Explicitly teaching visualisation strategies to Year Six students in a whole class environment will improve their reading comprehension.

Abstract

Many students in the upper primary years of school are able to decode words with accuracy however the level of comprehension can be considerably lower.

The hypothesis of this study is that the reading comprehension of Year Six students will improve if they are explicitly taught the strategy of visualisation. The research suggests that students benefit from a working knowledge of a number of comprehension strategies, with visualisation been a critical skill.

This study looked at the results of 34 female Year Six students who were divided into two groups. Each group of students was tested to give a base line for the study. One group, the intervention group, was given explicit teaching to develop an understanding of the R.I.D.E.R. strategy to improve their ability to visualise texts. The students were given the opportunity to experience modelling of the strategy with the level of support fading as the students skill develop until they are able to independently use the strategy. They were then re-tested to measure changes in their comprehension level.

The study showed the students who received the explicit teaching improved in both the specific skill of visualisation and also in their level of comprehension competency.

The results of this study would suggest that students in the upper primary benefit from explicit teaching of comprehension strategies.
Introduction

There is an expectation that once students reach the upper primary and they are able to read fluently, the “teaching” of reading is superfluous. However while many students are able to decode words with a high degree of accuracy, many of these students do not attain the same level of competence in comprehension. Teachers have reported that students in the upper primary can read but do not understand what they are reading (Scharlach, 2008). Burgoyne, Kelly, Whiteley, & Spooner (2009) pointed out through the research of Yuill and Oakhill (1991) that the results of students who attain low reading achievement were due to comprehension issues rather than decoding.

Being able to simply decode does not make an effective reader. “Reading encompasses both decoding and the making of meaning” (Harvey & Goudvis, 2007, p.13). Burgoyne et al (2009) quoted the research of Oakhill, Cain and Bryant, (2003), who proposed that successful reading is dependent on both decoding words and comprehension skills and while they were related they also require separate skills. Boulware-Gooden, Carreker, Thornhill & Joshi (2007) make reference to the National Institute of Child Health and Human Development (2000) which states that “Comprehension is the reason for reading, and vocabulary plays a significant role in comprehension” Staal (2000) takes this further cited the work of Boyle (1996) who stated that reading comprehension is one of the most important skills a student needs but also one of the most difficult tasks for students who struggle with reading.

Woolley (2005) referred to the work of Leach, Scarborough and Rescorla (2003) who observed that reading comprehension difficulties are often first noticed when a student reaches Year Four. This, they claim, is due to the fact many of the texts that students have read up to this age do not rely on strong comprehension skills but rather on the decoding of texts which are generally narrative and at instructional level for most students. However from Year Four the vocabulary becomes more specialised and text length has increase while the content becomes more complex and this requires a greater emphasis on comprehension. This theory is supported by Chall (1983) cited in Deshler and Hock (2006) who argued that struggling adolescent readers do not have the reading skills to “escape the fourth grade slump”.

Page 1 of 57
It is in the middle years of schooling that reading changes for students. Goodman (2003) suggests that this is a “pivotal point” in a student’s development. It is at this point they move from learning to read to reading to learn. This is the stage which sets up a student for their future studies and ability to function at a literate level in society. It is however at this level of school that we see a shift in the curriculum with the focus in reading moving from how to read to what is read. The content rather than the process becomes more important. Edmonds, Vaughn, Wexler, Reutebuch, Cable, Klingler Tackett, & Schnakenberg (2009) quoted from the work of Pressley (2000) and the RAND Reading Study Group (2002) stating that teachers are focusing on the content of their subject area rather than reading for learning and understanding.

Given that students need to use reading for learning and with the complexities of the texts increases during the middle years of schooling students need to acquire the skills and knowledge to meet these challenges. Burgoyne, Kelly, Whiteley & Spooner (2009) suggest that student’s access to the curriculum would be reduced if comprehension difficulties are not identified and support given to students to develop these skills is not obtained. A good reader is able to use to draw from a wide range of strategies when reading a text for meaning. Strategies such as the ones outline by Munro (2010) visualising and verbalising, synonyms, paraphrasing, predicting, questioning and vocabulary building all contribute to a student’s ability to develop into a proficient reader.

This study will look at one of these strategies, that of visualising and how through explicit teaching of this skill there can be a positive outcome on comprehension levels. The strategy of visualisation when reading is to create mental images from the written or oral text (Harvey & Goudvis 2007). Boling and Evans (2008) suggested that visualisation take place as the reader focus more on the meaning of the text rather than just decoding individual words. “Proficient readers visualize what they read as they construct meaning from a text” (Onofrey & Theurer, 2007, p. 682).

Not all readers visualise as they read. Manning (2002) stated that many students require support to create a mental image of settings and characters of what they are reading. It is therefore necessary to teach this powerful strategy (Naughton, 2008). Bell (1991) stated that
Reading comprehension requires automatic imaging in which parts are visualised and automatically brought together in the form of more image in order to develop a whole (gestalt) of the information read. (p.20).

Harvey & Goudvis (2007) spoke further about the importance of visualisation when student read non-fiction texts, again a skill which increase as the students get older. They stated that “Teaching children to construct their own mental images when reading nonfiction helps them to stop, think about, and understand the information”(p.19).

