

Teaching visualisation through R.I.D.E.R to year five students who have difficulty interpreting the text will improve their reading comprehension.

Abstract

Many students experience difficulty in comprehending what they read. They may be able to decode words competently and look like competent readers but when you investigate a little further, they are unable to follow the storyline. They fail to understand, interpret and infer meaningful content from the written passage. The purpose of this study is to explore the effects of visualisation and the R.I.D.E.R (Read, Imagine, Describe, Evaluate and Repeat) strategy devised by Clark, Deshler, Schumaker, Alley and Warner (1984) upon three year five students who have comprehension difficulties. This strategy entails visual imagery being taught with an oral language component. The method of teaching used in this study to teach visualising and the R.I.D.E.R strategy is based on the Collins, Brown and Newman (1989) model; modelling, coaching, scaffolding, articulation, reflection and exploration.

This study compared two groups; the control group who weren't taught visualisation and the intervention group who were explicitly taught visualisation and the R.I.D.E.R strategy. The results from this study indicated, that teaching visualisation through R.I.D.E.R can benefit students who have comprehension difficulties. Through the students' application of this strategy, there was definite improvement in the overall comprehension scores from the pre test to the post test results. Thus, implicating that continued teaching of this strategy over a longer period of time will bring about further understanding and comprehension of reading.

Introduction

Comprehension can be described as an active process making meaning from visual and non visual information. Susan Hill (2006) discusses that comprehension is the understanding not only of written text but also of illustrations, layout and design. She states that comprehension is the act of concurrently extracting and constructing meaning from the text. Without this process reading is meaningless, the reader makes no connection to the passage and isn't able to extract information from the text. Readers subsequently lose the purpose of reading and struggle comprehending what they read or hear. They lack the ability to grasp the meaning and ideas in a written or oral piece of work. Hence, many of today's students have difficulty comprehending, making connections and understanding information read.

Many low ability readers are able to simply decode all the words in a passage, 'barking at print' or listen attentively to the speaker; however, they often experience difficulty comprehending the actual passage or the message. These problems often occur due to the style of language used, particular genre, discourse or the students' knowledge on the topic. Furthermore, the student works too hard at decoding the text, and therefore has no more working memory space to retain or work out the meaning of the text. Readers must understand that there is more to reading a text than simply reading words.

The Australian Government Department of Education, Even Start Program (2008) states that comprehension can occur at a number of different levels of meaning. Comprehension looks at literal meaning -the exact meaning taken from the text, inferential meaning- being able to think about the implications of what has been said and critical meaning-the capacity to see through a text. Within these varying comprehension levels there are a number of different strategies that a proficient reader uses to comprehend the text. To name a few of these strategies, they may predict, question, make mental images, seek clarification and construct summaries. A good reader is able to move throughout these levels and strategies independently and flawlessly; however, the reluctant and low ability readers with comprehension difficulties, have problems moving through these various levels and taking an active role in their reading.

For the purpose of this research visual imagery or visualisation has been identified as a key comprehension strategy to be taught to the low ability readers who have difficulty with comprehension. Visualisation is the ability to build mental pictures or images while reading. It is a strategy that encourages the student to take on an active role whilst reading and assists with developing their level of understanding. The student needs to create visual images before, during or after reading, drawing upon their own prior knowledge or experiences, in order to make meaningful connections to the text. They simply close their eyes and using their senses imagine the scene, character, event or object, thereby becoming more actively engaged in their reading. Given today's technology, readers are surrounded by visual imagery: television, movies, computer games, playstations, Nintendo DS, Wii, videos and illustrated text. However, this bombardment of visual imagery doesn't mean the reader is able to create mental pictures that would support their learning. Visualisation allows the reader to draw conclusions, create interpretations and recall details from the text. A reader should be asking questions, thinking and processing whilst reading.

Stephanie Harvey and Anne Goudvis (2000) identify that visualising is fun and they liken it to creating a movie in your mind and refer to visualising as personalizing reading. In addition Carolyn Danko (1992) uses the analogy of the reader taking on the role of a video recorder whilst reading. The reader's brain acts as the camera and the "playback" feature is activated at the end of each paragraph using the technique of self questioning and retelling. The recorder / reader needs to retain as much information by making pictures in the mind and consequently making meaningful connections to the text. Danko found this strategy useful and beneficial to readers. Unfortunately, visualising images is not necessarily an easy process, as a reluctant and low ability reader often claims to "see nothing" as they read.

Harvey and Goudvis (2000) further support the theory of reading, as a process by which the reader is actively engaged with the text using metacognitive comprehension skills effortlessly. This process involves the strategy of thinking and interpreting the text, which can occur at a number of different levels. Manning (May 2002) similarly argues the notion that low ability readers need assistance in becoming involved in the text. She talks about low ability readers lacking background knowledge which restricts the reader from making mental pictures of an event or situation; they also pay little attention to punctuation and phrasing. She believes they need to slow down their reading, in order to become more involved with the text, consequently activating pictures in their mind thus developing a deeper level of comprehension. Linda B. Gambrell (1993) additionally discusses that mental images allows the reader to construct relations between the parts of the text, the readers' knowledge and experiences. Thus making the stories come to life.

Allan Pavis (1991) similarly talks about mental imagery and its relationship to understanding and processing a text. His theory, dual coding, involves two distinct sub systems, which are characterized as verbal and non verbal. The verbal is when knowledge is represented as words and the non verbal is when the perception of an experience is retained through vision. Pavis believes that the verbal system contributes to logic, order, direction and organisation of information, whereas the nonverbal system organises information as images. These images help the reader initially with memory and soon expand to other areas of cognitive development. This process allows the reader to create mental images in the mind when they hear or read words. Unfortunately, the reluctant reader struggles to make these connections because of limited vocabulary, background experience, or the complexity of the text. Even so, dual coding is important in the development of a reader's comprehension.

Clark, Deshler, Schumaker, Alley and Warner (1984) devised a strategy that centred on visualization to assist comprehension. This strategy is known as Reading, Imagine, Describe, Evaluate and Read on (R.I.D.E.R), which is used to develop the readers' ability to engage with the text creating images within their mind. The R.I.D.E.R strategy, allows the reader to process any information and turn it into a mental image in their mind. It explores the concept of reading the text, creating a mental image or movie in the mind, describing this image, evaluating this image against the read text and then either read on or repeat the steps to seek further clarification. It is a strategy which can be transferred across to all educational domains.

Recent research shows that visualising does assist a reader's level of comprehension and understanding of a text. Hibbing and Rankin-Erickson (May 2003) discuss that mental imagery when taught to students enhances their comprehension and strengthens the inferential thinking, ultimately enhancing the reader's understanding. These two skills are not used in isolation but rather intersect. When we visualise we are inferring, using mental images rather than words and thoughts. Inferential comprehension seeks to connect the reader's prior knowledge and experience in order to enhance the reader's understanding of a text. Furthermore, researchers have found that visualisation aids a reader's level of comprehension, no matter what age. They have in addition found that prompting and modelling visual imagery may still be required as many low ability readers will not independently use this process until they see the value and experience the success of this comprehension strategy (ibid).

This present study aims to examine the impact of how explicit teaching of the R.I.D.E.R. strategy developed by Clark, Deshler, Schumaker, Alley and Warner (1984) to three students who have difficulty in comprehending a text, will improve their comprehension level. The study hopes to further develop the earlier research and examine the influence of visualising in regards to comprehending a text.

Hypothesis

Teaching visualisation through R.I.D.E.R to year five students who have difficulty interpreting the text will improve their reading comprehension.

Method

Design

This study uses a naturalistic design in the context of a small group who have been withdrawn from the classroom. Visualising and inferential strategies were taught to improve the student's comprehension level.

