Hypothesis: The explicit teaching of visualising to a whole Grade 2 class using the R.I.D.E.R strategy will improve their reading comprehension of fiction texts.

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#### Abstract

: In the early stages of reading emphasis is placed on the decoding of words, rather than comprehending and gaining meaning from written texts. For students to become successful readers and users of texts they must be able to transfer information into knowledge and make it a part of their own learning process.

The hypothesis of this study is that the explicit teaching of Visualising to a whole Grade 2 class using the R.I.D.E.R strategy will improve their reading comprehension of fiction texts. Research suggests that teaching students to Visualise information as they read will equip them with efficient skills to recall information and ideas from texts in greater detail.

In this study, students were taught how to visualise using the R.I.D.E.R strategy (Read, Imagine, Describe, Evaluate and Repeat) to assist with the learning of comprehension. Students were taught to use their knowledge prior to and during reading to create visual pictures in their minds. The learning was scaffolded through each teaching sequence and was slowly phased out to equip the students with the necessary skills to independently visualise, verbalise and comprehend. This study was conducted using two groups of students, an Intervention group and a Control group.

The study produced results to support the hypothesis. The post test scores in the Visualising task and Neale Comprehension tests reflected improvement in the student's ability to recall specific information using the Visualising strategy. The research findings also demonstrated the effect that restricted decoding skills has on a student's ability to read words accurately and automatically.

It is the belief of educators that explicit modelling and instruction of strategies is important in the learning of Visualising. In order for students to become independent users of texts they must develop the necessary skills to monitor and adjust their own reading to gain understanding and knowledge.


## INTRODUCTION:

Learning to read is a multifaceted process which requires skills and strategies that a reader must perform to make meaning from their reading. These skills and strategies go beyond the acquisition of decoding words but understanding how the information already processed can be interpreted, organised, discussed and reflected upon (Westwood, 2003). However some learners find the process of reading overwhelming, as they experience difficulty with interpreting and making connections to the words read and their meanings. As stated by Bell (1991, p13) "the only reason to read or listen to language- take in verbal stimuli- is to get meaning, to comprehend, to interpret, to reason." Some learners are able to attain the necessary skills to decode words; however some will battle to develop the skills needed to comprehend and make meaning when listening to and reading texts.

Long before children can read they are able to use personal experiences to make connections between visual imagery that is represented around them in society. They are able to make links to letters and symbols and associate these with meaning. When a child sees the golden arches of McDonalds they automatically interpret the text and make connections to delicious food. From an early age children are able to develop an understanding that written print contains a message. This therefore exemplifies the power visual imagery has on a learner's ability to recall information.

Nelson (2005) explains that reading goes far beyond decoding letters into sounds and sentences into paragraphs, but understanding and comprehending the meaning and messages within the words. Center, Freeman, Robertson \& Outhred (1999), state that "to be a proficient reader, an individual needs to be proficient both at the decoding or word level and at abstracting meaning from print" (p.241). Students with phonologically difficulty are often unable to read sight words both accurately and fluently. They apply to much cognitive effort at decoding at the word level and therefore cannot effectively extract meaning from texts (Center, etal., 1999).

Nelson (2005) uses the research of Goudvis and Harvey (2000) to define comprehension as the "means that readers think not only about what they are reading but what they are learning. When readers construct meaning they are building their store knowledge. But along with knowledge must come understanding" (p6). Furthermore, Bell (1991) describes comprehension as the ability to make connections between both oral and written forms by recalling facts, inferring ideas, understanding the main ideas, predicting, making conclusions and evaluating. These skills form an integral part of cognition and enable the reader to obtain meaning.

The comprehension of texts begins from an early age, before children even begin school. When stories are read to children for enjoyment, adults begin to ask simple questions; such as: how did the character feel? What colour was the truck? It is the belief of educators that comprehension should be taught in the early stages of reading alongside the decoding and acquisition of words (Westwood, 2003). Westwood further supports the work of Pressley (1999) suggesting that word identification strategies and comprehension strategies are closely interrelated, as comprehension is heavily dependent on a reader's ability to rapidly identify words at a glance. Readers are able to apply strategic strategies to extracting meaning from texts whether they do it consciously or unconsciously. They are able to design and implement a mental plan of action to assist with the processing and understanding of texts when reading. Skilled readers are able to monitor and modify their own levels of understanding by using self management strategies (metacognition) when they read (Westwood, 2003). Therefore, learners who are not able to plan strategies of how they will approach their reading within the before, during and after stages, will greatly have an impact on their overall comprehension. Munro's research into reading (2003) highlights that student's experience difficulty with learning because they are unable to successfully direct and manage their learning.

Students who are good comprehenders are able to create visual images in their minds whilst reading (Westwood, 2003). This process is known as Visualising. Nelson (2005) uses the work of Goudvis and Harvey (2000) to define visualisation as, "creating pictures in our minds that belong to us and no one else" (p7). The imaging of pictures is a fundamental part of cognition that enables readers to bring meaning to what they have read (Bell, 1991). The use of imagery within reading is a scaffold for linking ideas, which enables readers to deal with loads of information by improving their ability to retain ideas in their short term memory (Munro 2003). The Visualising strategy enhances the reader's ability to recall specific detail of a text.