Clarke, Deshler, Schumaker, Alley & Warner (1984) devised the R.I.D.E.R. strategy as a framework for visualisation when reading. The process guides students through actions to assist them gain greater understanding of the text they are reading. The acronym R.I.D.E.R. stands for

- **Read** (or listen) first sentence, paragraph, episode, complete text
- **Image** make a picture in your mind, think about what you already know and add this to your picture
- **Describe** your image or 'picture'
- **Evaluate** your image for its completeness by checking against the text
- **Repeat** the process while you are reading (or listening)

Onofrey & Theurer, (2007) point out, “If students are going to become proficient in comprehension, we, as teachers, need to equip them with skills and strategies that are independently transferable”(p.683). There are many ways in which reading comprehension skills can be taught to students. In the past it was thought that the more a student read the better their reading, both decoding and comprehending, became. (Edmonds et al. 2009) However recent research suggests that explicit teaching of the comprehension skills is the most effective method. Duke and Pearson (2002) suggest that there should be a balance between “both explicit instruction in specific comprehension strategies and a great deal of time and opportunity for actual reading, writing, and discussion of text” (p. 2). Harvey & Goudvis (2007) explain explicit teaching in reading as showing the student how proficient readers think when they are reading. This is done through modelling, explanation and the
scaffolding to support the reader as they become more independent readers. Alder (2004) outlines a four step process in explicit teaching. They are:

*Direct Explanation*

The reason why the strategy helps with comprehension and when it should be applied is explained to the students by the teacher.

*Modelling*

The teacher demonstrates to the students how to use the strategy while they are reading by “thinking aloud” as the students read.

*Guided practice*

The teacher supports students as they gain experience using the strategy and are guided as to when and how to apply the strategy.

*Application*

The teacher assists students to practice the strategy until they are able to apply the strategy independently.

This process leads students through modelling, scaffolding and then to independence. Collins, Brown and Newman (1989) referred to a similar process however add that the student also has a responsibility to take an active part in their learning. Collins et al. (1989) argued that a student must be involved in articulation, reflection and exploration.

Articulation is defined as the student explaining what they are doing as they apply the strategy and when they would apply the learning. Reflection is when the student is able to consider what they now know that they did not previously. The final component is exploration which is when the student identifies the appropriate strategy and applies the learning in new contexts and with new tasks. Each of these principles of instruction creates the most effective learning model for students particularly those who experience difficulties.

**Prediction**

The aim of this study is to look at how explicitly teaching Year Six students, visualisation strategies will assist students create an image of what they reading in their mind. This will be taught as part of a literacy class and taught to the whole class. It will be using R.I.D.E.R. (Clarke et al.,1984) as the foundation strategy to assist students to improve their reading
comprehension. The hypothesis is that explicitly teaching visualisation strategies to Year Six students in a whole class environment will improve their reading comprehension.

Method

Design

This study uses a case study OXO design. Improvements in reading comprehension follow explicit teaching in the use of visualisation strategies before during and after reading, were monitored for Year Six students. The study compared two groups of students, a control group and an intervention group.

Both groups were pre tested using the TORCH Test of Reading Comprehension (Mossenson, Stephanou, Forester, Masters, McGregor, Anderson & Hill.2003) and Visualisation Task-Group Administration (Munro 2010).

Explicit teaching of visualisation strategy was then given to the intervention group. During the study, students in the intervention group were monitored through the use of a journal in which the participants in the intervention group recorded their knowledge and understanding of the visualisations strategy after each of the teaching sessions. At the completion of the teaching sessions, both the intervention and control groups were then post tested using the TORCH Test of Reading Comprehension (Mossenson et al., 2003)and Visualisation Task-Group Administration (Munro, 2010).

Participants:

The participants in this study consisted of 34 Year Six female students. There were 17 students in the control group and 17 students in the intervention group. The students in the intervention group were the whole class in one of three Year Six classes. The control groups consisted of students from the other two classes. The students who formed the control group were selected to match the pre-test TORCH scores of the intervention group.

The students in both these groups were of mixed reading abilities (Appendix 1). Each of the students was aged between 11 years and 3 months and 12 years and 8 months. There were no
students who would be classified as English as Second Language (ESL). There was one student in the intervention group who receives funding for Chronic Health Impairment.

**Material:**

Materials used include the following:

**Tests**
- TORCH – Test of Reading Comprehension (Mossenson et al., 2003)
- Visualisation Task - Group Administration (Munro, 2006) (Appendix 2)

**Student Journals** (Appendix 3)

**Teaching Sequence** - Ten lessons to provide explicit teaching instruction in developing the visualisation strategy (Appendix 4).

**Texts** - Collection of texts from a variety of genres which have been graded related to their readability (Appendix 5).

**Procedure**

In this study the students completed a series of pre-tests prior to the explicit teaching activities. The students in the intervention group completed a series of lessons designed to teach the strategy of visualisation and then Post-tests were administered to all students. The results of the tests then were analysed.

The pre-tests administered to the students were

TORCH – She’s Crying

Visualisation Task: Group Administration

The TORCH was completed in February of the year of the study as part of the school testing schedule.

These tests were all used to give a base line for the study. The TORCH gave an indication of the students overall ability to comprehend a piece of graded text. The Visualisation Task was administered to indicate each student’s ability to articulate, in written format, their visualisation of a series of sentences.
Over a two week period the students in the intervention group were involved in a series of ten lessons. Each lesson was of approximately 30 minute duration. These teaching sessions were taught to the whole class and formed part of the students’ literacy lessons.

The students in the control group, which consisted of students from two other Year Six classes, continued their literacy activities as part of the planned literacy curriculum. These students were involved in a variety of literacy activities which included the teaching of the strategies outlined in the Strategies to Achieve Reading Success (STARS) reading comprehension program. (Appendix 6) The focus over the two week period of this study was Comparing and Contrasting.