Participants

The three students chosen to participate in the study are currently in year five and have a history of comprehension difficulties. The group is made up of two boys and one girl with the average age of eleven. All three students are independent readers, only student T has a reading age below his chronological age. The other two students are reading above their chronological reading age as deemed by the Neale Analysis, but all three present with problems in comprehension.

There is no child on the Educational Maintenance Allowance, nor is any student funded or classified as English Second Language, as shown in Table 1. However, of the three students, two are occasionally exposed too and can speak another language other than English at home and with grandparents. However, it is not their dominant language.

Student G comes from a divorced family, which does affect his self esteem and at times impacts on his learning. Student T has a sibling who has some severe behavioural issues which frequently impacts on this student. He is often tired and less focused at school. Student S is busily involved in out of school dance lessons and at times auditions.

These three students have not had any formal literacy intervention programs such as Reading Recovery. However, they all have been given some form of extra support in literacy since year three, for varying periods of time.

The students were chosen for this study based on previous academic results, such as last year's Torch, this year's Probe and after consultation with the classroom teacher and Literacy Leader. Both teachers felt that extra assistance would benefit the development of the students' comprehension.

Table 1

Name	Control = 0 Teaching=1	Age in months	Gender 0=M 1= F	Years of Schooling	ESL No=0 Yes=1	LNSLN funding 0=SLD 1=ID 2=Asp	Earlier Intervention No=0 RR=1 Bridges=2 ERIK=3...	Reading Age pre test
T	1	126	0	6	0	0	0	8.9
G	1	132	0	6	0	0	0	12.4
S	1	127	1	6	0	0	0	Above - off scale
D	0	129	0	6	0	0	0	8.3
M	0	139	0	6	0	0	0	11.1
TT	0	129	0	6	0	0	0	7.11

Materials

The following are the materials used in this research;

- ❖ Neale Analysis of Reading Ability third edition (Neale, 1999). This was used to determine the level of comprehension the students had prior to and after the intervention sessions. Standardised Test Form 1 was used for pre testing and Form 2 for post testing. The results were then standardised using the Neale Analysis Manual.
- ❖ Visualizing and Verbalizing Stories, Book 1. Nanci Bell. This book contains original stories written specifically for visualizing. The stories often focus on the imagery of colour, size and movement. The stories start off with two – six sentences and then move to three – four short paragraphs. The stories are specifically written to develop the students' comprehension and critical thinking.
- ❖ Introducing Inference –written by Marilyn M. Toomey. This book contains various picture scenarios where the children would need to visualise and consequently infer what has happened or about to happen. It also has several worded passages, again looking at visualising and inferential meaning.
- ❖ R.I.D.E.R cue cards, which had definitions explaining each step. These definitions were taken from Catholic Education Office Speech Pathology – Language Program Comprehension Strategies.
- ❖ Running records from the Neale Analysis were used to ascertain the student reading levels, comprehension strategies and observe their reading behaviours.

Procedure

Prior to our intervention sessions commencing, each student was individually withdrawn and tested on a one to one basis, in a quiet setting using the Neale Analysis of Reading Ability- Form 1.

Drawing upon the results of the Neale Analysis, it became apparent that the children had problems with understanding the stories, especially as the stories got harder. The students were able to mostly 'bark at the print' though struggled with inferential aspects of these stories and at times literal components. It became clear to the teacher that the children needed work in visualising what they were reading, whilst reading, in order to comprehend the text.

The intervention teaching sessions were conducted with a small group of three, five times a week for a period of forty-five minutes, for two and a half weeks consecutively. The sessions were conducted in the morning at 10.00am on Monday, Thursdays and Friday and at midday on Tuesday and Wednesday, due school timetabling. The students were withdrawn from their classroom, in order to

get maximum concentration and input and because the intervention teacher wasn't the students' classroom teacher. The sessions took place in a smaller but still comfortable non specific classroom.

The first, fifth and final session were videotaped in an attempt to monitor the progress that the students had made over these sessions. Work samples were also collected after each session, to further gauge the students' progress.

The first session was purely an introductory session, where the teacher was trying to assess the students' prior knowledge of Visualising, through oral discussion. This oral discussion was recorded on a 'Before and After Chart' and videotaped. The students were then exposed to a few different visualizing activities in the first session to establish a brief understanding of what making a mental image means to each student. These scenarios dealt in visualising a particular room or meal and then retelling it to the group. The students were encouraged to image the whole picture, for example; locations, characters, facial expressions and environmental factors. The teacher modelled the focus and then scaffolded the students in a similar activity. The teacher then wrote up a sentence on the board and using the sentence starter, "In my mind I see....." described to the children what mental image was seen. The teacher drew this image on the whiteboard, to share the image with the students. Next the students had to carry out the same activity, describing their mental images. Once these images were described, the students then had to draw what they saw. The students were not given pictures to support the written text on the board.

The next four sessions started with a review of the previous session in an attempt to monitor the students' understandings. The sessions then moved into a warm up activity whereby the students had to partake in a visualising activity, similar to session one. Students were given a scenario whereby they had to create a visual image and then describe it to the group. At this stage the teacher would guide and prompt the students to support their learning.

During session three the Reading, Imagine, Describing, Evaluating and Read on (R.I.D.E.R) cue cards were also introduced to aid the students' understanding of visualising. These sessions ran similar to session one, however, the teacher took on more of a coaching role. In session five, the students were exposed to various visualising cards which took on either a written format or a picture. The picture required the students to visualise, infer and describe what may have happened in the prior scenario. These cards became the warm up activities in future sessions. In session seven to ten, the teacher faded her role allowing the students to develop more independence in completing tasks. The style of teaching used in these sessions is based on the Collins, Brown and Newman (1989) teaching model.

At the end of each session, the students were asked to reflect on their learning, articulate what they had learnt and identify when they could utilise these strategies.

The last session looked at completing the groups' 'Before and After Chart' and revisiting what they now understood visualising meant to them. The students were expected to use the R.I.D.E.R strategy with minimal support from the teacher. It was expected that the students would automatically use visualising whilst reading to make meaningful connections to a text. A more in-depth lesson brief can be found in Appendix 1.

On the completion of the ten sessions, the intervention students were given R.I.D.E.R bookmark to assist with their future learning. The following week, individual assessment was completed using Form 2 of the testing reader from the Neale Analysis Reading Ability kit. This took three days as six children were tested. This test took about forty – five minutes and was administered in a quiet room by the intervention teacher.

Results

Overall the comprehension results indicate support for the hypothesis that teaching year five students, who have difficulties with comprehension, the visualisation strategy of R.I.D.E.R increases their understanding of text. It would seem the ten intervention lessons had some impact on the intervention group as they have shown an improvement with their level of comprehension in contrast to the control group. The overall gain for the intervention group was of an average of three point six. However, the Reading Accuracy of the intervention group dropped slightly by an average of three.

