drop in his visualising results. His overall comprehension remained the same. His results did not support my hypothesis. Figure 5 represents his results in pre testing and post testing.

Student C correctly responded to 17 out of 32 questions (53%) in his **visualising** pre-test He scored full marks for 5 of the 16 items in this pre-test. His post- test score was 14 out of 32 (44 %) in his visualising test. He scored full marks for 3 of the 16 items. In the post-test this student added information, rather than including the information read out to him. He predicted what may happen in the future in the story and he was inferring other people's responses in the story. He frequently did not state what he could visualise after the passage had been read to him. For example the sentence read to him was, 'People in the park had stopped what they were doing and started to yell, "Stop" or "Be careful." Student C's response was, 'They shouted out, we can't, we can't. We can't reach the brakes.'

The results for Student C's **comprehension** test remained the same.

 In his pre- test and post-test results he scored 19 out of 25 (76%). 3 of the 6 incorrect answers were the same for the pre-test and post-test. There were 5 passages in the test. On average there were 5 questions per passage. This student averaged one wrong answer per passage.
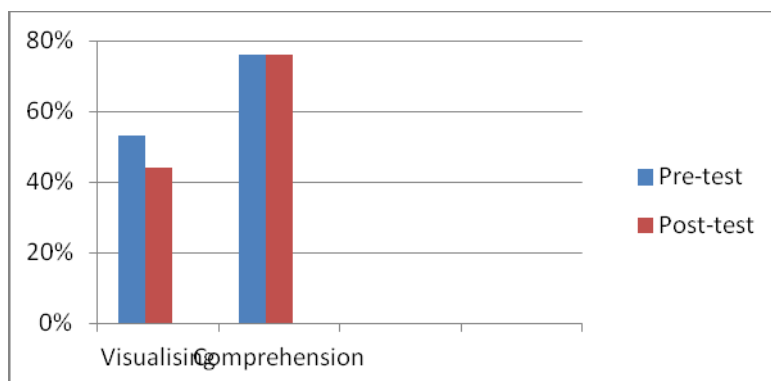
Student C

Figure 5 Test scores of Student C in Percentage

Student D (Intervention Group)

Student D's results indicated a drop in her visualising test and gain in her comprehension test. Her results partly supported the hypothesis because her comprehension test results improved after the 10 lessons. Figure 6 represents her results in pre testing and post testing. Student D correctly responded to 26 out of 32 questions (81%) in her **visualising** pre-test. She scored full marks for 11of the 16 items in her pre-test. Her post- test score was 22 out of 32 (69 %) in her visualising test She scored full marks for 7 of the 16 items in her post-test. In her post-test she would describe extra details and not necessarily all of the information that I had read to her. For example, the passage I read was, 'The track became narrow and twisted' Student Ds response was, 'I see there is about a turn and they couldn't see.' The results for Student Ds **comprehension** test indicated significant gain.

In her pre- test results she scored 13 out of 25 (52%). There were 5 different passages. She did not receive full marks in her pre-test with regard to any of the five passages.

In her post- test results she scored 18 out of 25 (72%). She scored full marks in her post-test with regard to two out of the five passages. The 2 passages she scored full marks for are outlined as follows. One passage was an **itinerary** titled 'Holiday Program' and another passage was a **narrative** titled 'Going to the Dentist'.
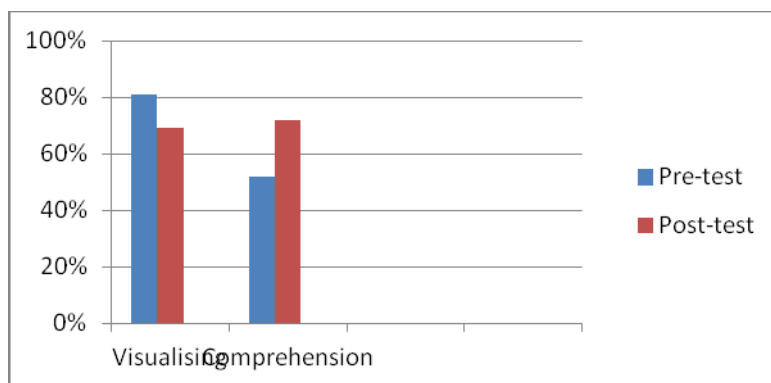
Student D

Figure 6 Test scores of Student D in Percentage

Student E (Control Group)

Student E's results indicated no gain in her visualising test but a gain in her comprehension test. Figure 8 represents her results in pre testing and post testing. Student E correctly responded to 27 out of 32 questions (84%) in her **visualising** pre-test. She scored full marks for 11 of the 16 items. Her post testing score was 25 out of 32 (78 %) in her visualising test. She scored full marks for 9 of the 16 items. She demonstrated an excellent understanding of visualisation in both the pre and the post test. She used synonyms and she accurately reworded many sentences. For example, the following sentence was read to the student in the post test, 'They were enjoying themselves.' The student then said, 'They were having a lot of fun and they thought it was so fun and they were enjoying themselves so much.'