The lessons for the intervention group were designed based on a model of teaching students visualisation developed by Munro (2006). This model lead students through a process whereby the teacher models and scaffolds their learning and then tapered off this support to encourage and develop more independent learning. These lessons also drew from the work of Collins et al (1989) which is reflected in the student activities. (Appendix 4)

The lessons presented to the intervention group were structured to build on the experience and learning of the previous lesson. The text chosen in the first four lessons were well below the skill level of the targeted class. On the Fry’s Readability Scale (1977) the texts were levelled at Year Four. (Appendix 7). The reasoning behind this was that the students would be able to focus their attention on the strategy of visualisation rather than concerning themselves with decoding. The texts chosen also were descriptive passages which lent themselves easily to creating a graphic picture. The use of such texts allowed the students to create an image in their mind with ease. In the first series of sentences used, the students were asked to draw a picture of what was read. This permitted students to develop an explicit understanding of what visualisation means. Part of the decision was also to encourage students who are visual learners, to draw what they were able to see in their mind, before transferring to words through verbal and finally written formats.
The first lesson in the series was designed to introduce the strategy of visualisation. This began with an explicit outline of what and why it was going to be taught. The explanation was followed by the teacher modelling the strategy. The sentence was read and she explained what she imagined in her mind as she read. Students were then given the opportunity to do the same and were also encouraged to draw the images they saw to get a sense of what the process involved. This moved on to students and the teacher visualising and then describing each of sentences as a whole class. The students then broke into pairs to visualise and describe the sentences and with the support of a partner, checked that the description matched the sentence.

Each of the following lessons began with a review of the previous lesson. The students were asked to reflect on what they had learnt. These were written on the Smartboard to provide a visual record of the different learning which had taken place. At the end of each of the sessions students were given time to reflect on what they had learnt.

In Lesson Two students were asked to reflect on the previous days lesson and outline the activities that they had completed. As each activity was described the main word was written on the Smartboard. The first letter of each word was written in a different colour. This then formed the acronym R.I.D.E.R.. This was explained to the students as the process that they could use to assist them the visualise texts they were reading. The explanation and the acronym were displayed in subsequent lessons as a prompt on the side of Smartboard (Appendix 7). It was followed by the teacher modelling the reading aloud of a paragraph. She then shared her visualisation and description of each of the sentences. The students, then, also completed the same task.

Lesson Three and Four progressed from the modelling of visualising pairs of sentences to where students worked collaboratively to describe the sentences. In Lesson Four a non-fiction text was introduced. In the pre-reading activity the students identified words that they expected to come across in the text. The non-fiction text related to the integrated topics that they were involved in and so this again lessened the stress of both decoding and lack of experience related to the text.
Students’ reading full paragraphs was introduced in Lesson Five. Teacher support or scaffolding in asking questions ensured that the whole paragraph was looked at rather than just a few sentences.

This support was faded in Lesson Six as the students read the paragraph aloud and then visualised and described each sentence independently. In Lessons Seven and Eight students moved from visualising sentences to reading and then visualising paragraphs. This was done without the scaffolding of the teacher however students were supported by each other to describe these paragraphs. This lead to the students, in Lesson Eight, individually visualising a paragraph and then sharing it with a partner.

Lesson Nine and Ten gave the students the opportunity to work independently. They read the assigned paragraphs; one was fiction and the other non-fiction. They silently visualised the text and then wrote what they visualised.

Apart from the explicit teaching lessons, throughout the normal day, the strategy was discussed in relation to other reading tasks completed by the students. This was done to reinforce the strategy and to reiterate how this strategy could be applied to a variety of other learning situations (Collins et al 1989). During the first week of this study, the students also created a bookmark which was laminated so that they could refer to the strategy while reading. (Appendix 9)

At the conclusion of the series of lessons all students from the control and the intervention groups completed a series of post –testing using the following:

- TORCH – “Matches”
- Visualisation Task: Group Administration

Students from the intervention group also submitted their Visualisation Journals.

The results of the TORCH comprehension tests were used to determine if the there were any changes in each individual student’s comprehension scores as well as giving an overall view of both groups of students. These results were graphed and analysed to determine what
impact the explicit teaching of visualisation had on the comprehension of the students in the intervention group.

The Visualising Task: Group Administration was administered as a post test to measure if there was any improvement in the students’ ability to visualise sentences.

The Visualisation Journals were submitted to gain an understanding of what the students’ thinking was throughout the teaching sessions (Appendix 10). It was also done to establish if there was any connection between what the students were thinking while they were completing the sessions and the results of the formalised tests.

Results
The results of this study supported the hypothesis that students who receive explicit teaching in visualisation strategies will improve their performance in comprehension.

1. Group Data

Two groups of 17 female, Year Six students were used in this study. Their initial scaled TORCH scores were compared with the population data for female Year Six students (M = 51.5, SD = 8.5) collected in the TORCH Teacher Manual (Mossenson et. al., 2009). Neither the intervention group (M1 = 50.24, SD1 = 10.81) nor the control group (M2 = 50.61, SD2 = 7.96) achieved results significantly different to the population (z1 = -0.14, p>>0.05, z = -0.10, p>>0.05).

2. Intervention Group; TORCH Test

The graph below (Fig. 2.1) summarises the TORCH score data collected for students in the intervention group. It shows the TORCH scale scores recorded early in the year prior to formal visualisation teaching as well as their results three months later after ten visualisation lessons (with over 98% attendance).
Figure 2.1. Summary of TORCH scaled scores for pre-test (pre-intervention) and for post-test (post-intervention) for students in the intervention group.

Frequency distributions (Fig. 2.2 & 2.3) for the intervention group have been compiled to demonstrate the difference between pre-intervention and post-intervention TORCH scores.

Figure 2.2. Frequency distribution for TORCH scale scores pre-test (pre-intervention) for the intervention group.
Students in the intervention group achieved a mean TORCH scaled score of 50.24 (SD = 10.81) prior to the lessons and 55.24 (SD = 7.71) after the lessons. Using the difference in score between the two assessments, a one tailed t-test for related samples indicated that there was significant improvement across the group (M(difference) = 4.99, SE(difference) = 1.57), t(16) = 3.18, p<0.005.