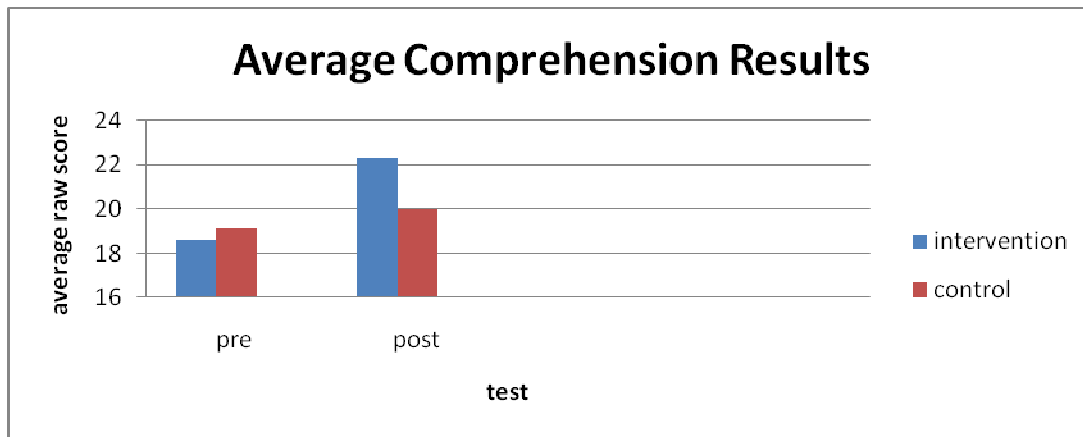


Figure 1

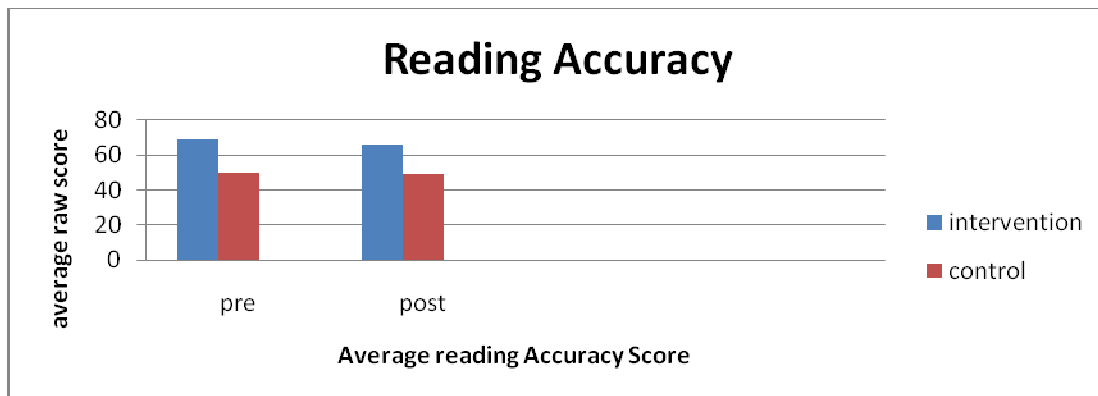


Figure 2

Looking more closely at the initial pre testing student results, it would appear that the control group was marginally stronger in comprehension (Figure 1) though slightly weaker in word accuracy (Figure 2). The intervention group after pre testing had a Comprehension raw score average of eighteen point six, which is below the standard average as deemed by the Neale Analysis of Reading Ability 1999, whereas the control group had a comprehension raw score average of nineteen point one, a difference of point five, which is also below average. On the other hand, the Reading Accuracy pre test raw score average of the intervention group was sixty nine which is average for the number of

schooling years. In comparison the control group's Reading Accuracy raw score average was sixty six which is also deemed average by the Neale Analysis. Consequently, the difference between the two groups, pre test in Reading Accuracy, is only three points.

The post testing results, on the other hand, of the Comprehension and Reading Accuracy appear to show that the intervention group have benefitted from the explicit and scaffolded visualization sessions. Figure 1 shows the intervention group started with a Comprehension raw score average of eighteen point six and when tested at the completion of the ten intervention sessions finished with an average raw score of twenty two. Thus, finishing with an overall improvement Comprehension raw score averages of three point seven. Though the final average result of twenty two still has the intervention group below average for the number of years the students have been at school, it needs to be noted that this result is only one point from being deemed average. The control group in comparison shows that their pretesting comprehension raw score average was nineteen point one and when post tested their raw score comprehension average was twenty, a difference of only point nine. These results still place the control group below average.

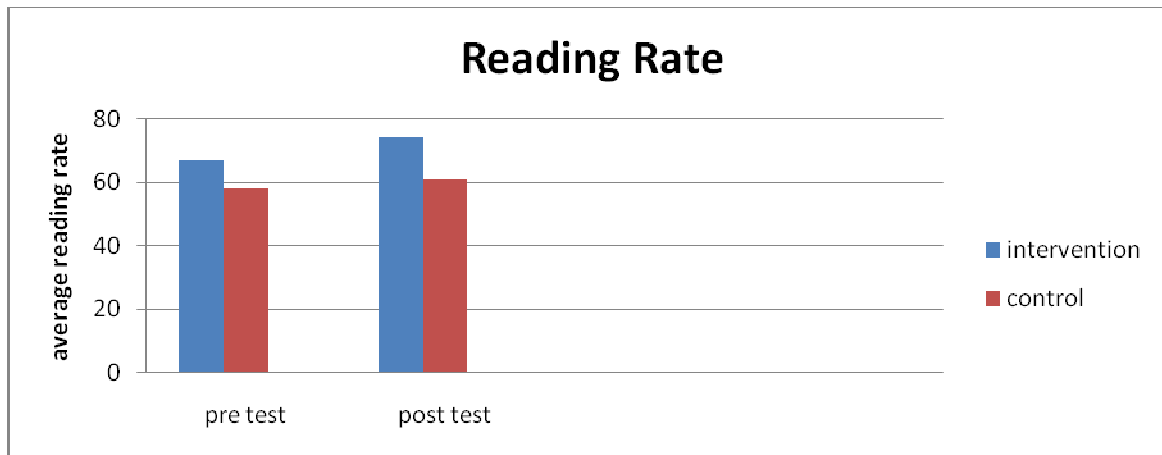


Figure 3

The overall results also indicate a marginal improvement in both groups' Reading Rate as shown in Figure 3. The intervention group had a reading rate average of sixty – seven after the pre test. This average Reading Rate improved by seven point two in the post test. The intervention group finished with an average Reading Rate of seventy –four point two. In comparison, the control group pre tested with an average Reading Rate of fifty-eight point two and post tested with an average of sixty one an improvement of two point eight.

When analysing each individuals' results, Table 2 looks at both the intervention and control groups' pre and post testing results, reading either the five or six level texts within the Neale Analysis of Reading Ability. It shows each individual student's progress and journey throughout the testing phase of this project. It also shows the percentile rank each child has achieved. This table first looks at the intervention group pre test and then post test results. It then proceeds to look at the control group and their pre and post test results.

Neale Analysis Pre and Post Results Table

Table 2

Name	text 1	text 2	text 3	text 4	text 5	text 6	total	% rank		text 1	text 2	text 3	text 4	text 5	total	% rank
T	4	8	2	2	3		19	21		3	5	7	3	0	18	13
G	3	4	3	2	1	3	16	12		4	6	7	3	1	21	19
S	3	7	5	2	4	0	21	25		4	7	7	6	4	28	44
TT	4	7	4				15	10		4	5	6	4		19	15
D	4	8	6	3			21	25		4	6	4	5		19	15
M	4	8	3	3	1	3	22	26		3	7	6	3	3	22	22

%

As shown in Table 2 the intervention group’s pre-test score ranged between sixteen and twenty one and their post test scores ranged between eighteen and twenty eight. Student T started with an overall comprehension score of nineteen after the pre testing and finished with a post score of eighteen after the ten intervention sessions. Student G began the intervention sessions with a comprehension score of sixteen and completed the post test with a score of twenty one. Student S had an overall comprehension score of twenty one after pre testing and completed the post test with a score of twenty eight. In contrast the control group’s comprehension pre testing score ranged between fifteen and twenty–two and the post test score ranged between nineteen and twenty two. Student TT began with an overall comprehension score of fifteen and finished with a score of nineteen. Student D pre tested with an overall comprehension score of twenty one and post tested with a score of nineteen. Student M pre tested with an overall comprehension score of twenty two and also finished with a score of twenty two.