The results for Student E's **comprehension** test indicated significant gain.

 In her pre- testing results she scored 10 out of 25 (40%). In her post- testing results she scored 17 out of 25 (68%). In the pre-test she did not attempt the last 8 questions because she ran out of time.
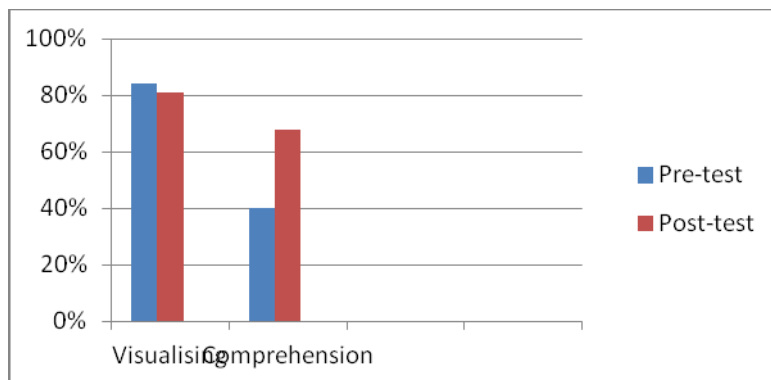
Student E

Figure 8 Test scores of Student E in Percentage

Student F (Control Group)

Student F's results indicated no gain in her visualising test result and a small gain in her comprehension test result. Figure 9 represents her results in pre testing and post testing. Student F correctly responded to 24 out of 32 questions (75%) in her **visualising** pre-test. She scored full marks for 9 of the 16 items. Her post testing score was 22 out of 32 (69%) in her visualising test. She scored full marks for 7 of the 16 items. She demonstrated a good understanding of visualisation in both the pre and the post test. She used synonyms and she

accurately reworded many sentences. For example, the following sentence was read to the student in the post test, 'The two friends chatted. They were not paying attention to anything.' The student then said, 'I can see them almost going into the town and not concentrating and just chattering, chattering.'

The results for Student F's **comprehension** test indicated a small gain.

In her pre- testing results she scored 21 out of 25 (84%). In her post- testing results she scored 22 out of 25 (88%). She answered the same questions correctly in both the pre-test and post- test. She answered one more question correctly in the post- test.
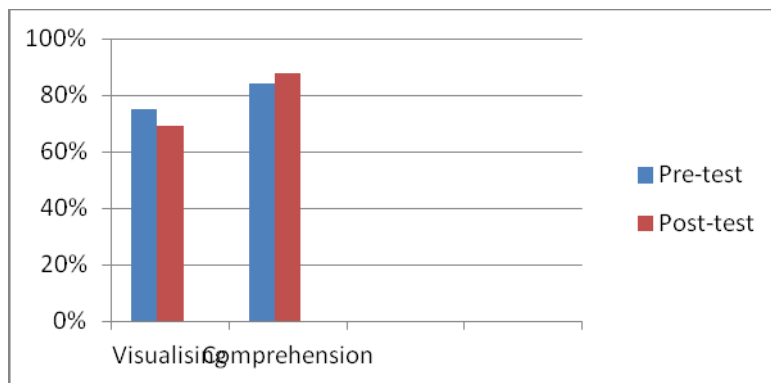
Student F

Figure 9 Test scores of Student F in Percentage

Student G (Control Group)

Student G's results indicated small gains in his visualising test and comprehension test. Figure 10 represents his results in pre- testing and post- testing.

Student G correctly responded to 5 out of 32 questions (15%) in his **visualising** pre-test. He scored full marks for 1 of the 16 items. His post testing score was 8 out of 32 (25 %) in his visualising test. He scored full marks for 1 of the 16 items. He frequently did not demonstrate visualisation in both the pre and the post test. At times he would state what would happen next in the story. For example, the following sentence was read to the student in the post test, 'All of a sudden the path goes around a sharp curve.' The student then said, 'They fall off into the water.' He did not demonstrate visualisation of a sharp curve.