Given the high significance of this result an $r^2$ test was completed to determine the effect size. The calculated $r^2$ value was .388, meaning that 38.8% of the variance in scores can be explained by their participation in the intervention lessons. This can be classified as a “large effect” (Gravetter and Wallnau, 2004, pp295).

3. Intervention Group; Visualisation Task

The graph below (Fig. 3.1) summarises the visualisation task performance data collected for students in the intervention group. Again, these results were collected before and after ten lessons teaching visualisation strategies.
Figure 3.1. Summary of Visualising Task scores pre-intervention and post-intervention for students in the intervention group.

The frequency distributions (Fig. 3.2 & 3.3) for the visualisation task scores pre and post intervention can also be compared:

Figure 3.2. Frequency distribution for Visualisation Task scores at pre-intervention for the intervention group.
Students in the intervention group achieved a mean visualisation task score of 14.35 (SD = 6.49) prior to the lessons and 27.06 (SD = 4.84) after the lessons. Using the difference in score between the two assessments, a one tailed t-test for related samples indicated that there was significant improvement across the group (M(difference) = 12.71, SE(difference) = 1.95), t(16) = 6.52, p<0.005.

The $r^2$ value calculated for the change in scores was .727, meaning that 72.7% of the variance in scores can be explained by the visualisation intervention lessons. This can be classified as a “large effect” (Gravetter & Wallnau, 2004, p. 295)

4. Control Group; TORCH Test

The graph below (Fig. 4.1) summarises the TORCH score data collected for students in the control group. It shows the TORCH scale scores recorded at the same interval as the students in the intervention group, however they have lessons on visualisation strategies.
Figure 4.1. Summary of TORCH scaled scores pre-test and post-test for students in the control group.
TORCH score frequency distributions (Fig. 4.2 & 4.3) were plotted for the control students at pre-test and post-test, as with the intervention group.

*Figure 4.2.* Frequency distribution for TORCH scale scores for the pre-test for the control group

*Figure 4.3.* Frequency distribution for TORCH scale scores for post-test for the control group

Students in the control group achieved a mean TORCH scaled score of 50.61 (SD = 7.96) at pre-testing and 52.96 (SD = 6.59) at post-testing (after the intervention group had completed...
their lessons). Although there was some increase in the mean TORCH score, a one tailed t-test for related samples indicated that there was no significant improvement across the group (M(difference) = 2.35, SE(difference) = 1.77), t(16) = 1.32, p>0.10.

5. Control Group: Visualisation Task

The graph below (Fig. 5.1) summarises the Visualisation Task score data collected for students in the control group. Again, these results were taken at the same interval as the intervention group; however no visualisation classes took place.

*Figure 4.1. Summary of Visualisation Task scores at pre-test and post-test for students in the control group*
Visualisation Task score frequency distributions (Fig. 5.2 & 5.3) were plotted for the control students at for pre and post-test for comparison with the intervention group.

Figure 5.2. Frequency distribution for Visualisation Task scores for pre-test for the control group

Students in the control group achieved a mean visualisation task score of 19 (SD = 6.52) at pre-testing and 19.64 (SD = 5.92) at post-testing (after the intervention group had completed their lessons). A one tailed t-test for related samples indicated that there was no significant
improvement across the group (M(difference) = 0.65, SE(difference) = .57), t(16) = 1.12, p>0.10.

6. Intervention and Control Group Comparison

The graph below (Fig. 6.1) summarises the TORCH scaled score data in order to clarify the difference between the control and the intervention groups the mean test scores have been collated.

![Graph showing TORCH scaled scores](image)

*Figure 6.1. Pre-test and post-test mean TORCH scaled scores for the intervention and control groups (SD in brackets)*

The mean results of the pre-test TORCH scaled scores for the intervention and control groups show that the two groups were evenly matched. In the post-test the results achieved by the intervention group indicate an increase in excess of normal development in reading comprehension. The control group represents the expected increase that may occur for students over a three month period.

The graph below (Fig. 6.2) summarises the Visualisation Task score data in order to clarify the difference between the control and the intervention groups the mean test scores have been collated.
Figure 6.2. Pre-test and post-test mean Visualisation Task scores for the intervention and control groups (SD in brackets)

The mean result of the pre-test Visualisation Task indicates that the control group results were 4.65 higher than the intervention group. However after the visualisation lessons the results show that the intervention group’s mean result had increased by 12.71 while the control group had only increased by 0.64.
7. Individual results

The graphs below (Fig. 7.1 - 7.10) summarises the TORCH scaled score data and the Visualisation Task scores of individual students from the intervention group. The results discuss here give a cross section of the students results.

Figure 7.1 Student B pre and post-test TORCH Scale Scores

Figure 7.2 Student B pre and post-test Visualisation Task scores

The results of Student B (Fig. 7.1 & 7.2) show that both the TORCH Scale Score and the Visualisation Task score rose in the post-test assessment. In the TORCH Scales Scale the result rose from 40.3 to 57 which represent an increase of 1.96 Standard Deviation. The Visualisation Task rose from 3 to 27. There appears that for this student that there is link between improved Visualising Task Score and improved TORCH Scale Scores.
The results of Student C (Fig. 7.3 & 7.4) show that both the TORCH Scale Score and the Visualisation Task score rose in the post-test assessment. In the TORCH Scales Scale the result rose from 42.3 to 57 which represent an increase of 1.72 Standard Deviation. The Visualisation Task rose from 14 to 27. There appears that for this student that there is link between improved Visualising Task Score and improved TORCH Scale Scores.
The results of Student J (Fig. 7.5 & 7.6) show that while the TORCH Scale Score fell slightly, the Visualisation Task score rose in the post-test assessment. In the TORCH Scale Score the result fell from 54.2 to 51.3 which represent a decrease of 0.34 Standard Deviation. The Visualisation Task rose from 7 to 24. There appears that for this student while there was a large increase in the Visualising Task Score there was no change in the TORCH Scale Scores.