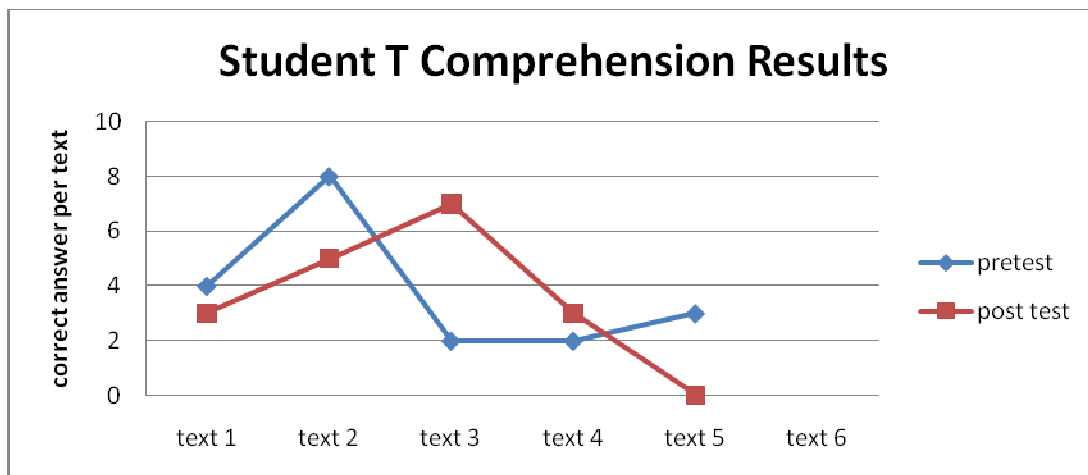


Figure 4

As shown in Figure 4, Student T actually dropped very marginally in the level of comprehension, therefore, showing no major gain from the visualization intervention sessions. Student T pre tested with a raw score of nineteen in comprehension, which according to the Neale Analysis Reading Ability Scale places student T in the category of Below Average. Student T then post tested with a comprehension raw score of eighteen after ten intervention sessions. This result kept student T in the Below Average performance descriptor as deemed by the Neale Analysis. Student T needed a gain of four points in order to be ranked as an average performer. Student T was able to read up to and including text level five in both tests, however, as shown in Table 2 wasn't able to correctly answer any questions in text level five of the post test. Student T did, however, improve on the reading accuracy scale moving from below average pre test to average post test for the number of years at school. This improvement was of twelve points and placing student T in the bottom third of average performance descriptor. Student T started with a percentile rank of twenty –one after pre testing in comprehension however, he finished with a percentile rank of thirteen after post testing. He did move from stanine three to four in his reading accuracy, however, he didn't move stanines in the comprehension or reading rate.

Analysing Student T's results closely you can see that student T was more consistent with correct answers in the post test than in the pre test. Student T was able to answer on four occasions out of five, three or more correct questions as opposed to three out of five in the pre test. On one occasion student T was able to answer seven correct questions in the post test. In addition, on only one occasion, student T scored below three and that was when reading text five which proved hard to all students both decoding and comprehending. Though student T didn't improve overall, it can be suggested that some gain did occur. Student T was more consistent in the post test than in the pre test and appears to have had a wider spread gain across the post test bell curve, rather than a slight spread as in the pre test.

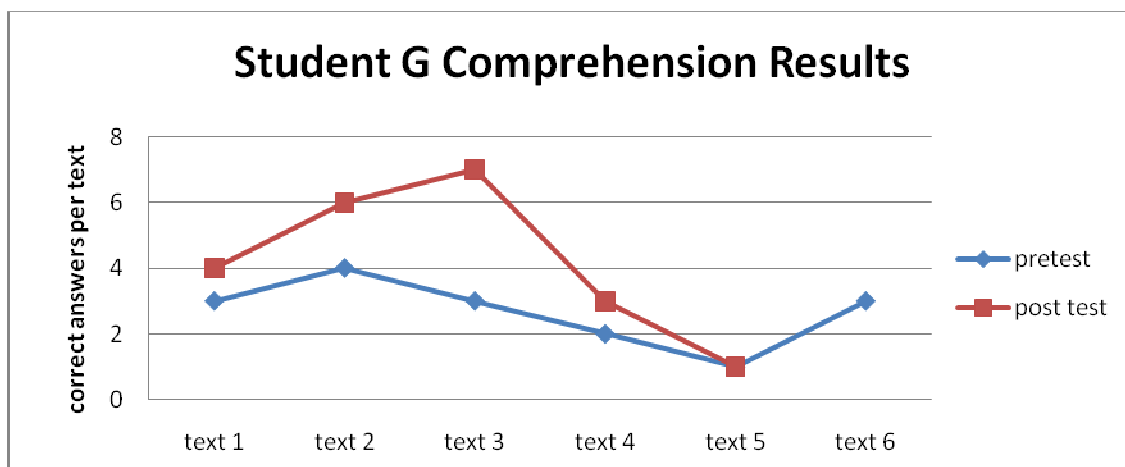


Figure 5

Student G in contrast demonstrated an improvement in the level of comprehension through the teaching of R.I.D.E.R. However, when comparing student G's post results to the performance descriptor of the Neale Analysis Student G still sits in the Below Average range for comprehension. In other words, though there were gains in Student G's comprehension, there weren't significant gains

overall when comparing the results against the Neale Analysis. Student G correctly answered three or more questions four out of six times when pre tested. In contrast student G performed better in the post test, correctly answering three or more questions four out of five times. Student G was also able to answer four or more questions correctly on three occasions. Student G on one occasion correctly answered seven questions in the post test, which is a great feat as student G wasn't able to score higher than four correct answers at a given time in the pre test.

Student G performed more consistently in the post test and appears to have had a wider gain spread across the post test bell curve. In contrast student G's pre test results weren't as wide spread, therefore showing a reasonable improvement in Student G's comprehension post test results. Though there was some reasonable improvement, Student G remained with a stanine score of three in comprehension. He did however, move from a percentile rank of twelve (pre test) to nineteen (post test), keeping him still Below Average for his years of schooling.

Student G did however, drop a little with word accuracy, four points, however, this result still places student G in the average performance descriptor for word accuracy. This drop did however impact on his stanine score, which dropped from five to four. Student G was able to read all six texts in the pre test however, like the other students, was only able to read five texts in the post test. His reading rate did improve from the pre test and post test by sixteen points, placing him in stanine four and within the average range for the years of school.

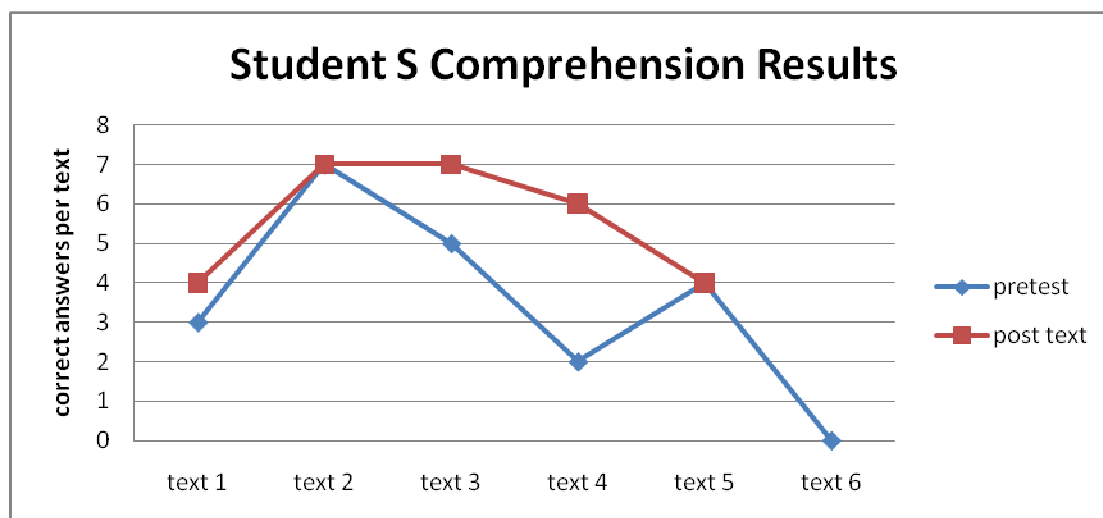


Figure 6

Student S likewise showed significant improvement in the use of R.I.D.E.R to assist with the comprehension of a text. Student S stayed within the bottom third of the average range of the performance descriptor using the Neale Analysis. She improved by seven raw points in her post test placing her in stanine five. She moved from percentile rank of twenty-five to forty-four after post testing. Student S's reading accuracy dramatically dropped by sixteen raw scores from pre testing to post testing, however, it still kept student S within the average range of performance. She dropped from stanine five to four. Student S was able to read all six texts in the pre testing and correctly answered three or more questions five out of six times. In contrast Student S was only able to read