Bell (1991) further describes the connection between imagery and cognition by referring to the works of great history thinkers such as Einstein and Aristotle. Aristotle understood the importance of cognition as he stated in 348 B.C, that "it is impossible even to think without a mental picture" (p14). The Visualising of information through the use of imagery helps readers to scaffold information and link ideas in texts (Munro, 2003). Harvey and Goudvis (2000) as outlined in Nelson (2005) discuss the effectiveness that drawing as a reading strategy has on reading comprehension. Drawings help facilitate students to Visualise what they have read and verbalise what they have drawn. Therefore, it
can be implied that every picture is worth 1000 words. The teaching of comprehension is a complex process that requires various levels of instruction. Nelson describes from the research of Goudvis and Harvey (2000), that the teaching of Visualising should encompass a gradual release of instruction through teacher modelling, guided practice, independent practice and the application of the strategy into real reading situations.

The data collected from Nelson's (2005) study led her to find that there were three major changes in the abilities of her 5th grader participants, when investigating the use of the Visualising strategy and the effects it has on developing reading comprehension. She found that the students had made improvements in answering comprehension questions, personal opinion questions and showed a positive increase in their reading attitudes. Nelson concluded that the students had gained a better understanding of the meaning behind the events in the story and the author's purpose. However, Nelson further explained that some student's scores did not improve as they lacked in confidence in their drawing skills. It is from these findings that the present study being conducted focuses on discussing and describing as well as drawing a picture of their mental image.

The visual imagery strategy also known as R.I.D.E.R is a teaching strategy that was designed to help facilitate reading comprehension to learning disabled students, by teaching them how to Visualise passages of text. The R.I.D.E.R process requires students to follow through the steps of; Read, Imagine, Describe, Evaluate and Repeat. Students are required to use visual imagery to make meaning of material already read, by transferring the knowledge into visual, kinaesthetic and auditory images of information. Learners form mental pictures of sentences as they read, they continually build upon these images and then recall orally what they have Visualised. The transferring of their inner thoughts into dialogue enables students to internalise their own learning. In conjunction with the R.I.D.E.R strategy the students were also taught self questioning skills whilst they were reading. The results of the study indicated that the learning disabled students were able to apply both the visual imagery and self questioning strategies to reading ability levels and grade level materials (Clark, Deshler, Schumaker, Alley \& Warner, 1984). The post test data also showed that the students demonstrated a greater improvement in their comprehension scores when compared to their pre test data.

The present investigation aims to examine the effect of the Visualising strategy on the participant's ability to recall important information using the RIDER principle, therefore improving their comprehension. The benefit of the explicit teaching of Visualising aims to provide readers with the skills essential to preparing and planning before reading, Visualising during reading and verbalising after reading to improve and develop comprehension. This investigation aspires to help students in laying strong foundations in using strategies to interpret, make meaning of and reflect upon, in order to develop their understandings of texts. Reading and comprehension are lifelong skills that are a part of our everyday lives; therefore it is pivotal that students are taught the necessary skill to obtain meaning from the world around them.

## METHOD:

## Design:

This study uses a naturalistic design that is based in the context of a 'real' classroom, to determine if the gain in reading comprehension can be improved by the explicit teaching of Visualising. The explicit teaching of the Visualising strategy has been targeted to a whole class of Grade 2 students. Within this whole class group there are some students who have reading and comprehension
difficulties. In the study the performance of an Intervention group and a Control group are compared. Data was collected during the pre and post stages of the teaching sessions and then analysed to find out how the Intervention group, who received explicit teaching, compared to the Control group.

## Participants:

The participants selected for this study all attend the same Primary School and are in straight Grade 2 classes. The school has a large student population with a mix of varying cultures and backgrounds. All participants are between 7 and 8 years old. Recent text level reading results were used to select 8 students who demonstrated similar reading and comprehension difficulties. Four of these students were selected from the Intervention class for the Intervention group. The Control group consisted of four students of similar ability from another Grade 2 class. Their age, text level of reading and other participant details are outlined in Table 1.

Table 1: Participant Characteristics

| Name | Teaching = 1 <br> Controlled = 0 | Age in <br> Months | Gender <br> Male = 0 <br> Female = 1 | Time at <br> school in <br> months | ESL <br> NO =0 <br> Yes = 1 | EMA <br> NO =0 <br> Yes = 1 | Pre <br> Reading <br> Level |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| A | 1 | 105 | 0 | 35 | 0 | 0 | 24 |
| B | 1 | 95 | 0 | 35 | 0 | 0 | 26 |
| C | 1 | 99 | 0 | 35 | 0 | 0 | 22 |
| D | 1 | 94 | 1 | 35 | 0 | 0 | 23 |
| E | 0 | 108 | 0 | 35 | 0 | 0 | 24 |
| F | 0 | 97 | 0 | 35 | 0 | 0 | 23 |
| G | 0 | 96 | 1 | 35 | 0 | 0 | 23 |
| H | 0 | 98 | 0 | 35 | 0 | 0 | 22 |

## Materials:

The following materials were used for Pre and Post testing for the data collection of this study:

- Visualising Task (Appendix B) - taken and adapted from John Munro's Visualising test and scoring. This was used to assess students Visualising and comprehension skills while reading a short text. The students were required to read one or two sentences and Visualise a picture of the sentences inside their mind. They then were asked to draw their picture and describe orally what they saw. The task is assessed using the scoring grid, based upon their oral description.
- Neale Analysis of Reading Ability - was used to assess student's comprehension, word accuracy and reading rate skills using standardised tests. The students were required to read a passage of text that was timed and to orally answer comprehension questions immediately after the text had been read. Testing was concluded when the student made 16 or more errors on a text.
- Text level of reading - running records based on PM benchmarks, were used at the beginning to ascertain the entry of students that experienced difficulty in reading and comprehending information within texts. Post testing was used to establish whether the students were able to transfer their knowledge of Visualising while reading texts.
- Fry's Readability Scale - was taken from John Munro's course notes in Literacy Intervention Strategies. A Fry's readability was conducted on the ERIK program texts used in the teaching of the Visualising unit, to see what age group the texts used, were appropriate for.