The results of Student N (Fig 7.7 & 7.8) show that while the TORCH Scale Score fell slightly, the Visualisation Task score rose in the post-test assessment. In the TORCH Scale Score the result fell from 56 to 55 which represent a decrease of 0.11 Standard Deviation. The Visualisation Task rose from 12 to 30. There appears that for this student while there was a large increase in the Visualising Task Score there was no change in the TORCH Scale Scores.
The results of Student A (Fig. 7.9 & 7.10) show that while the TORCH Scale Score rose, the Visualisation Task score did not increase significantly in the post-test assessment. In the TORCH Scale Score the result rose from 16.4 to 32.1 which represent an increase of 1.84 Standard Deviations. The Visualisation Task rose from 13 to 14. There appears that for this student while there was a large increase in the TORCH Scale Scores there was little change in Visualising Task Score.

Whilst this study has show a general trend for improvement in the intervention group’s TORCH Scale Scores and the Visualisation Task scores (this has been shown to be statistically significant) it has not be able to fully explain the differences for individual students.
Discussion

The results of this study supported the hypothesis that students who receive explicit teaching in visualisation strategies will improve their performance in comprehension as measured by the TORCH test.

In the pre-test, prior to the intervention lessons on visualisation, both the control group and the intervention group achieved results on the TORCH test that showed no significant difference to the population. The test results of the post-tests showed that on the TORCH scaled score there was improvement in both groups. The mean for the intervention group had risen from 50.24 (SD = 10.81) prior to the lessons and 55.24 (SD = 7.71) after the visualisation lessons. This contrasts with the control group which had risen from 50.61 (SD = 7.96) at pre-testing to 52.96 (SD = 6.59) at the post-test. Whilst both groups showed improvement, only the intervention group improved in a statistically significantly way.

Similarly with the Visualisation Task scores, the intervention group made a greater improvement than the control group. While the intervention group’s mean score increased from 14.35 (SD = 6.49) prior to the lessons and 27.06 (SD = 4.84) after the lessons, the control group demonstrated little change with the mean increasing from 19 (SD = 6.52) at pre-testing to 19.64 (SD = 5.92) at post-testing. Only the intervention group showed a significant improvement in the mean result.

The improvement made by the intervention group of both these tests indicates that the explicit teaching of visualising strategies does improve their performance on the TORCH test; a standard measurement of reading comprehension.

While the improvement in visualising was evident for most students in the intervention group, the improvement in comprehension as measured by TORCH was more apparent in those students who had achieved the lowest pre-test TORCH scores. This suggests that the explicit teaching of visualisation strategies improved their reading comprehension.
The teaching of the visualisation strategy supports students who have achieved lower comprehensions scores; however, it did not have as great an impact on students with higher TORCH scores. The fact that some of the high performing TORCH test students showed improvement in visualisation but not in their TORCH tests may be an indication that they do not rely as heavily on visualisation strategies when comprehending texts.

This study also shows that there are some students who do not fit the predicted trend. Several students who achieved scores around the mean for the pre-test did not make improvement in their post-test TORCH scale score. This is despite the fact that they made significant improvement in their Visualisation Task score. One student (Student A) made significant improvement with her TORCH scale score while making little improvement in the Visualisation Task score.

This study supports the work of Edmonds et al. (2009) who suggested that older students benefit from explicit teaching of comprehension skills. The results of this study support these findings, with 100% of student improving in their Visualisation Task scores after explicit instruction as compared with 47% of the students’ results from the control group. This also supports the study of Scharlach (2008) in citing the work of Block, Gambrell and Pressley (2002), which states that readers’ comprehension could improve if taught the strategies of good readers. Having identified the strategy of visualisation as one used by highly competent readers to enhance reading comprehension, this study has shown through the intervention group that there has been significant improvement in the ability to apply the strategy of visualising to the Visualisation Task.

Onofrey & Theurer (2007) quote the work of Pressley (2003) suggesting that many students need to be actively involved in multiple lessons repeating the same instruction before they are able to visualise abstract concepts that they read. This study used a series of ten lessons which enabled this repetition to be done and anecdotally through the students’ Visualisation Journals, this study appears to have provided support for this concept. Students felt that repeating the process outlined in the R.I.D.E.R. strategy help to cement the idea for them. This is supported by Edmond et al, (2009) who suggests that older readers benefit from explicit teaching with opportunities for the students to be actively engaged in monitoring...
their understanding and processing text meaning. In this study this was done through the Visualisations Journals, which anecdotally support the concept.

Manning (2002) suggested that a lack of background knowledge is one of the factors which hinder student’s development of visualisation. Although this study was unable to prove or disprove his idea, it may be interesting to note that the text for the post-test TORCH test, Matches, was related to the topic the students were studying at the time. Through the explicit teaching lessons and through other class activities, students had been looking at inventions. This gave the students access to some of the vocabulary and the structure of this genre style. This may have impacted on the students’ results. However the control group were also studying the same topic, the specific difference was that the control group was not involved in the explicit visualisation lesson.

Burgoyne et al. (2009) point out that comprehension is not reliant on one skill but on many. The result of this study supports this theory, where students whose results on the TORCH test did not improve significantly despite the fact that their performance in a single strategy had significantly improved. This demonstrates that some students, particularly those with higher results on the pre-test TORCH test, are less dependent on one strategy to make a marked improvement as they are able to draw from other strategies.