up to text level five in the post test, however, correctly answered four or more questions five out of five times. Her reading rate didn't alter too much with only a drop of one point, which kept her in stanine four. On no occasions did student S score zero in post testing. On two occasions student S scored seven correct answers. Student S showed consistent improvement in post test comprehension in contrast to the pre test results. Student S showed a wide spread gain when comparing against the bell curve of the post test, as opposed to an inconsistent performance during the pre test.

Student S overall performed more consistently during the post test and when comparing against Student T and G and was the student who made the most gain. Student G improved the most by seven points, second was student G with an improvement of five points and last was student T with a drop of one point.

Students in the control group on the other hand, demonstrated only a marginal area of improvement from their pre test to their post test.

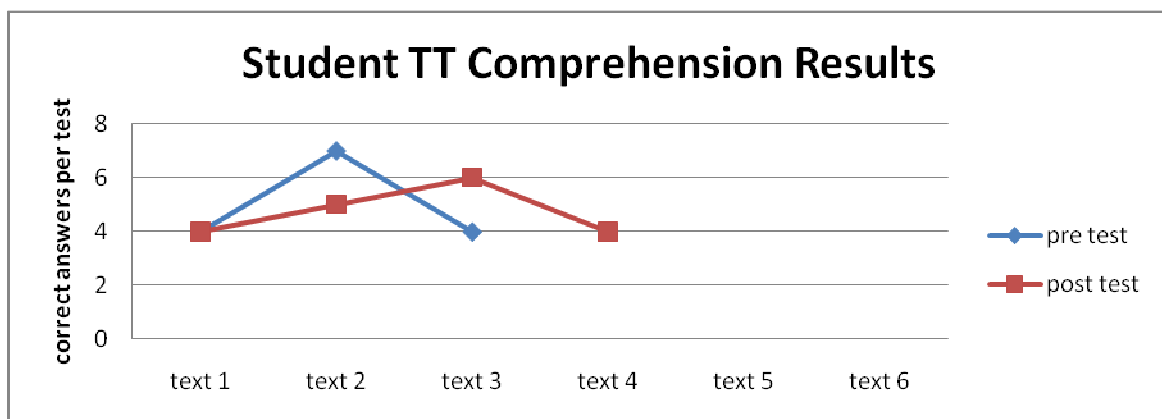


Figure 7

Analysing Student TT's results (Figure 7), it is evident that student TT was able to read and answer four texts in the post test as opposed to only three texts in the pre test, thus improving the overall score of the post test results. This student demonstrated a slight improvement by four points. He moved from stanine two to three in comprehension and from very low to below average in performance. This altered his percentile rank from ten to fifteen. During the post test, Student TT answered on two occasions four correct questions and on two more occasions correctly answered questions with scores of five and six respectively. However, during the pre test, Student TT answered correctly four questions twice and only on one other occasion correctly answered above four questions. His reading accuracy remained the same score and so to his stanine score of three. He did however, drop from stanine three to two in regards to his reading rate, placing him in the very low performance descriptor.

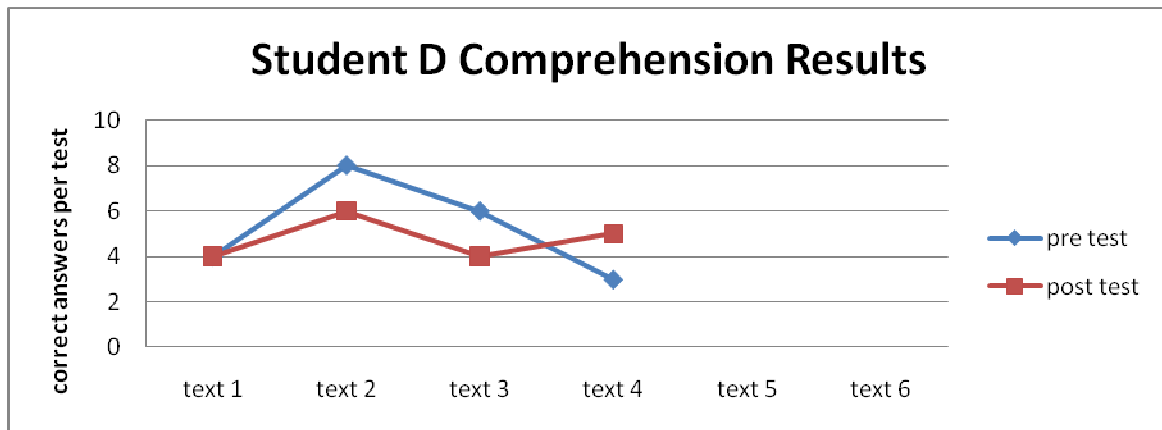


Figure 8

Student D (Figure 8) in contrast was able to read four texts in both the pre test and the post. This student actually declined with its score level of comprehension. He dropped one stanine in his reading accuracy, dropping from stanine three to two, placing him in the very low performance descriptor. Student D started with a percentile rank of twenty-five, however, finished with a rank of fifteen. Looking closely at the results Student D was able to correctly answer on three occasions four or more questions and only once answered below four during the pre test. However, whilst answering questions in the post test, Student D wasn't able to answer above six questions correctly as was the case in the pre test. Student D only answered correctly four to six questions on the four occasions. Student D's comprehension declined by two points which placed him in stanine three for comprehension and below average. However, he did improve in his reading rate, finishing with a stanine score of four and a performance descriptor of average.

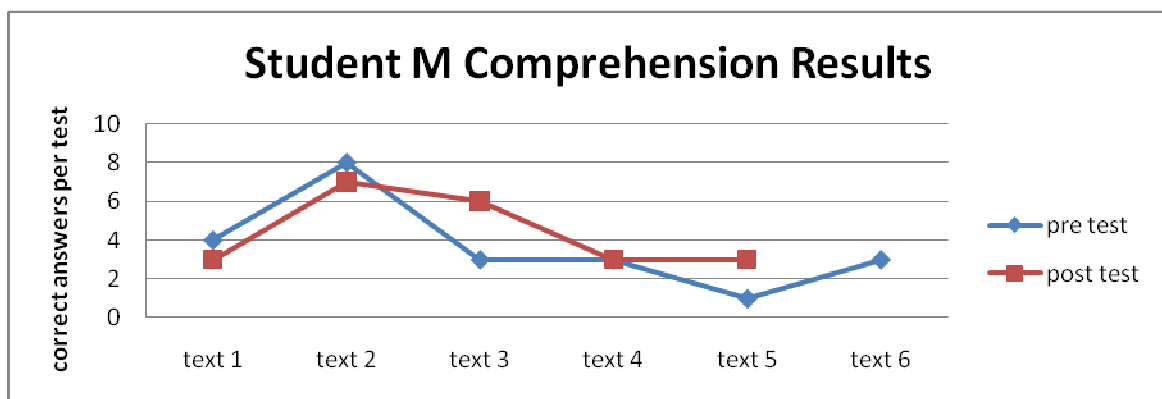


Figure 9

Student M was able to read all six texts in the pre test and only able to read five in the post test. Student M remained level with his previous comprehension test results. However, the score of twenty-two in the post test, positions student M in the stanine of three and the descriptor of below average, whereas, this score in the pre test had student M in stanine four and descriptor average. Though his comprehension scores remained the same, his percentile rank changed. He went from

twenty – six to twenty-two. The post test results for student M, however, shows a more consistent performance as opposed to the pre test results. Student M answered on five occasions three or more correct answers and on no occasions scored less than three in the post test. In contrast, Student M in the pre test scored below three once, with a score of one. Student M also improved in his reading rate, lifting himself from stanine two to three. This stanine score does however position student M below average for his years at school, however, he has progressed from very low. Student M has remained in stanine four in regards to his reading accuracy, even though he dropped by one point.