The following materials were used to assist the explicit teaching of Visualising to the whole class:

- Visualising and Verbalising Stories - This is a text that contains many different short stories that vary in difficulty and length. In lessons one to five the stories were taken from this text and were used to introduce the skill of Visualising to the students.
- Visualising and Verbalising Stories - Level 1 : story 1 pg 12
- Visualising and Verbalising Stories - Primary Level : story 9 pg 8
- Visualising and Verbalising Stories - Level 1 : story 6 pg 14
- Visualising and Verbalising Stories - Level 1: story 9 pg 16
- Visualising and Verbalising Stories - Level 2: story 12 pg 26
- ERIK- Sessions 19, 21 and 26 - The stories from within the ERIK program were used to help facilitate the teaching of Visualising.
- Session 19: A Day at the Beach
- Session 21: The Party Dress
- Session 26: The School Camp
- Picture of a camera.
- RIDER poster
- Whiteboards and markers


## Procedure:

All students in the Intervention and Control groups were pre tested prior to the commencement of the study. Tests were administered individually to each student outside of the classroom, in a quiet room. Students completed the tests in isolation to prevent them from tiring. The Visualising task was administered first, followed by the Neale Analysis. The duration of which each student participated within the testing sessions was approximately thirty minutes.

Following the pre-testing the students within the Intervention group were involved in a ten lesson teaching unit on Visualising. The lesson sequence was implemented within the literacy block, once a day and over a two week period. Majority of the lessons occurred within the morning sessions, however sometimes due to interruptions within the curriculum a few lessons were conducted in the afternoons. Each lesson approximately took twenty to forty minutes a day. The lesson sequence was taught to the whole class by their own classroom teacher.

Before commencing the teaching sequence, suitable texts were selected based upon the size of the story and whether it would be easy for the students to apply the Visualising strategy. Once the texts were chosen a Fry's readability was conducted on the texts to see if they were age appropriate. A Fry's readability was not conducted on the beginning stories that came from the text 'Visualising and Verbalising Stories,' as these texts were too short and a sample of 100 words could not collected. The
below table displays the results from the Fry's readability scores for the Erik stories used within the teaching sessions. Two of the stories were age appropriate for the grade two children; however one of the texts was structured for grade one children. All texts were still used within the teaching sessions as the children were being introduced to the Visualising teaching strategy for the first time, therefore required texts that were simple to understand and that could be easily visualised.

Table 3: Results from the Fry's Readability Scale

| Text | No. of Syllables | No. of Sentences | Fry's Readability |
| :--- | :---: | :---: | :---: |
| Session 19: <br> A Day at the Beach | 103 | 9 | Grade 2 |
| Session 21: <br> The Party Dress | 107 | 11 | Grade 1 |
| Session 26: <br> The School Camp | 107 | 10 | Grade 2 |

The teaching sessions in the study were based on John Munro's (2010) Comprehension - Visualising teaching strategy. In order to support the students learning of Visualising the model of teaching and learning that was developed by Collins, Brown, \& Newman (1989) as cited in Munro (2010) was used during the teaching sequence of lessons. The teaching of Visualising was first modelled by the teacher. Next the teacher supported and scaffolded the students as they practised Visualising for themselves. Finally the scaffolding was gradually faded out so that the students were able to Visualise the tasks independently. The R.I.D.E.R strategy was used to assist students in recalling the process of steps to use when Visualising texts. Within the implementation of R.I.D.E.R the students were also asked to draw their images to facilitate comprehension. During the beginning and ending of each session students reflected on the strategies they used to understand the text and the purpose of using the Visualising strategy.

To introduce students to the concept of 'Visualising' an image of a camera was used. Students discussed the purpose of a camera and how and why they use it in their everyday lives. Thereafter students were able to make connections between a camera and Visualising, in order to help them better remember things they have read. During the introductory session the students were introduced to the term 'GKR' - Getting Knowledge Ready. Students were explicitly taught how to draw upon their prior knowledge and understandings of a topic before they commenced reading. This term was utilised in all teaching sessions where a new text was introduced.

In sessions one to five the text Visualising and Verbalising Stories was used, as it contained many different short stories which varied in difficulty and sentence length. Therefore, as the sessions progressed, the complexity of the texts increased. A long story was not used within the beginning of the teaching sequence as the teacher did not wish to overload the students with too much information, but wanted to start small and increase the demands of the text as the students became confident with using the strategy.

Students were asked to use their cameras to take photos of the texts and to close their eyes and Visualise the photo in their minds. They were then required to draw a picture of their photo onto their whiteboards. At the completion of the drawing the students were then asked to discuss what they could see in their drawing to a small group and then to the whole class. To conclude the session the students
checked the accuracy of their descriptions in light of the text and reflected on how well they used the Visualising strategy.

Once students had become familiar with Visualising texts, stories from the Erik program were introduced within session's six to ten, as they were age appropriate. Teacher scaffolding was gradually faded out within these sessions to promote independent completion of the task. To conclude these sessions the students were asked some comprehension questions about the text to monitor whether the strategy of Visualising had improved their comprehension of the text.

At the conclusion of the teaching unit, post testing using the same and standardised tests was conducted in the same manner as pre testing, as previously explored. All data was collected and collated into graphs and tables in order to analyse and evaluate the effectiveness of the teaching unit.