The results for Student G's **comprehension** test indicated significant gain.

In his pre- testing results he scored 18 out of 25 (72%). In his post- testing results he scored 20 out of 25 (80 %). His results in the comprehension test demonstrated an overall understanding of the 5 passages.
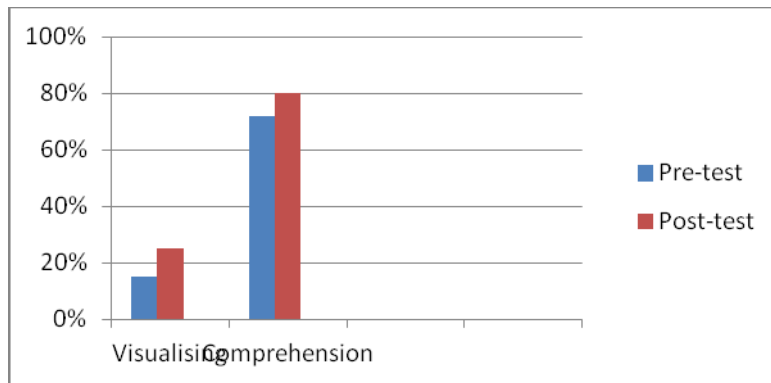
Student G

Figure 10 Test scores of Student G in Percentage

Discussion

In reflecting on the results of this study there is some support for the hypothesis and the research which suggests that, explicit teaching of Year 2 children to use visualisation through the RIDER strategy improves literal comprehension. Students A and B significantly improved in their visualisation test and demonstrated gains in their reading comprehension test. Student C did not improve in his visualisation test (his score dropped slightly) and his reading comprehension result remained the same. Student D did not improve in her visualisation test (her score dropped slightly) but her reading comprehension result improved.

Prior to this Action Research, Students A and B had demonstrated difficulties in comprehending texts during guided reading and independent reading sessions in the classroom. The RIDER strategy seemed to be beneficial to them as it encouraged them to reflect and think about the text rather than only decoding, getting to the end of the text or hearing words. It seemed to be a strategy that was taught at their point of need.

Student A was a reading recovery student in Year 1 and he has been very aware that he has found reading difficult. He has been embarrassed about this now that he is in Year 2. He has not appreciated the individual attention from teachers who have assisted him. He has not wanted to be singled out because he needed extra help. This study improved his self efficacy. Although he was withdrawn from the classroom situation, he was withdrawn with children who were quite fluent and independent readers. He was with a more advanced group and it appears that he felt that he wasn't being withdrawn because he needed extra assistance. During the sessions, he was encouraged and praised for his efforts and he enjoyed being in a

small group. He was given many opportunities to share. His manner was confident during the 10 lessons and it appears that he truly believed he could accomplish the set tasks. He concentrated and worked steadily. This was evident during the post-tests.

Originally 2 ex-reading recovery students were involved in the Action Research. Unfortunately, one of these students' results was compromised in the PAT-R comprehension pre-test. The results from this student were invalid. It was the originally aimed to have both ex- reading recovery students involved in the study so a more direct comparison could be made.

Overall, students in the control group demonstrated better comprehension skills in their pre-tests. The intervention group, however, improved more than the control group. One student in the control group, Student G, demonstrated a low score in the visualisation pre and post test. He still managed to score well in the comprehension pre and post tests. It appears that he had alternative strategies to visualisation for comprehending a text. He may not have completely understand what was required of him in the visualisation test.

Student C's post- test results did not demonstrate an improvement in visualisation but, during the 10 teaching lessons this student showed an excellent ability in visualisation. He could accurately, and with detail, describe what he could visualise in his mind after a passage was read. When he did the post test, in visualisation, he decided to demonstrate his inferential and prediction strategies. He did not always demonstrate his literal understanding of what was read to him; he seemed to delve beyond that. His use of rewording and using synonyms to describe what was read to him was not always evident in the post-test. This was why his visualisation test score did not improve. If this study was repeated, clarification of what was required of him in the visualisation test was needed. From observations of him over the 10 lessons it was clear that his visualisation strategies were excellent (even though his visualisation test result did not show this). Investigators from previous studies found that school-age readers instructed to image while reading recalled more and made significantly more predictive inferences about story events than did control group subjects (Oliver, 1982 ; cited in Bell,1991). Student C's behaviour supported this investigation because he was making more predictive inferences.