It should be noted that all of the intervention and control students didn't read text level six of the post test due to the level of difficulty they all had decoding text level five.

Discussion

The results of this study support the hypothesis and research that teaching year 5 students who have difficulties with comprehension, the visualisation strategy of R.I.D.E.R will improve reading comprehension. Students in this study demonstrated some gain in reading comprehension and though this gain was marginal, there was nevertheless improvement. Whilst the strategy of visual imagery should be continually emphasized for a period of time after this study to the intervention group, this strategy should bring about continued significant change. Trends indicate the results are beneficial and these results can be supported by the study of Clark et al (1984) which resulted in the improvement of comprehension scores of over 30% for students who were taught the R.I.D.E.R strategy. Studies by Danko (1992) also support the findings that visual imagery benefits the reader's ability to understand the text.

Whilst these results have supported the prediction, there are a number of factors that need to be addressed when looking more deeply at this study's results. Anecdotal records from the post testing will show that both groups found the level texts used in the Neale Analysis post test were far more difficult than the pre test level texts. Students from both groups struggled decoding and connecting to these post level texts. The level texts in the post test referred to knights and dragons and submarines and scuba diving, topics that today's students may have very limited experience with. These notes also indicate the need to pre teach vocabulary before reading as supporting the reader is crucial for understanding the text as suggested by Munro (2010). Both tests also required the reader to read at least four to five passages and answer six to eight questions per passage which can be quite draining to any reader, let alone reluctant readers. The students tire after about the fourth text and start to lose focus, ultimately impacting on their comprehension results.

The performance of each student also varied depending on the post level texts read and the connection the students made to these passages. The majority of the students weren't able to make meaningful connections to the levelled texts four, five or six of both tests, which impacted on their performance. However, during the intervention sessions, the students' performance was less varied as they helped one another interpret pictures and any read text. The intervention sessions in addition delved more into the oral language development and discussion as opposed to the individual testing sessions. The intervention sessions were also less formal than the testing sessions.

Furthermore, it should be remembered that testing doesn't always give a true indication about an individual's abilities, the scores simply tell us an end result, not the journey they have taken. Student T for example, appeared less pressured and more relaxed during the intervention sessions than during the post test, which could contribute to his lack of improvement in the post test results. Student T was more talkative and made many connections during the intervention sessions, unlike his post test performance.

Whilst the results have shown support for the hypothesis another variable that can't be measured, but must be noted are the students' themselves. For instance, Student T is an eleven year old student who has a young baby brother born earlier this year and another brother two years younger than himself. The younger brother has behavioural issues both at home and at school and whilst this

behavioural issue is being monitored, it still impacts on student T's emotions. Often issues arise from the home which affects student T's focus and learning capacity, which is beyond an eleven year olds control.

During the intervention sessions student T attended all sessions, and was able to make mental pictures and describe them to the group with minimal assistance. Student T was an active member of the group always contributing and showing an understanding of R.I.D.E.R. However, student T is a restless student who at times has a low attention span, thus contributing to learning issues. Nevertheless, during the intervention session's student T was allowed the freedom to move about and at times was reminded to stay on task which had a beneficial effect on student T's comprehension during intervention sessions.

Upon reflection, student T rushed his thinking during the post testing and didn't use the text at any time to assist with answering the questions if needed. This is not necessarily a true indication of the progress this student had made over the past few weeks. It needs to be noted that this student was tested on a Friday morning which was the last day of the school term for this student as the student was going to Queensland the following week. It needs to be also noted that this student at times can often not be focused and is often tired due to the family dynamics, which was the case on this particular day. It can also be said that during formal testing circumstances student T doesn't perform as well as informal testing.

Student G, on the other hand, is an eleven year old student who comes from a divorced family who frequently becomes emotionally confused and socially manipulated. This student is an only child and comes from a Greek background. Student G can often be vague at school and when called upon to think independently, lacks experience and is often easily distracted. Student G will often rely on the catch phrase, "can you come back to me, or I was thinking the same thing" when asked a question. Student G often looks busy thinking, but in fact isn't thinking about the task at hand. Student G attended all ten sessions.

Whilst in this intervention group student G had to contribute to group discussions by either going first or being told the group would come back for an answer. This enabled student G time to think and be answerable to the small group, which ultimately attributed to student G's self esteem lifting slightly and thus impacting somewhat on the understanding of a read text. Student G was also made to feel that his opinion was valued. Throughout the intervention sessions student G was more attentive than in class, due to the size of the group and enjoyed coming out of class with the other two group members. Student G benefitted from some one-on-one time of strategic and explicit teaching and indirectly self esteem building from the intervention teacher. However, student G still needs to develop further visual imagery to continue to develop the level of comprehension, as often student G couldn't see or interpret the text without support. Often student G would need to refer back to the text in order to remember some detail. Student G's opinion of himself often fluctuates and lacks motivation to learn and engage in complex conversations.

Student G was able to answer more inferential questions in the post test and was observed trying several times to make a mental picture and connect with the text. Student G wasn't rushing the questioning / answering process and was genuinely making an effort at answering the questions asked as opposed to the pre test. It would appear through the teacher's observation that during this process the student's level of self esteem lifted which could therefore attribute to some of Student

G's improvement in comprehension. It should be noted that during the intervention sessions student G's father was remarried overseas, which may have impacted on student G's emotions and learning.

Student S on the other hand, performed more confidently and appeared more focused during the post testing and rarely asked for the questions to be repeated as was the case during the pre test. Student S took time to think, process the questions and text and occasionally used the text to assist with answering the question. Student S attended eight out of the ten sessions, missing the last two sessions due to poor health. This absence didn't seem to impact on student S's post test results; however, Student S is often away which must impact on her overall results. Student S showed a great grasp and understanding of R.I.D.E.R or mental imagery during these intervention sessions. Nevertheless this strategy needs to be continued and emphasised in future learning in order to impact on all of the student's comprehension. This strategy needs to be internalised to the point of transfer into the classroom and everyday life, if it is to have any major and continued benefit.

The role of Oral language also needs to be addressed when discussing comprehension issues. It was clear that as the texts got harder to decode, or were about an unfamiliar topic, both groups in this study struggled to comprehend. Often students arrive at school with second or third phase English, or limited experiences which impacts on their understanding of language and its structure and ultimately their level of comprehension. Neale (1999) likens words to 'miracles,' they link us to those around us and globally. They open up the doors to knowledge both now, in the past and in the future. Without words we are excluded and have a sense of lose. We as educators need to be aware of this problem and provide an Oral Language program accordingly. We need to provide experiences for students that are interesting, engaging and meaningful. Through these experiences we can provide discussion, reflection and ultimately open up an appropriate environmental exposure to the English language. We learn from doing, exploring, questioning and sharing. It is through an extensive Oral Language Program and explicit teaching of visualization that children will benefit and further develop their level of comprehension. It is a focus that should be addressed across all curriculums and carried out not in isolation.