## RESULTS:

## Group trends:

The results from this study supports the hypothesis that the explicit teaching of Visualising to a whole Grade 2 class using the R.I.D.E.R strategy will improve their reading comprehension of fiction texts. The below table outlines the test scores achieved for all participants in the Intervention group and the Control group. The test scores for the participants in the Intervention group shows that the students made the greatest growth in the Visualising Task and Neale Comprehension task compared to the Control group.

Table 3: Results for Individual Tests

|  | ACCURACY |  | ACCURACY |  | COMPREHENSION |  | COMPREHENSION |  | RATE |  | RATE |  | $\begin{gathered} \hline \text { VISUALISING } \\ \text { TASK } \\ \hline \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  | $\begin{aligned} & 5 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & \text { Nen } \end{aligned}$ |  | 5 0 0 0 N 0 0 0 |  |  |
| A | 19 | 11 | 14 | 4 | 4 | 10 | 7 | 24 | 34 | 21 | 22 | 7 | 6 | 8 |
| B | 30 | 33 | 23 | 31 | 5 | 6 | 10 | 13 | 114 | 38 | 99 | 29 | 8 | 11 |
| C | 12 | 27 | 9 | 26 | 7 | 13 | 12 | 39 | 36 | 17 | 24 | 5 | 8 | 12.5 |
| D | 26 | 24 | 18 | 22 | 5 | 8 | 10 | 17 | 64 | 49 | 61 | 43 | 8.5 | 10 |
| E | 47 | 33 | 65 | 31 | 7 | 8 | 12 | 17 | 52 | 52 | 46 | 48 | 4.5 | 7.5 |
| F | 30 | 33 | 23 | 31 | 7 | 13 | 12 | 39 | 51 | 34 | 45 | 24 | 3 | 5 |
| G | 21 | 28 | 14 | 27 | 9 | 3 | 19 | 3 | 20 | 18 | 9 | 5 | 5.5 | 9 |
| H | 28 | 24 | 21 | 22 | 5 | 8 | 10 | 17 | 23 | 48 | 9 | 43 | 5.5 | 3.5 |



Figure 1: Average Pre and Post test scores for the Visualising Task for all groups
The data in Figure 1 indicates that there was an improvement in the overall post test means when compared to the pre test means for each of the groups in the study. The data shows that the Intervention group had increased their mean score by $22 \%$ and the Control group had increased their mean score by $12 \%$. However, even though both groups experienced some improvement in their scores, the results indicate that the Intervention group experienced the greatest growth and scored $10 \%$ higher than the Control group.

The below table shows the breakdown of events in each sentence, that was used in the Visualising task. For a student to achieve a score for each sentence they must have included all the details in their oral description.

Table 4: Results for the number of events in each sentence in the Visualising Task

| Students | $\mathbf{1}$ event sentences |  | 2 event <br> sentences <br> /7 |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Pre |  |  |  |
| Student A | Pre | Post | Pre | Post |
| Student B | 3 | 4 | 0 | 2 |
| Student C | 3 | 6 | 2 | 3 |
| Student D | 4 | 6 | 1 | 3 |
| Percent Average for the Intervention <br> Group. | $54 \%$ | 5 | 1 | 1 |
| Student E | 1 | $75 \%$ | $33 \%$ | $75 \%$ |
| Student F | 1 | 4 | 0 | 1 |
| Student G | 2 | 4 | 0 | 1 |
| Student H | 4 | 2 | 0 | 1 |
| Percent Average for the Control Group. | $29 \%$ | $54 \%$ | 0 | 0 |

Table 3 shows that the Intervention Group performed the greatest in both the pre and post tests for the one and two event sentences in the Visualising Task, when compared to the Control group. The data indicates that the Intervention group was able to correctly interpret and verbalise $75 \%$ of the sentences that had one and two events for the post tests. The Intervention group increased their scores for the one event sentences by $21 \%$ and were able to increase their scores for the two event sentences by $42 \%$. The Control group were able to make improvements in their scores but still however achieved the lowest scores. They scored their highest score on the one event sentences and increased their score by $25 \%$. They were also able to increase their scores in the two event sentences by $25 \%$. This growth was increased as they scored $0 \%$ in their pre test scores.


Figure 2: Average Pre and Post test scores for the Neal Analysis for all groups
Figure 2 shows the mean results for the Neale Analysis pre and post percentile ranks for the two groups in the areas of Accuracy, Comprehension and Rate.

The post test results in reading Accuracy shows that both groups scored within the $20^{\text {th }}$ percentile. The data results indicate that the Intervention group had moved 2.75 of a percentile rank whilst the Control group experienced a decrease of 3 of a percentile rank. The Control group overall made the least improvement in their reading Accuracy score, but still were able to maintain 7 percentile ranks higher than the Intervention group.

The post test results for reading comprehension reflects the most overall improvement for both groups when compared to the pre test means. The Intervention group experienced a much greater increase of 13.5 of a percentile rank, whilst the Control group only increased their percentile rank by 5.75.

The reading rate post test results indicate that there was no improvement made by the Intervention group instead a decrease of a percentile rank of 30.5 . The Control group was able to make a slight increase of 2.75 of a percentile rank.


Figure 3: Average Pre and Post scores for all tests for the Intervention Group

When analysing the data for the Intervention group it demonstrates the greatest improvements were made in the Visualising task and the Neale Analysis Reading Comprehension, where they scored higher than the Control group. For the Visualising task there was an increase of $22 \%$. For the Neale Analaysis in Accuracy the average percentile rank increased from 18 to 20.75. Their greatest increase was in the Neale Reading Comprehension where their percentile rank increased from 9.75 to 23.25 .