Student D's post-test in visualisation dropped slightly. She demonstrated similar behaviour to Student C. She was making predictive inferences without describing some of the literal details. Her contributions during the 10 lessons showed that she understood visualisation.

The results lend support for the work of Bell (1986), Manning (2002), Mills (2009), Woolley (2010), Nelson (2005) and Appleton (2004) who suggest that teaching visualisation will improve students' comprehension of text. This was very clearly demonstrated by students A and B, following the intervention (Table 1). There was a positive effect on students' comprehension but as mentioned by Appleton (2004) further research is needed.

The use of the RIDER acronym as suggested by Whitehead (1986) was beneficial in helping students remember the steps in visualisation. The students were able to articulate each letter in the acronym. The students found it beneficial having the RIDER acronym displayed in front of them, especially in the first few lessons. At the end of the teaching sessions the students could all write the RIDER acronym and write down what each letter stood for.

Maryann Manning (2002) noted that some students look at reading as a chore or a race. They look at it as something to be quickly completed. This was evident in students A and B prior to the study. After the study it was noticed that they had learnt to reflect on the text. They were not just trying to get to the end of it and then breathe a sigh of relief.

Over the course of the 10 lessons the students, at times, found it difficult to concentrate. The 30 minute lessons were very intensive. The students found the last few lessons difficult to be completely immersed in. It was originally planned to have one lesson per day in a small focus group in the classroom. It did not work out this way due to the busyness of classroom life and the organisation necessary in planning all the material. It was then decided to work with the students out of the main classroom environment and complete the 9 remaining lessons over a three day period. The children averaged 3 lessons a day, in order that all 10 lessons were completed. At times, this was difficult for this age group. If this Action Research were to be repeated it would be ideal to have all 10 lessons away from the main classroom environment and average 2 lessons a day over 5 days.

There are a number of factors that would need to be addressed if repeating the study. The PAT R test Level 2 Comprehension Test was too difficult for 3 of the 7 students to read independently. It may have been more suitable to administer the PAT R test Level 1 Comprehension Test. Lower level texts may have been more appropriate for the students at this time. (Fuchs, Fuchs, Hosp & Jenkins, 2001; cited in Hagaman et al.) found that students who are able to decode and recognise words easily are able to devote more of their ability towards reading comprehension. As a result, readers who are fluent are more likely to have better comprehension skills.

Another factor to consider, when repeating the study, would be to include more detailed anecdotal records. More thorough anecdotal records of the students' discussions would be beneficial for investigating ways to improve the lessons.

A positive aspect of the teaching practice was the explicit modelling of the RIDER strategy. This was used in early lessons. Bishop, Reyes and Pflaum (2006) highlighted that explicit modelling, by the teacher, of the strategies is highly important. As the lessons progressed the students were given more independence and less teacher modelling was given. This strong scaffolding was an excellent foundation for their learning. This is important to note for future study.

Another positive aspect of the teaching practice was the time, during the lessons, dedicated to the students drawing pictures of the images that they had created in their mind. This was frequently done after listening to or reading a passage from a text. The students enjoyed this quiet time. They liked the break from the intensity of the lesson. This factor should be considered if repeating this study. After lesson 7 this drawing time was less frequent as the children were encouraged to think and reflect upon the image they had created (rather than draw it).

It is important that the students are given the opportunity to continue to use the RIDER strategy. This could be incorporated in Guided Reading Sessions.

The results suggest that explicit teaching of Year 2 children to use visualisation through the RIDER strategy improves reading comprehension.

It appears that students also need explicit teaching of the strategy, paraphrasing. It would be beneficial to investigate how well a student comprehends after having intense lessons in paraphrasing. When the students were describing what they heard in the visualisation test their rewording and synonyms used in the sentences could have been more succinct. Paraphrasing lessons would probably be beneficial because students could investigate the ways they could verbally recall the facts that have been read. John Munro (2011) has stated that visualising and paraphrasing are both very beneficial strategies. Through observation it was noted that Student A's self efficacy improved. Future investigation where self efficacy was formally investigated before, during and after the Action Research would be a beneficial addition to this research. This research, on self efficacy, could be combined with the lessons on the RIDER strategy.