One of the major benefits of this study was also the size of the group. Working with only three students meant that the focus of visualisation and R.I.D.E.R could be achieved with minimal interruptions or distractions. The students were focused and attentive. The students chosen for this study were also known to the teacher and therefore, little time was needed for familiarization. The classroom teacher was also very flexible and co operative with the removal of these students everyday for a period of forty –five minutes.

The findings of this research support the theory that the teaching of visualisation is an effective strategy when comprehending a text. Through explicit teaching of R.I.D.E.R and ultimately the articulation process, students develop an understanding of a specific skill involved when comprehending a text. Research highlights that through explicit teaching, the usefulness of this strategy can be enhanced. Harvey and Goudvis (2000) pose the question in relation to when to teach the strategy of visualising. Is it best taught at a later stage of a student's primary education? We visualize at a very early stage in our life, when we dress up and play 'make believe' we are visualizing. The concept of visualising isn't new but often a doormat skill, called upon in our later years of primary schooling. It is a skill that dates back to Ancient Greece. It is a skill that shouldn't just be taught to older children but rather developed on from your first experiences of visualising. It

is a strategy that should be enhanced from our first days of schooling. Visual imagery should be recognised as a powerful tool.

Aristotle once said "A soul never thinks without a mental picture"

Bibliography

- Clark, F.L., Deshler, D.D., Schumaker, J.B., Alley, G., and Warner, M.M. (1984). Visual Imagery and Self Questioning: Strategies to Improve Comprehension of Written Material. *Journal of learning Disabilities* March 1984
- Danko, C. (1992). Using Visual Imagery to Help Chapter 1 Students Improve Comprehension
- Gambrell, L. (1993). Mental Imagery, Text illustrations, and Children's Story Comprehension and Recall. *Reading Research Quarterly* 28 July/August/September.
- Harvey, S. and Goudvis A. (2000). *Strategies that Work – Teaching Comprehension to Enhance Understanding*. Stenhouse Publishers
- Hibbing, A and Rankin –Erickson, J.L. (2003). A Picture is Worth a Thousand Words: Using Visual Images to Improve Comprehension for Middle School Struggling Readers. *The Reading Teacher* Vol 56 no 8 May 2003
- Hill, S. (2006). *Developing Early Literacy Assessment and Teaching*. Eleanor Curtin Publishing
- Manning, M. (2002). Visualizing When Reading. *Teaching Reading and Writing*. Pg.89
- Munro, J.K. (2010). Literacy Intervention Strategies, 472697. Lecture notes. 2010.
- Neale, M.D. (1999). *Neale Analysis of Reading Ability*. ACER Press.
- Paivio, A. (2006). Dual Coding Theory and Education – Draft Chapter for the conference on 'Pathways to Literacy Achievement for High Poverty Children.' September / October
- Tutor Fact Sheet: Approaches to Teaching Reading-Text Comprehension (March 2008)
- www.goodreads.com/author/quotes/2192.Aristotle - Cached - Similar

Appendix

Lesson Plan 1

- 1. Introduce the comprehension strategy:** *Over the next few days I will be teaching you a strategy that will help you to retain information and understand what you read or hear. This strategy is called visualising. Does anybody know what the word visualising might mean? Wait for any responses. Discuss responses and record on a before and after chart. State that visualising is when you create a picture or image in your mind after reading or hearing a statement. After creating this picture / image you then describe what you see. This process helps you to understand and remember all the different parts. It is also a strategy that can be used in everyday life, at school, when talking with friends etc.*

(10 min)

- 2. Visualisation Activity:** *Teacher to model visualising, describing the library with the current book fair exhibition. While students are listening to my description ask them to try and picture the library as it is happening. Teacher to model using sentence starter "In my mind I see two moveable bookcases, two pin boards with either posters or pens pinned on them, another two or three moveable bookcases and four tables in the middle....." Model with eyes closed. Pose the question could you picture the library as I described it? Do you use this strategy while reading books? Are you able to make pictures in your mind of the characters or the places within the stories? Discuss*

(15mins)

- 3. Student Visualisation Activity:** *I would like you to think about what you had for breakfast this morning, think about what your breakfast looked like and create a picture in your mind. Each student is to describe their image, using the sentence starter "In my mind I see....."*

(10mins)

- 4. Visualisation Activity using a sentence:** *teacher reads the sentence "The boy jumped over the old wire fence" then makes a picture in her mind. Teacher then describes the picture to the group. "In my mind I see....." Students are asked to re read the sentence and draw the picture they have created in their mind on sheets. (Use grey lead only). Students turn over their drawings and then describe their drawings to their partner. Students use the sentence starter "In my mind I see....."*

(15mins)

- 5. Review: Pose the question: What did you learn to do?** *To help us understand information we can form pictures in our mind or “make a movie in our mind”. This is called Visualising or Imaging.*

Lesson Plan 2

1. **Review last session.** *What could we do to help ourselves to remember information that we hear or read? How does visualising help you when you read?*

(5mins)

2. **Individual Visualisation warm up activity:** *I would like you to think about your classroom, think about what it looks like and create a picture in your mind. Each student is to describe their image, using the sentence starter "In my mind I see....."*

(5mins)

3. **Group Activity:** Yesterday we practiced visualising one sentence, today we are going to practice one sentence and then link it to another.

Using Visualizing and Verbalizing Stories -Book 1 written by Nanci Bell. Teacher to read the first sentence from level 2, exercise 5: *The fishing rod began to bend.*

- Make a picture in her mind
- Describes the picture to the group. "In my mind I see....."
- Students are asked to re read the sentence and draw the picture they have created in their mind on sheets. (Use grey lead only).
- Students turn over their drawings and then describe their drawings to their partner. Students use the sentence starter "In my mind I see....."
- Repeat above steps reading the next sentence.

(20mins)

4. **Review:** What did we do with the text? We read each sentence and made a picture of it in your mind. Making a picture helps to understand what the text is telling us. This strategy is called Visualising.

(10mins)

Lesson Plan 3

Review: What are you doing when you visualise? (5mins)

1. Warm up Activity: using Visualizing and Verbalizing Stories -Book 1 written by Nanci Bell. Teacher to read the first sentence from primary level, exercise 3: *The cat ran after the white duck*

- Teacher to make a picture in her mind
- Describes the picture to the group. "In my mind I see....."
- Students are asked to re read the sentence and draw the picture they have created in their mind on sheets. (Use grey lead only).
- Students turn over their drawings and then describe their drawings to their partner. Students use the sentence starter "In my mind I see....."

(10min)

2. Steps to visualising a text?

- Discuss with the group the visualising steps they think they should be doing when reading. Hopefully from discussion, they will mention, reading the sentence, make a picture and then describe the picture.
- *Introduce strategy of R.I.D.E.R -use picture cues to enhance understanding of strategy.*
 - Read the text
 - Imagine the picture
 - Describe the picture
 - Evaluate
 - Read on /Re read.

(10mins)

3. R.I.D.E.R Activity: Using Visualizing and Verbalizing Stories -Book 1 written by Nanci Bell. Teacher to read the first sentence from level 3, exercise 1: *The clown came running into the circus ring.*

(10mins)

4. Session Review: What do you do when you visualise a sentence?

Lesson Plan 4

Review: What does R.I.D.E.R stand for? Look at each step again using picture cue cards. How can we use this strategy with our reading?

(5mins)

1. **Warm up Activity:** Children are to visualise the Italian room. *Children then use sentence starter "In my mind I see....." And describe the Italian room as they see it.*

(5mins)

2. Using Visualizing and Verbalizing Stories -Book 1 written by Nanci Bell. Teacher to write the phrase from level 1, exercise 1: *The farmer went into the barn. The cows were waiting for him. He got a bucket and started to milk the cows.* Children to use sentence starter "In my mind I see....." On this occasion the children are reading the three sentences collectively to make a mental picture. Ask what steps the children did to form their mental image.