Figure 4: Average Pre and Post scores for all tests for the Control Group
On review of the testing data for the Control group, it displayed an increase in the Visualising task, the Neale Reading Comprehension and Rate mean scores. The greatest gain was made in the Visualising task where the scores increased by $16 \%$. Furthermore their reading comprehension percentile score increased from 13.25 to 19 . The group scores for their reading rate percentile score also slightly increased from 27.25 to 30 but still remained higher in percentile rank than the Intervention group. However, the scores for reading Accuracy percentile score decreased from 30.75 to 27.75. Even though these scores decreased the Control group were able to still maintain a higher percentile rank than the Intervention group.

## Learning Trends for Each Student:



Figure 5: Average Pre and Post scores for all tests for Student A
Student A is a quite student and often finds it difficult to participate in class learning activities with confidence. The results on Figure 5 show that student A had experienced an improvement in his post text scores within the Visualising task and the Comprehension component of the Neale Analysis, when compared to the pre test scores. During the Pre Test of the Visualising Task the teacher had to further explain to the student the concept of creating a picture in his mind, as the student did not understand how to do this. However Student A was able to improve his score by $16 \%$ in the pre test after being exposed to the Visualising strategy. The data for the Neale Comprehension indicates that Student A was able to improve his score and move 17 percentile ranks higher in the pre test. During the Neale test Student A experienced a decline in his results within the reading Accuracy and reading Rate components. The low test scores show that the student experienced difficulty in reading words accurately as the demands of the text increased. Therefore this resulted in Student A reading and decoding words more slowly; consequently achieving a poor reading rate.


Figure 6: Average Pre and Post scores for all tests for Student B
The results in Figure 6 shows that student B had experienced an improvement in his post test results for the Visualising task and the Neale Analysis components of reading Accuracy and Comprehension when compared to his pre test scores. His Visualising and oral retell of sentences within the post test Visualising task contained many accurate details when compared to the pre test task. The data indicates that Student B was able to increase his score by $23 \%$. Figure 6 also shows that Student B was able to increase his percentile score rank within the Neale Accuracy component by 8 percentile ranks. Although his Accuracy post test scores have only increased by 7 percentile ranks, his score of 31 is still above the post test means of the Intervention and Control groups. When comparing Student B's Neale Comprehension results to the rest of the Intervention group participants, student B had made the lowest growth in his percentile rank and had scored the lowest percentile rank of 13 in his post test score. The data also shows that student B experienced the largest decline in his percentile rank when compared to all the participants within the Neale Reading Rate.


Figure 7: Average Pre and Post scores for all tests for Student C

Student C participates in class learning activities with enthusiasm and is eager to learn. In Figure 7 the data indicates that Student C's Visualising task, Neale Accuracy and Comprehension scores have improved greatly and that he had made the greatest growth in scores when compared to all of the participants. He was able to accurately describe images from the Visualising task with detail. Student C had experienced a 34\% improvement in the pre test Visualising task when compared to his results in the pre test. In the Neale Accuracy component Student C had increased his scores by 17 percentile ranks, whilst in the Neale Comprehension component he had improved his score by 27 percentile ranks. However, even though Student C had made some improvements in his scores, Figure 7 also highlights that Student C experienced a decrease of 17 percentile ranks in his reading Rate. This was due to the time that he spent on decoding words in the texts.


Figure 8: Average Pre and Post scores for all tests for Student D
Student D is a reluctant student who does not normally participate in class discussions unless called upon. However, during the study Student D had become more confident in making contributions to class discussions during the teaching of Visualising to the whole class as she was eager to share her visual description with the class. The results on Figure 8 show that student D had experienced an improvement in her post text scores within the Visualising task, the Accuracy and Comprehension components of the Neale Analysis, when compared to the pre test scores. The results from the pre test Visualising task (Table 2.) shows that Student D had achieved the highest score. She was able to improve her percentage growth by $12 \%$. The data for the Neale Comprehension indicates that Student D was able to improve her score and move 7 percentile ranks in the pre test. Student D also experienced a decline in her reading Rate for the Neale Analysis of 18 percentile ranks in the pre test. Even though her reading rate did decline, Student D was still able to make a small improvement in her Neale Accuracy scores.


Figure 9: Average Pre and Post scores for all tests for Student E
Student E experienced an improvement in his scores within the Visualising Task and the Neale Comprehension and Rate components. He experienced his greatest growth in the Neale Analysis Comprehension where he moved 5 percentile ranks higher. Student E also improved his Visualising Task scores by achieving a $23 \%$ increase when compared to his pre test scores. Student E experienced the greatest regression in his Neale Analysis Accuracy scores when compared to all of the particpants of the study. He had decreased is score by 34 percentile ranks.


Figure 10: Average Pre and Post scores for all tests for Student F
Student F participated enthusiastically in all the pre and post test tasks. He is a very animated character that enjoyed making up stories during the Visualising Task that had no relation to the task at all. He was able to make his biggest improvements in his post test scores for the Neale Analysis

Comprehension and Accuracy. Student F increased his percentile rank by 27 ranks in the Neale Comprehension. However his results in the Neale Reading Rate show that he experienced a regression in his percentile rank, suggesting that it took him longer to decode words within the post test texts. Within the Visualising Task he made the smallest improvement of $15 \%$.


Figure 11: Average Pre and Post scores for all tests for Student G
Student G achieved the lowest percentile ranks in the post tests for the Neale Analysis reading Rate and Comprehension tasks, and also showed a regression in her post test scores. It was noted by the researcher that Student G demonstrated a very slow RAN (Rapid Automatised Naming ) of words and would also often spend a lot of time decoding high frequency words that she already knew. The researcher believes that her slow rate of reading has impacted on her ability to remember important events in the text. The results indicate that she decreased her percentile rank by 4 in the Neale Rate and decreased her percentile rank by 16 in the Neale Comprehension. Student G experienced her greatest growth in the Neale Accuracy task and was able to move 13 percentile ranks.