Sometimes during the lessons on the RIDER strategy the text would be repeated to make sure the students understood the information read. Another area of study could be on the improvement of a student's comprehension after repeated readings. Future research in this area would be beneficial. It would be interesting to work on this topic with Student A (the ex-reading recovery student) who was involved in this Action Research,

This study of the benefits of the RIDER strategy would be useful with a group of similar students all with excellent decoding skills yet struggling with comprehension. Meisenger, Bradley, Schwaneflugel, Kuhn & Morris (2009) Shankweiler, Lundquist, Dreyer &Dickenson (1996) found that nearly 10% of students who are fluent readers have difficulty understanding the text. It would be interesting to work with a group of students who have this difficulty. It would also be interesting to see these students' results after the RIDER strategy has been taught to them over at least 10 consecutive lessons. Working with slightly older students would be a beneficial situation because they have a greater capacity for concentrating. The descriptions and evaluations by these students could be richer and provide much information for the researcher.

Overall, this study has demonstrated the importance of explicit instruction to assist students with reading comprehension. It is clear that students' results can improve. It appears that their self efficacy and enjoyment of reading can be enhanced through this instruction.

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Appendix 1

RIDER

1. Read

2. Imagine – picture

3. Describe

4. Evaluate / check

5. Read on

Appendix 2

Name:
Title:

Story Train

What happened first?   What happened next?   What happened last?

Beginning

Middle

End
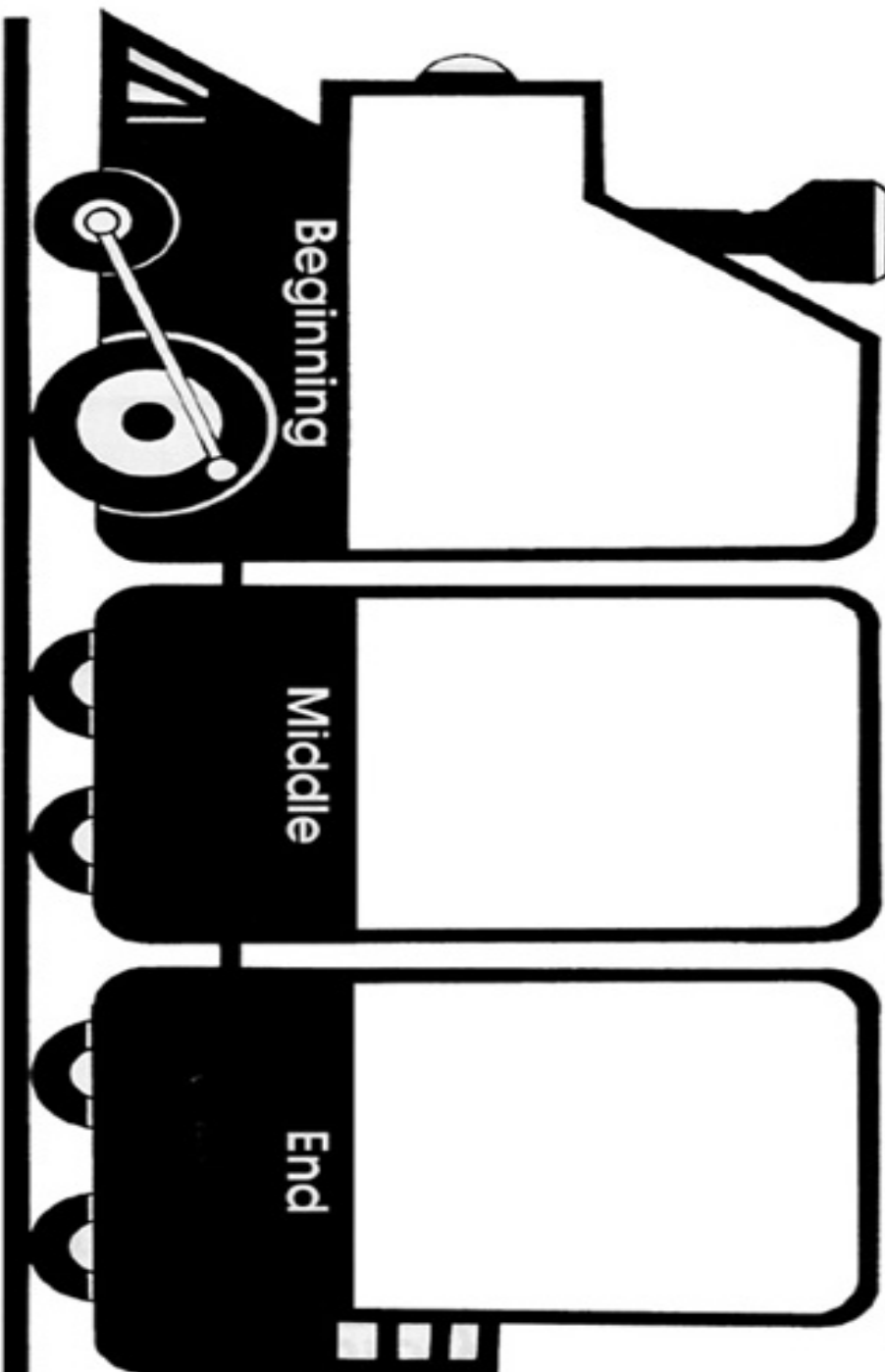
Description:

Appendix 3

Lesson 1

Duration 30 minutes

Text A Bike for Alex by Elsie Nelley (PM Level 15)

Materials RIDER prompt chart , paper, pencil, white board and markers

Before Reading

The students are told that they are going to be taught how to remember and understand what they have read by seeing pictures in their mind.

They are introduced to the RIDER strategy. Each letter of the acronym will be explained.

1 Read- Read a sentence, paragraph or page

2 Image- put a picture in your mind

3 Describe- say what you see

4 Evaluate- Check that what you have said is accurate

5 Repeat- go back and repeat steps 1,2, 3 and 4 for the next sentence paragraph or page.

Introduce the book 'A Bike for Alex. Ask the children if they have a bike. Ask the children to describe their bike. Read the story. Stop at page 8. The teacher will then model the RIDER strategy based on the information gained from page 8.

The teacher says, 'When I close my eyes I can see... The teacher draws the image that she can remember.

The teacher describes what is drawn on the paper. The text is then brought back. Teacher evaluates picture. Teacher states what has been included

The students are then given the opportunity to visualise the same picture. They draw what they can remember and describe their drawing.

 The text and the picture is then brought back and they evaluate what has been included

The students then state what they have learnt from the lesson and share what they enjoyed.

Lesson 2

Duration 30 minutes

Text The Big Red Apple by David Tunkin

Materials RIDER prompt chart , paper, pencil, white board and markers

Before Reading

The RIDER strategy will be reviewed with the children. Each letter of the acronym will be explained.

1 Read- Read a sentence, paragraph or page

2 Image- put a picture in your mind

3 Describe- say what you see

4 Evaluate- Check that what you have said is accurate

5 Repeat- go back and repeat steps 1,2, 3 and 4 for the next sentence paragraph or page.

Introduce the book 'The Big Red Apple'. Look at the text and title with the children. Ask, 'What do you think the story is about?'

During Reading

Teacher reads pages 2 and 3 of text. The teacher **models** the RIDER strategy to the students. Teacher thinks out loud and goes through each step of the RIDER strategy . I have read the first 2 pages. I now have an image of a large apple on an apple tree. I can also remember a little girl looking at the apple because she wanted to pick it and eat it.

The teacher then describes what she has drawn on paper. The teacher then brings back the text and evaluates the text in front of the children. She asks if anything else needs to be added to the picture.

Teacher re-reads pages 2 and 3 for the children. The children then go through the process of the RIDER strategy

The teacher reads on until pages 7 and 8. The teacher **models** the RIDER strategy.

Teacher re-reads pages 7and 8 for the children. The children then go through the process of the RIDER strategy individually. Teacher may prompt, ' What else could you include?'

After Reading

Children retell what has happened so far.

They also say what they have enjoyed and learnt with a partner

Lesson 3

Duration 30 minutes

Text The Big Red Apple by David Tunkin

Materials RIDER prompt chart , paper, pencil, white board and markers

Before Reading

The story is recapped by asking the students what has happened so far

Revise the RIDER strategy with the students

The RIDER strategy will be reviewed with the children. **Have the children state what each letter of the acronym stands for, before the prompt chart is shown to the children.**

1 Read- Read a sentence, paragraph or page

2 Imagine- put a picture in your mind

3 Describe- say what you see

4 Evaluate- Check that what you have said is accurate

5 Repeat- go back and repeat steps 1,2, 3 and 4 for the next sentence paragraph or page.

During Reading

Teacher reads pages 10 of text.