**Implications for teaching practice**

The research around comprehension strategies for upper primary and lower secondary has suggested that there is a greater need for more explicit teaching of comprehension skills. There is also a need to explicitly teach a variety of strategy for developing effective comprehension skills.

While at the upper primary and lower secondary level there is an emphasis on testing comprehension, there is not a focus on the teaching of these skills. The implication for teaching in this area is to develop a sequential process of identification, teaching and then testing of comprehension strategies to ensure effective comprehension development. The first step in this process is to ensure that teachers in the upper primary school are aware of the
strategies which enable reader to fully develop their comprehension skills. The ability to test students to identify their strengths and weaknesses in applying these strategies is also required. This study supports the idea that teaching a comprehension strategy to a whole class has a positive outcome for all students however the greatest impact has been on those students who test lower on comprehension tests. Follow up testing assists teachers in assessing the effectiveness of the teaching on the specific group of students. This process needs to form the cycle of the students learning, identification, teaching and testing.

Students in upper primary and lower secondary school face an increasing requirement to read non-fiction texts, as a consequence, the demands for teaching the strategy of visualisation changes. One of the implications for teaching visualisation strategies for non-fiction texts is to identify what experiences the students require before they can visualise these unfamiliar texts. In fictional texts many students are able to draw on a wide range of experiences. However with non-fiction texts related to such areas as science, where subject specific language is required, some students may have little familiarity. The effect of this is that students are unable to make a visual picture of many of the words, sentences and even topics. This severely impacts on a student using this strategy. The implication for teaching would be for teachers to place a greater emphasis on the pre-reading activities to assist students through either practical activities or extensive vocabulary building before presenting students with a text.

Areas for Further research

Further research in this area could be to investigate what comprehension strategies impact on students at the upper primary to junior secondary level. This could be broken down into smaller areas to investigate such as:

- Are students able to articulate the strategies they use when they are reading?
- What are the most commonly strategies used by students in the upper primary and/or junior secondary school?
- Identifying why some strategies appear to become less important to students.
- Which strategies best support students to comprehend non-fiction texts?
- How can these strategies be incorporated into subject specific areas of the curriculum?
This could also help develop an understanding about how to support students who have difficulty with comprehension when the intricacy of text increases.

Many students in this age group continue to be able to decode complex text without fully understanding its meaning. It is therefore imperative that teaching pedagogy adapts to support those students who struggle with reading. Students need to develop all the comprehension skills to ensure that they are able to make sense of the texts that surround them as they become literate in the twenty first century.
Bibliography


**Resources**

**Test**


**Texts**


Downloaded: April 1st 2010.
### Appendices

#### Appendix 1

Table of all participants in the study

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Appendix 2

Visualising task: Group administration

John Munro

In this task we are going to be reading and writing sentences. This is not a spelling test. If you are not sure of how to spell a word, just write down how you think it is spelt. In this task it doesn’t matter if you write words incorrectly.

Look at the first two sentences. These are part of a story. I will read them and I want you to read them to yourself with me. Then I will think about what the story might say next. I want you to think about what it might say as well.

Read the two sentences. In my mind I see a man wearing work clothes going to live in a strange town. In his bag he has toys he has made and tools for making them. He is looking around the new town. Now you have a go at making your picture. Then describe what your picture has in it. Remember you don’t need to spell all the words correctly.

Now you have a go at the second sentence. Read it to yourself. Now have a go at making a mind picture of it. Then describe your picture in words. Write it in the space. Remember you don’t have to spell all the words correctly. Ask some students to share their responses with the class and provide useful corrective feedback. Now listen to the picture I made. It says “He wanted to find a place to live. “I can see the man looking at a house where he could live. Write down what I have said in the space.

Now you have a go at the third sentence. Read it to yourself. Now have a go at making a mind picture of it. Then describe your picture in words. Write it in the space. Remember you don’t have to spell all the words correctly. Ask some students to share their responses with the class and provide useful corrective feedback. Now listen to the picture I made. It says “He needs to get to know the city. “I can see the man wanting to find where to get something to eat.” Write down what I have said in the space.

Tell the children that you may not be able to change every word in a sentence. Sometimes you will have to say some of the words that are in the starting sentence.

Now you have a go at the fourth sentence. Read it to yourself. Now have a go at making a mind picture of it. Then describe your picture in words. Write it in the space. Remember you don’t have to spell all the words correctly. Ask some students to share their responses with the class and provide useful corrective feedback. Now listen to how I say it. It says “After he bought a map he looked for a bus. I can see the man buying a map and then looking in the street for a bus stop.” Write down what I have said in the space.
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<td>This person who makes toys moved to a new town.</td>
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<td>He needed to get a house to stay.</td>
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<td>He needs to get to know the city.</td>
<td>He wants to find out where things are in the town.</td>
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<td>After he bought a map he looked for a bus.</td>
<td>First he got himself a map. Then he searched for a bus stop.</td>
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Introduce the set of target sentences. Give the students the following instructions: Read each sentence to yourself. Make a picture of it in your mind. Then describe your picture in words. Write this in the space. Remember I am keen to know about the pictures you make. You will probably make different pictures from each other.

| The young man and his friend rode on the bike.                                 |                                                                          |
| They were enjoying themselves.                                                 |                                                                          |
| The birds were singing in the trees.                                           |                                                                          |
| The two friends chatted. They were not paying attention to anything.           |                                                                          |
| They were supposed to watch where they were going.                            |                                                                          |
| The track became narrow and twisted.                                           |                                                                          |
| Suddenly it began to slope down and the bike sped up.                         |                                                                          |
| People in the park watched and gasped as it went faster and faster.           |                                                                          |
| The two riders weren’t smiling and chatting any longer.                       |                                                                          |
Now they were gripping the bike as tightly as they could, showing fear on their faces.