Figure 12: Average Pre and Post scores for all tests for Student H

Student H was the only student from the control group who experienced a regression in his post test score in the Visualising Task. Student H results indicate that he decreased his score by $15 \%$. There may be a number of reasons as to why he experienced a regression in his scores, such as it was a whole school footy day celebration, time of day or maybe due to tiredness from the night before. Any of these speculations may have affected his concentration and resulted in his poor performance. The results show that Student H showed the greatest improvement in his Neale Analysis reading Rate scores by moving 34 percentile ranks. This suggests that his automaticity of reading words had become more rapid, however not always accurate. In the Neale Analysis Comprehension Task he scored 7 percentile ranks higher when compared his pre test scores.

## DISCUSSION

When reflecting on the results of this study there is evidence to suggest that the hypothesis, 'the teaching of Visualising to a whole grade 2 class using the R.I.D.E.R strategy will improve the reading comprehension of fiction texts,' is somewhat proven. Participants within the Intervention Group improved in their ability to Visualise images and remember detail of a simple text within the Visualising Task. Students displayed increasing confidence in using the Visualising strategy throughout the teaching unit and the post testing of the Visualising task, as they were able to recall far more detail of events than the Control group. This study supports the research of Nelson (2005) who noted that within her study her students "answers became more in depth and thoughtful" (p24) after the teaching of Visualising. Whereas the Control group found it difficult to Visualise the text which often resulted in long winded stories that were not related or stated in the text. The students within this group often verbalised future ideas rather than the events in the text.

This study somewhat supports the views of Nelson (2005), who describes that the students in her study had a "better understanding of the author's purpose and the meaning behind the events of the story" (p28). This is reflected in the Intervention group's performance in the Neale Analysis Comprehension task as they experienced the greatest results when compared to the Control group. The participants improved in their ability to make meaning and understanding of texts through the Visualising strategy. However, even though the Intervention group made overall improvements in their scores, the results also highlight that no student was able to achieve a percentile rank higher than 40 , therefore meaning there is still, a lot more room for improvement to be made in their comprehension skills. With more practise using the Visualisation strategy in different texts the Intervention group will be able to continue to develop their understandings of texts.

Observations made in the pre test data of the Neale Analysis indicate that students A, B, C, D, F and G all regressed in their Neale Rate scores. This regression may have been due to the learning of a new skill and their ability to apply it into different situations. When listening to and watching students read within the Intervention group, it was evident that they were not independently using the Visualising strategy within the Neale Analysis. Students were unable to approach the text with the same strategies they used within the Visualising Task as it was structured differently. This regression may also be a result of decoding difficulties within the texts and therefore slowing down their rapid automatised reading of words. This strongly links with Center, etal.,(1999) who suggests that students who experience difficulty with decoding cannot effectively gain meaning from texts as they exert too much cognitive effort on reading words accurately. As discussed before Student G was noticeably the slowest reader out of the participants who demonstrated poor RAN skills. She would often spend a great deal of her time decoding high frequency words that are previously known. The above analysis is in line with the views of Pressley (1998) as cited in Westwood (2003) that a student's comprehension
skills are dependent on their rapid auotmatised reading of words. This suggests that if a student is able to accurately read words at a rapid rate then their ability to comprehend and gain meaning from texts will improve. However, it can be suggested that if students are provided with more opportunities to practise the skill of Visualising then automaticity, reading accuracy and rate 'should' improve. This supports the view and work of Rubin (2000) which is used by Westwood (2003) that reading comprehension is "a complex intellectual process involving a number of abilities" (p10) that can only be mastered overtime. It is also noted that the participants were not post tested on the same texts as the ones used during the pre test stage for the Neale Analysis, as standardised texts where used. It would be interesting to see if the participants would have performed better within the reading rate component if the same pre test texts were used for post test purposes.

The current study used the R.I.D.E.R strategy to instruct the students in the learning of Visualising. The process of instruction used within this study is in line with the views of Nelson (2005) who describes an effective teacher as one who models the strategy first. The teacher modelled the R.I.D.E.R process of reading to the students by demonstrating how to read, creating an image, describing, evaluating and repeating again. Students became very comfortable with the new learning procedure and were very keen to record their images onto their whiteboards. They were exposed to new terms that were replicated in their descriptive sentences. It was evident from the Visualising task post test that the Intervention group was working through parts of the R.I.D.E.R process unconsciously as they took their time by closing their eyes to imagine their picture before drawing and describing it in their retell.

The data from the study also highlights that the Control group achieved the greatest scores than the Intervention group within the Neale Accuracy and Rate scores. Even though these participants were not part of the intensive program it is important to note that student's progress in their own time regardless of whether they receive intense instruction on a specific strategy or none at all. However the Control group did experience the lowest improvement within the Visualising Task which suggests that they had no specific training in using the R.I.D.E.R. strategy to help them Visualise groups of sentences. During the pre and post tests these participants demonstrated less confidence with the task as they responded slowly to the activity and hesitated in their response.