(10mins)

3. Using Visualizing and Verbalizing Stories -Book 1 written by Nanci Bell. Teacher to write the phrase from level 3, exercise 3. *(The boy put a tooth under his pillow. He closed his eyes and went to sleep. He dreamed a pretty fairy visited him in the night. When he woke up, his tooth was gone, and he found three shiny coins under his pillow.)* Children need to make a mental picture and then record this picture onto paper. After the children have drawn their mental picture and described this picture to the group, teacher to pose several comprehension questions about this passage. Hopefully children are able to answer and draw inferential meaning from their mental pictures.

(15mins)

4. Discuss-how were you able to answer these questions? Have you heard of the term inferencing? What is inferencing? Record as a brainstorm children to do. *Making inferences is the ability to think of information that is related to what you are reading or listening to but isn't actually contained in the text.*

(15mins)

Lesson Plan 5

Review: What is inferencing? How can inferencing help with our reading? Look at R.I.D.E.R – revisit the meaning. The children are to record their comments on paper and then share to the group.

(5mins)

Warm up activity:- Each child is to draw out of a hat a simple passage that they are to read, visualise and then describe to the group. Group members need to evaluate against the passage. *Discuss what process the children carried out to complete the task.*

(10mins)

1. Using Visualizing and Verbalizing Stories -Book 1 written by Nanci Bell. Teacher to write the phrase from level 3, exercise 11. *Rain finally fell on the dry red desert. The water soaked into the ground. In a while, yellow and blue flowers were everywhere. Bees buzzed, birds sang, and life was good.* Children to use sentence starter *"In my mind I see....."* On this occasion the children are reading the three sentences collectively to make a mental picture. Ask what steps the children took to form their mental image.
2. Using Visualizing and Verbalizing Stories -Book 1 written by Nanci Bell. Teacher to handout the phrase from level 4 exercise 1. *The barbecue smelled heavenly. Wood smoke swirled around the man's head as he leaned in to turn the meat with a long fork. Then using a stick with a rag tied to the end, he basted the meat with barbecue sauce. A little later, he looked closely at the sizzling meat and finally smiled and yelled, "Come and get it!"*
 - Children need to make a mental picture and then record this picture onto paper. After the children have drawn their mental picture and described this picture to the group, teacher to pose several comprehension questions about this passage. Hopefully children are able to answer and draw inferential meaning from their mental pictures.
3. Discuss - how does visualising and inferencing help when reading a text? What steps could we take when working out meaning of a text?

Lesson Plan 6

Review: How can inferencing help with our reading? What is inferencing?

(5mins)

Warm up activity:- using serial picture cards taken from 'Introducing Inference' written by Marilyn M. Toomey, children are to select a set of cards, look at them and describe what they think is probably going to happen next. (Inferencing)

(10mins)

1. Using single picture cards taken from 'Introducing Inference' written by Marilyn M. Toomey, children are to visualize what may have happened before. Children are to describe this event to the group. Group is to evaluate against the current picture. *Do the previous events fit the current picture? What strategy are you using?*

((10mins)

2. Using Visualizing and Verbalizing Stories -Book 1 written by Nanci Bell. Teacher to handout the phrase from level 4 exercise 5. *The girl went up the rickety stairs to the attic and came down with an old suit that smelled of moth balls. The boy found a beat up blue felt hat in the garage. Together they stuffed the suit full of the straw. Then they drew a frowning face on a paper bag and stuffed it with straw. They put the bag on top of the suit and the hat on top of the bag, and propped the whole thing up with sticks. The new scarecrow stood guard in the garden all summer.*

- Children need to make a mental picture and then record this picture onto paper. After the children have drawn their mental picture and described this picture to the group, teacher to pose several comprehension questions about this passage. Hopefully children are able to answer and draw inferential meaning from their mental pictures.

(15mins)

3. What strategy have you been using today? How do you know you have been using this strategy? Do you feel this strategy is helping you to understand the text?

Lesson Plan 7

Students read the **R.I.D.E.R** cue cards

Students to initiate these sessions, teacher to observe children's behavior and strategies children use when finding meaning to a text.

Warm up activity:-

a) Each child is to choose a simple passage that they are to read, visualise and then describe to the group. Group members need to evaluate against the passage. *Discuss what process the children carried out to complete the task.*

b) Using single picture cards taken from 'Introducing Inference' written by Marilyn M. Toomey, children are to visualise what may have happened before. Children are to describe this event to the group. Group is to evaluate against the current picture. *Do the previous events fit the current picture? What strategy are you using?*

1. Use Visualizing and Verbalizing Stories -Book 1 written by Nanci Bell.

- Children need to make a mental picture and retain this picture in their mind to assist with the several comprehension questions posed about this passage. Hopefully children are able to answer and draw inferential meaning from their mental pictures.
- Repeat this exercise several times using different exercises.

Review:-How is R.I.D.E.R helping you to understand the meaning of a text? When / where could you use the R.I.D.E.R strategy?

Lesson Plan 8

Students read the **R.I.D.E.R** cue cards

Students to initiate these sessions, teacher to observe children's behavior and strategies children use when finding meaning to a text.

Warm up activity:-

a) Each child is to choose a simple passage that they are to read, visualise and then describe to the group. Group members need to evaluate against the passage. *Discuss what process the children carried out to complete the task.*

b) Using single picture cards taken from 'Introducing Inference' written by Marilyn M. Toomey, children are to visualise what may have happened before. Children are to describe this event to the group. Group is to evaluate against the current picture. *Do the previous events fit the current picture? What strategy are you using?*

2. Use Visualizing and Verbalizing Stories -Book 1 written by Nanci Bell.

- Children need to make a mental picture and retain this picture in their mind to assist with the several comprehension questions posed about this passage. Hopefully children are able to answer and draw inferential meaning from their mental pictures.
- Repeat this exercise several times using different exercises.

Review:-How is R.I.D.E.R helping you to understand the meaning of a text? When / where could you use the R.I.D.E.R strategy?

Lesson Plan 9

Students read the **R.I.D.E.R** cue cards

Students to initiate these sessions, teacher to observe children's behavior and strategies children use when finding meaning to a text.

Warm up activity:-

a) Each child is to choose a simple passage that they are to read, visualise and then describe to the group. Group members need to evaluate against the passage. *Discuss what process the children carried out to complete the task.*

b) Using single picture cards taken from 'Introducing Inference' written by Marilyn M. Toomey, children are to visualise what may have happened before. Children are to describe this event to the group. Group is to evaluate against the current picture. *Do the previous events fit the current picture? What strategy are you using?*

3. Use Visualizing and Verbalizing Stories -Book 1 written by Nanci Bell.

- Children need to make a mental picture and retain this picture in their mind to assist with the several comprehension questions posed about this passage. Hopefully children are able to answer and draw inferential meaning from their mental pictures.
- Repeat this exercise several times using different exercises.

Review:-How is R.I.D.E.R helping you to understand the meaning of a text? When / where could you use the R.I.D.E.R strategy?

Lesson Plan 10

Warm up activity:-using picture cards taken from 'Introducing Inference' written by Marilyn M. Toomey, children are to select a set of cards, look at them, visualise and describe what they think is probably going to happen in the middle. (Inferencing)

1. Use Visualizing and Verbalizing Stories -Book 1 written by Nanci Bell. Choose exercises that have a couple of paragraphs.
 - Children need to make a mental picture and retain this picture in their mind to assist with the several comprehension questions posed about these paragraphs. Hopefully children are able to answer and draw inferential meaning from their mental pictures.
 - Repeat this exercise several times using different exercises.

Review -Discuss with children how they used R.I.D.E.R when reading a passage that had several paragraphs.