Teacher thinks out loud and models each step of the RIDER strategy. I have read page 10. I have an image of the apple in a big hole with leaves and dirt covering the apple.

The teacher then describes what has been drawn on paper. The teacher then brings back the text and evaluates the text in front of the children. She asks if anything else needs to be added to the picture.

Teacher re-reads page 10 the children. The children then go through the process of the RIDER strategy.

Teacher reads the last two pages of the book (pages 11 and 12).

The above process is repeated for page 12.

After Reading

Children retell what has happened in the story.

They also write down what they know about the RIDER strategy and then talk to a partner.

Lesson 4

Duration 30 minutes

Text Gregor the Grumblesome Giant by Allen Trussell-Cullen

Materials RIDER prompt chart , paper, pencil, white board and markers

Before Reading

The RIDER strategy will be reviewed with the children. **Have the children state what each letter of the acronym stands for, before the prompt chart is shown to the children.**

1 Read - Read a sentence, paragraph or page

2 Imagine- put a picture in your mind

3 Describe- say what you see

4 Evaluate- Check that what you have said is accurate

5 Repeat- go back and repeat steps 1,2, 3 and 4 for the next sentence paragraph or page.

Introduce the book 'Gregor the Grumblesome Giant'. Look at the text and title with the children. Ask, 'What do you think the story is about?'

During Reading

Teacher reads pages 2-8 of the text.

Teacher thinks out loud and models each step of the RIDER strategy. The teacher says, 'I have read pages 8 and 10'. I have an image of six stupendous salads and my other image is of eight enormous egg burgers.

The teacher then describes what has been drawn on paper. The teacher then brings back the text and evaluates the text in front of the children. She asks if anything else needs to be added to the picture.

Teacher re-reads page 8 to the children. The children then go through the process of the RIDER strategy.

The teacher continues to read up to page 12

The children imagine and draw a picture of page 12 (no teacher modelling)

 After Reading

Children retell what has happened so far.

They also say what they have enjoyed and learnt.

Lesson 5

Duration 30 minutes

Text Gregor the Grumblesome Giant by Allen Trussell-Cullen

Materials RIDER prompt chart , paper, pencil, white board and markers

Before Reading

The RIDER strategy will be reviewed with the children. **Have one child write what each letter of the acronym stands for.**

Teacher has a letter for each word on the whiteboard. The teacher does not have the prompt chart up for the students.

1 Read - Read a sentence, paragraph or page

2 Imagine- put a picture in your mind

3 Describe- say what you see

4 Evaluate- Check that what you have said is accurate

5 Repeat- go back and repeat steps 1,2, 3 and 4 for the next sentence paragraph or page.

The story is recapped by asking the students to write down what has happened so far.

During Reading

Teacher reads pages 14 and 16 of the text.

Children carry out each step of the RIDER strategy based on pages 14 and 16'.

The students each describe what has been drawn on paper. The teacher then brings back the text and the students and teacher evaluate their pictures.

After Reading

Children draw what they remember of the story.

They also say what they have enjoyed and learnt.

Lesson 6

Duration 30 minutes

Text The Fishing Trip (Erik program)

Materials RIDER prompt chart , paper, pencil, white board and markers

Before Reading

The RIDER strategy will be reviewed with the children. **Have the children state what each letter of the acronym stands for.**

Teacher has a written letter for each word written up on the whiteboard. The teacher does not have the prompt chart up for the students.

R

I

D

E

R

Introduce text 'The Fishing Trip'. Use the title of text and illustration to orient the students' prior knowledge about this topic.

During Reading

Teacher reads the text to the students.

After reading the first section, the students are encouraged to draw using RIDER. The RIDER cue cards will be shown to the students to assist them.

The students each then describe what they have drawn on the paper. The teacher then brings back the text and evaluates the drawing details with the children.

This process will then be repeated with the rest of the story.

After Reading

Children retell what happened in the story.

They also say what they have enjoyed and learnt.

Lesson 7

Duration 30 minutes

Text Chicken Pox (Erik program)

Materials RIDER prompt chart , paper, pencil, white board and markers

Before Reading

The RIDER strategy will be reviewed with the children. **Have the children state what each letter of the acronym stands for.**

Teacher writes a letter for each word. The teacher does not have the prompt chart up for the students.