The data provided by the study proposes a number of implications for teaching Visualising to students. The following are recommendations to consider as a result of the present study:

- Explicitly teaching students to direct, monitor and become independent learners by assessing their own learning as they read texts. It is important to teach students to apply the Visualising strategy to when reading more difficult and longer texts. If students are able to successfully and independently use this strategy whilst reading then they will be able to monitor the meaning gained from their reading or adjust their reading strategies in order further understand the messages constructed by authors.
- Visualising is a valuable strategy to teach to the whole class regardless of whether students are able to decode perfectly, as understanding the meaning of texts is far more important than getting every word correct. However the teaching of Visualising should not just be limited to whole class shared learning but also implemented within small reading focus groups. It is within these smaller sized groups that the strategy can be effectively maximised to cater for the individual needs of students. Scaffolded support can be regulated and phased out at rate which students can feel comfortable with letting go of support aids such as drawing.
- To foster the learning of Visualising students should also be taught strategies to question and paraphrase to assist with the Visualising process. Learning to ask questions during the reading
process will help students to clarify and construct further meaning of texts. Paraphrasing texts will help students to verbalise their learning by putting the information presented into their own words.
- Timeframes play a significant part in the learning of new skills. When measuring student's progress over a period of time when learning a particular skill it is important that the teacher evaluates whether the desired outcomes are achievable within the timeframe. From this study it has been noted by the researcher that the students require more than ten teaching sessions of the Visualising strategy in order for them to become independent users.

A future direction of research to reflect upon is exploring whole class teaching versus small group teaching. Which teaching strategy is more beneficial to the students learning of a particular skill? Furthermore it would be interesting to analyse the data from the two groups who were involved in whole class and small group teaching and make comparisons between the effectiveness of each. Another potential area of research to consider may examine the affects that Visualising has on a student's self-efficacy in regards to their reading. Research may include additional information about the impact that effective teaching strategies has on a readers self belief, or the effects that a positive or negative attitude has on a student's ability in becoming a confident and successful user of texts.

As an educator it is important that students are equipped with the necessary skills, knowledge and strategies to become effective text users. For many students the process of learning to read is a difficult and complex task. Therefore a positive learning environment that promotes self belief and ongoing support is important in fostering students self efficacy as a reader.

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Appendix A: Excel Data


## Appendix B: Visualising Task Adapted from John Munro

| Sentence | Drawing | Description | Scoring |
| :--- | :--- | :--- | :--- |
| The young boy and his friend <br> rode on their bikes. <br> They were enjoying <br> themselves. |  |  |  |
| The two friends chatted to <br> each other. |  |  |  |
| They were not watching <br> where they were going. |  |  |  |
| The bike track became skinny <br> and twisted. |  | $/ 1$ |  |
| They came to the top of a hill <br> and the bikes went faster and <br> faster. |  |  |  |

## Appendix C: Lesson Plans

| 1 | Duration: 40 minutes <br> Text: Visualising and Verbalising Stories - Level 1 : story 1 pg 12 <br> Materials: Enlarged copy of a picture of a camera, a picture of a farm, whiteboards and markers. <br> Before Reading: <br> - Show children a picture of a camera and discuss the purpose of a camera. <br> - Discuss why do we take pictures and what do we use them for? Cameras help us to remember important things. <br> - Have children make a camera using their hands and have them practise taking a photo. <br> - Introduce children to the concept of Visualising. Tell them that we are going to use our cameras to help us remember important information from texts. <br> - Show children a picture of a farm. Record what they know about farms and what they can see in the picture. <br> While Reading: <br> - Teacher reads aloud the text sentence by sentence to the students. <br> - Students read aloud the text sentence by sentence. <br> - Teacher visualises and describes sentence by sentence to the whole class. <br> - Students get out their cameras and take a photo of each sentence to store it into their minds. <br> - They then close their eyes and Visualise each sentence. <br> - Using the whiteboards they draw their pictures. <br> - The children share their picture with a small group and describe what they have drawn. 'In my mind I see...' <br> - Have some children share their pictures with the whole class. <br> After Reading: <br> - As a whole class read each sentence and circle the key words in the text and make connections to the children's pictures. <br> - Have children suggest a suitable title for the story. <br> - Reflect on children's learning about the word 'Visualising' |
| :---: | :---: |
| 2 | Duration: 40 minutes <br> Text: Visualising and Verbalising Stories - Primary Level : story 9 pg 8 <br> Materials: Enlarged copy of a picture of a camera, R.I.D.E.R. poster, whiteboards and markers. <br> Before Reading: <br> - Review the term Visualising and its meaning. <br> - Review the use of a camera. <br> - Students recall what they remember about the story from the previous day. <br> - Get the students knowledge ready by asking them 'What do you know about frogs?' <br> - Show students the short story about a frog. |



|  | - The children share their picture with a small group and describe what they have drawn. 'In my mind I see...' <br> - Have some children share their pictures with the whole class. <br> After Reading: <br> - As a whole class read each sentence and circle the key words in the text and make connections to the children's pictures. <br> - Have children suggest a suitable title for the story. <br> - Ask students the comprehension questions from the 'Visualising and Verbalising book.' <br> - Reflection : What have you learnt from the activity. |
| :---: | :---: |
| 4 | Duration: 40 minutes <br> Text: Visualising and Verbalising Stories - Level 1: story 9 pg 16 <br> Materials: R.I.D.E.R poster, whiteboards and markers. <br> Before Reading: <br> - Review the Visualising and R.I.D.E.R strategy. <br> - Students recall what they remember about the story from the previous day. Get the students knowledge ready by asking them 'How do thunderstorms make you feel? What can happen during a thunderstorm?' <br> - Show students the short story about a lightning storm. <br> While Reading: - Refer to R.I.D.E.R process throughout the lesson describing which step the children are up to. <br> - Students read pairs of sentences aloud. <br> - Teacher visualises and describes pairs of sentences to the whole class. <br> - The students then close their eyes and visualise pairs of sentences. <br> - Using the whiteboards they draw their pictures. <br> - The children share their picture with a small group and describe what they have drawn. 'In my mind I see...' <br> - Have some children share their pictures with the whole class. <br> After Reading: <br> - As a whole class read each sentence and circle the key words in the text and make connections to the children's pictures. <br> - Have children suggest a suitable title for the story. <br> - Ask students the comprehension questions from the 'Visualising and Verbalising book.' <br> - Reflection : What have you learnt from the activity. |
| 5 | Duration: 40 minutes <br> Text: Visualising and Verbalising Stories - Level 2: story 12 pg 26 <br> Materials: R.I.D.E.R poster, whiteboards and markers. <br> Before Reading: <br> - Review the Visualising and R.I.D.E.R strategy. <br> - Students recall what they remember about the story from the previous day. <br> - Get the students knowledge ready by asking them 'what are some activities you like to do outside with your friends?' |