People in the park had stopped what they were doing and started to yell, “Stop” or “Be careful”.

All of a sudden the path goes around a sharp curve.

Ahead they see in the middle of the path, a huge stone.

The closer they get to it, the more enormous it becomes.

As they fly towards it, their hearts are beating louder and louder and they try to take avoidance action.

There is loud thud, the front wheel crumples and the young couple is airborne, flying over the obstacle to the grass on the side of the path.
### Visualising task: Group administration

#### Student work sheet

**Student name:** _________________________  **Grade:** ____________  **Date:** __________

<table>
<thead>
<tr>
<th>Sentence</th>
<th>Teacher</th>
<th>Your try</th>
</tr>
</thead>
<tbody>
<tr>
<td>A toy maker went to live in another city.</td>
<td>This person who makes toys moved to a new town.</td>
<td></td>
</tr>
<tr>
<td>He wanted to find a place to live.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>He needs to get to know the city.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After he bought a map he looked for a bus.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sentences</th>
<th>Your mind picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

1. The young man and his friend rode on the bike.

2. They were enjoying themselves.

3. The birds were singing in the trees.
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>The two friends chatted. They were not paying attention to anything.</td>
</tr>
<tr>
<td>5</td>
<td>They were supposed to watch where they were going.</td>
</tr>
<tr>
<td>6</td>
<td>The track became narrow and twisted.</td>
</tr>
<tr>
<td>7</td>
<td>Suddenly it began to slope down and the bike sped up.</td>
</tr>
<tr>
<td>8</td>
<td>People in the park watched and gasped as it went faster and faster.</td>
</tr>
<tr>
<td>9</td>
<td>The two riders weren’t smiling and chatting any longer.</td>
</tr>
<tr>
<td>10</td>
<td>Now they were gripping the bike as tightly as they could, showing fear on their faces.</td>
</tr>
<tr>
<td>11</td>
<td>People in the park had stopped what they were doing and started to yell, “Stop” or “Be careful.”</td>
</tr>
<tr>
<td>12</td>
<td>All of a sudden the path goes around a sharp curve.</td>
</tr>
<tr>
<td>13</td>
<td>Ahead they see in the middle of the path, a huge stone.</td>
</tr>
</tbody>
</table>
14. The closer they get to it, the more enormous it becomes.

15. As they fly towards it, their hearts are beating louder and louder and they try to take avoidance action.

16. There is loud thud, the front wheel crumples and the young couple is airborne, flying over the obstacle to the grass on the side of the path.

Scoring System
At the completion of reading (or listening to) each sentence, ask the student to describe the image they have in their mind in his/her own words.

Give 2 points for a description/sentence that has been reworded, and the student has substituted more than 50% of the words in the sentence (using synonyms).

Give 2 points for a sentence in which the order of the words within the sentence has been changed and meaning has been maintained. (Some synonyms may also be used.)

Give 1 point for a sentence that has had less than 50% of the words in the sentence have been substituted with synonyms, or the words have just been reordered.

Give 0 points if a sentence is complete, or does not maintain meaning.

Note: Students can only gain points if the meaning of the sentence is maintained.
Appendix 3
Blank Visualisation Journal

Visualisation Journal

Name:
Date:

------------------------------------------
Lesson Plans: A series of ten lessons

<table>
<thead>
<tr>
<th>Session: One</th>
<th>Year Level: 6</th>
<th>Format: Whole Class</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Duration:</strong></td>
<td>30 minutes</td>
<td></td>
</tr>
<tr>
<td><strong>Text:</strong></td>
<td>The Complete Adventures of Charlie and Mr Willy Wonka  Roald Dahl  Fry's readability Year 4</td>
<td></td>
</tr>
<tr>
<td><strong>Materials:</strong></td>
<td>Text, Smart board, Student Journals, student literacy book</td>
<td></td>
</tr>
<tr>
<td><strong>Goal:</strong></td>
<td>To teach the skills of visualisation to assist students create a mental pictures as they read to develop greater understanding of texts read.  To introduce the concept of visualisation.  Model visualisation to class.</td>
<td></td>
</tr>
<tr>
<td><strong>Teaching Strategy</strong></td>
<td>Teacher Modelling: The teacher models the visualization strategy.</td>
<td></td>
</tr>
</tbody>
</table>

**Before Reading**

Introduction: “I am going to teach you something that you can do that will help you to remember what you read. It is called visualising. This is what you do. After you have read each sentence, you make a picture of it in your mind and say what the picture is. We will begin doing this with sentences then pairs of sentences and then with paragraphs.”  John Munro 2006

Explain that the purpose of this session is to focus on introducing visualisation.

**While Reading**

“I am going to use a book that you all know really well. This will help you because you know what the story is about, you know the setting and so. This helps because you can easily create a image in your mind. But I want you to listen so that see the detail”

Teacher reads aloud a paragraph (modelling) from The Complete Adventures of Charlie and Mr Willy Wonka

Students read aloud the same paragraph, sentences by sentence from the Smart board.

Ask students to make a picture in their minds about what was have read. “Close your eyes what do you see when I read this to you?”

Teacher and student share what was visualised and describe each sentence.

Teacher: “When I read this sentence I see…”

*With the first two sentences ask the students to draw an image. This caters for those students who are visual learners, it allows them to express their idea in their preferred learning style.*

In pairs students visualise and describe each sentence. “I want you to tell your partner what you see when you hear that sentence. The
person listening needs to check if their partner image matches the text.

In pairs check what the other student is describing and make corrections if needed.