R

I

D

E

R

Introduce text 'Chicken Pox'. Use the title of text and illustration to orient the students' prior knowledge about this topic.

During Reading

Teacher and students read the text together.

The text is then read together again.

After reading the first section, the students are encouraged to visualise using RIDER. The RIDER cue cards will be shown to the students to assist them.

Each student will describe what he/she has visualised. The teacher then brings back the text and evaluates the visualised details with the student.

This process will then be repeated with the next part of the story (different students will be chosen to share what they have visualised.)

For the last section of the story the children draw what they have visualised.

After Reading

Children retell what happened in the story.

They also say what they have enjoyed and learnt.

Lesson 8

Duration 30 minutes

Text What a Day (Erik program)

Materials RIDER prompt chart , paper, pencil, white board and markers

Before Reading

Teacher holds up a letter for each word. The teacher does not have the prompt chart up for the students.

R

I

D

E

R

Have each student describe one letter, and what it stands for, to the group

Introduce text 'What a Day'. Use the title of text and illustration to orient the students' prior knowledge about this topic.

During Reading

Students read the text together.

After reading the first section, the students are encouraged to visualise using RIDER. The RIDER cue cards will be shown to the students to assist them.

One chosen student will describe what he/she has visualised. The teacher then brings back the text and evaluates the visualised details with the student.

This process will then be repeated with the rest of the story (different students will be chosen to share what they have visualised.)

For the final part of the story the students draw what they have visualised and then check their accuracy with the text..

After Reading

Children retell what happened in the story.

They also say what they have enjoyed and learnt.

Lesson 9

Duration 30 minutes

Text Ross and Jack go Camping (Erik program)

Materials RIDER prompt chart, paper, pencil, white board and markers

Before Reading

Teacher holds up a letter for each word. The teacher does not have the prompt chart up for the students.

R

I

D

E

R

Have each student describe one letter, and what it stands for, to the group

Introduce text 'Ross and Jack go Camping'. Use the title of text and illustration to orient the students' prior knowledge about this topic.

During Reading

Students read the text independently.

After reading the first section, the students are encouraged to visualise using RIDER. The RIDER cue cards will be shown to the students to assist them.

One chosen student will describe what he/she has visualised. The teacher then brings back the text and evaluates the visualised details with the student.

This process will then be repeated with the rest of the story (different students will be chosen to share what they have visualised.)

After Reading

Using a story train the students will draw as much as they can remember of the story. (beginning, middle and end)

They also say what they have enjoyed and learnt.

Lesson 10

Duration 30 minutes

Text A Day at the Beach (Erik program)

Materials RIDER prompt chart , paper, pencil, white board and markers

Before Reading

Teacher holds up a letter for each word. The teacher does not have the prompt chart up for the students.

R

I

D

E

R

Have each student describe one letter, and what it stands for, to the group

Introduce text 'A Day at the Beach'. Use the title of text and illustration to orient the students' prior knowledge about this topic.

During Reading

Students read the text independently.

After reading the first section, the students are encouraged to visualise using RIDER. The RIDER cue cards will be shown to the students to assist them.

One chosen student will describe what he/she has visualised. The teacher then brings back the text and evaluates the visualised details with the student.

This process will then be repeated with the rest of the story (different students will be chosen to share what they have visualised.)

After Reading

Using a story train the children will draw as much as they can remember of the story.

They also write about what they have enjoyed and learnt.

They also write down what each letter of the acronym represents.

Appendix 4

Name	Control = 0 Teaching=1	Age in MONTHS	Gender 0=Male 1= Female	Years of Schooling	ESL No=0 Yes=1	Earlier Intevention No=0 RR=1 Bridges=2 ERIK=3…	Alpha Assess Running Record	EMA No=0 Yes=1
A	1	97	M	2 years	0	1	14	0
B	1	92	F	2 years	0	0	20	0
C	1	100	M	2 years	0	0	28	0
D	1	92	F	2 years	0	0	27	0
E	0	98	F	2 years	0	0	21	0
F	0	91	F	2 years	0	0	27	0
G	0	98	M	2 years	0	0	21	0

Name	Attendance No. of sessions	Visualisation Test raw PRE	Visualisation Test raw POST	Pat R raw PRE	Pat R raw POST
A	10	9	19	2	13
B	10	11	21	5	9
C	10	17	14	19	19
D	10	26	24	13	18
E	10	27	25	10	17
F	10	24	22	21	22
G	10	5	8	18	20