|  | - Show students the short story about skateboarding. <br> While Reading: - Refer to R.I.D.E.R process throughout the lesson describing which step the children are up to. <br> - Students read pairs of sentences aloud. <br> - Teacher visualises and describes pairs of sentences to the whole class. <br> - The students then close their eyes and visualise pairs of sentences. <br> - Using the whiteboards they draw their pictures. <br> - The children share their picture with a small group and describe what they have drawn. 'In my mind I see...' <br> - Have some children share their pictures with the whole class. <br> After Reading: <br> - As a whole class read each sentence and circle the key words in the text and make connections to the children's pictures. <br> - Have children suggest a suitable title for the story. <br> - Ask students the comprehension questions from the 'Visualising and Verbalising book.' <br> - Reflection : What have you learnt from the activity. |
| :---: | :---: |
| 6 | Duration: 20-30 minutes <br> Text:ERIK - session 19: A day at the beach <br> Materials: R.I.D.E.R poster, <br> Before Reading: <br> - Students recall what they remember about the story from the previous day. <br> - Get the students knowledge ready by asking them 'what do you like to do at the beach?' <br> While Reading: - Refer to R.I.D.E.R process throughout the lesson describing which step the children are up to. <br> - Students read pairs of sentences aloud. <br> - Students visualise sentence by sentence individually. <br> - The children share their visualised image in their mind with a small group. 'In my mind I see...' <br> - Have some children share their descriptions with the whole class. <br> After Reading: <br> - Ask children the following questions about the text- <br> - What day were Beck and her mum going to the beach? <br> - What did Beck's mum pack to take to the beach? <br> - Why do you think one of the boys shouted to Beck to watch out? <br> - Reflection : What have you learnt from the activity. |
| 7 | Duration: 20-30 minutes <br> Text: ERIK - session 19: A day at the beach Materials: R.I.D.E.R poster |


|  | Before Reading: <br> - Review key events that happened in the story the previous day. <br> - Have children predict what they think is going to happen next in the story. <br> - Discuss difficult words in the text and suggest possible meanings. <br> While Reading: - Refer to R.I.D.E.R process throughout the lesson describing which step the children are up to. <br> - Students read silently each paragraph. <br> - Students visualise pairs of sentences and describe their images to the whole class. <br> - In small groups the students visualise pairs of sentences and then share their visualised image with a small group. 'In my mind I see...' <br> After Reading: <br> - In partners have the students retell the story in their own words. <br> - Reflection : What have you learnt from the activity. |
| :---: | :---: |
| 8 | Duration: 20-30 minutes <br> Text:ERIK - session 21: The Party Dress <br> Materials: R.I.D.E.R poster <br> Before Reading: <br> - Get the students knowledge ready by asking them 'what occasions do you dress up for?' <br> - Discuss difficult words in the text and suggest possible meanings. <br> While Reading: - Refer to R.I.D.E.R process throughout the lesson describing which step the children are up to. <br> - Students read silently each paragraph. <br> - Students visualise each paragraph and describe their images to the whole class. <br> - The students visualise each paragraph and then share their visualised image with a partner. <br> After Reading: <br> - Have students predict what might happen next in the story. <br> - Reflection : What have you learnt from the activity. |
| 9 | Duration: 20-30 minutes <br> Text: ERIK - session 26: The School Camp <br> Materials: R.I.D.E.R poster <br> Before Reading: <br> - Review key events that happened in the story the previous day. <br> - Discuss difficult words in the text and suggest possible meanings. <br> While Reading: - Refer to R.I.D.E.R process throughout the lesson describing which step the children are up to. <br> - Students read silently each paragraph. <br> - Students visualise each paragraph and describe their images to the whole class. |


|  | - The students visualise each paragraph and then share their visualised image with a partner. <br> After Reading: <br> - Have students predict what might happen next in the story. <br> - Reflection : What have you learnt from the activity. |
| :---: | :---: |
| 10 | Duration: 20-30 minutes <br> Text:ERIK - session <br> Materials: R.I.D.E.R poster, whiteboards and markers. <br> Before Reading: <br> - Review key events that happened in the story the previous day. <br> - Discuss difficult words in the text and suggest possible meanings. <br> While Reading: - Refer to R.I.D.E.R process throughout the lesson describing which step the children are up to. <br> - Students read silently each paragraph. <br> - Students visualise each paragraph and describe their images to the whole class. <br> - The students visualise each paragraph and writes their sentence down onto their whiteboards. <br> - They share their visualised image and sentence with a partner. <br> After Reading: <br> - Students retell with a partner the story in their words.. <br> - Reflection : What have you learnt from the activity. |

## Picture of a Camera



## Farmyard.



R.I.D.E.R. Poster

$R$Read it


IImagine it


## D

Describe it


## $E$ <br> Evaluate it

R
Repeat and read on