<table>
<thead>
<tr>
<th>After Reading</th>
<th>Verbally review what happened in the session. What were the challenges? What did you find easy to do? What have you learnt? How did you feel about what we did? Reflective Journal. Questions to answer: What do you understand by the term visualizing? What did you do while we were doing those sentences?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow up</td>
<td>Following this lesson when the students were reading they were asked to use the skills of visualising in other reading situations. This drew their attention to how it can be used in their other activities.</td>
</tr>
<tr>
<td>Session: Two</td>
<td>Year Level: 6</td>
</tr>
<tr>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>30 minutes</td>
</tr>
</tbody>
</table>
| **Text**    | The Complete Adventures of Charlie and Mr Willy Wonka. Roald Dahl  
Fry’s Readability Year 4 |
| **Materials** | Text, Smart board, Student Journals |
| **Goal**    | To teach the skills of visualisation to assist students create a mental pictures as they read to develop greater understanding of texts read.  
Introduce the acronym R.I.D.E.R.  
Model visualisation to class. |
| **Teaching Strategy** | Teacher Modelling /Guided Practice  
The teacher models the visualisation strategy.  
Teacher supports students through scaffolding their attempts. |
| **Before Reading** | Revise what is visualisation?  
Review what was done in the previous session and develop the RIDER acronym. Through discussing with students identify what were the different activities completed in the previous lesson and the order in which we completed them.  
Read. Imagine. Describe. Evaluate and Read On/ Repeat the process.  
Explain that this acronym which will help them to remember what we need to do when we are reading. R.I.D.E.R.  
Display the acronym with student devised explanation on the Smartboard and insert the text beside it. |
| **While Reading** | Teacher read aloud each paragraph. This is followed by the students reading the text.  
Teacher / students visualise and describe each sentence. This is lead by the teacher the first few sentences are lead by the teacher followed by the students adding input into what they visualise and describing it to the group.  
“What do you see in your mind when you read this?”  
“What do you think influences what you see?”  
“You have seen this movie does that influence what you see?”  
In pairs visualise and describe the image of the remainder of the sentences. |
| **After Reading** | Verbally review what happened in the session.  
What were the challenges? What did you find easy to do?  
What have you learnt? How did you feel about what we did Review and articulate meaning of the RIDER acronym.  
Journal: what do you know now that you did not previously? |
<p>| <strong>Follow up</strong> | Following this lesson when the students were reading they were asked to use the skills of visualising in other reading situations. This drew their attention to how it can be used in their other activities. |</p>
<table>
<thead>
<tr>
<th>Session: Three</th>
<th>Year Level: 6</th>
<th>Format: Whole Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text: The Complete Adventures of Charlie and Mr Willy Wonka Roald Dahl Frys readability Year 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials: Text, Smart board, Student Journals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal: To teach the skills of visualisation to assist students create a mental pictures as they read to develop greater understanding of texts read. <strong>Model visualisation to class. Provide scaffolding of questions to ask while reading to enhance visualisation.</strong> Revise the meaning and steps in R.I.D.E.R.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Strategy: Teacher Modelling /Guided Practice The teacher models the visualisation strategy. Teacher supports students through scaffolding their attempts. Use prompt questions. Such as Who is being talked about in this sentence? What is the setting?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before Reading: Revise what is visualisation What are the steps outlined the R.I.D.E.R. acronym</td>
<td></td>
<td></td>
</tr>
<tr>
<td>While Reading: Teacher reads the first paragraph Students read aloud each paragraph. Teacher models visualising the first pair of sentences, describing what image the teacher sees. Students, within the class group visualize and describe pairs of sentences. In pairs visualize pairs of sentences and describe their image checking with each other that their description matches the pair of sentences. Repeat the process with several paragraphs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After Reading: Verbally review what happened in the session. What were the challenges? What did you find easy to do? What have you learnt? How did you feel about what we did? Review and articulate meaning of the RIDER acronym. Journal: what do you know now that you did not previously? What did you find a challenge?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow up: Following this lesson when the students were reading they were asked to use the skills of visualising in other reading situations. This drew their attention to how it can be used in their other activities.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Session:** Four  
**Year Level:** 6  
**Format:** Whole Class

<table>
<thead>
<tr>
<th><strong>Duration:</strong></th>
<th>30 minutes</th>
</tr>
</thead>
</table>
| **Text:**     | Simple Machines  
Smog Readability Year 7 *** this is graded at two years above the level which is readable. |
| **Materials:** | Text, Smart board, Student Journals |
| **Goal:**     | To teach the skills of visualisation to assist students create a mental pictures as they read to develop greater understanding of texts read.  
To teach the strategies to use when visualising non-fiction texts  
Revise the meaning and steps in R.I.D.E.R. |

**Teaching Strategy**  
Collaborative Practice

**Before Reading**  
Discuss the topic of the non-fiction text- machines  
Identify some of the words that may appear in the text.  
Make a list of words on the board.  
Check that the students know what the words mean.  
Revise what is visualisation.

**While Reading**  
Students read aloud a paragraph.  
Ask individual student to read aloud the first pair of sentences.  
Students visualise and describe pairs of sentences sharing with the class what they see in their mind as they read/ listen to the pairs of sentences.  
In pairs visualise pairs of sentences and describe their images. When sharing what is seen in their head, other student checks to ensure that the image matches that in the pairs of sentences.  
Repeat the process with several paragraphs.

**After Reading**  
Verbally review what happened in the session.  
What were the challenges? What did you find easy to do?  
What have you learnt? How did you feel about what we did?  
Review and articulate meaning of the RIDER acronym.  
Journal: what do you know now that you did not previously?  
How differently did you read and visualise a non-fiction text from a fictional text.

**Follow up**  
Following this lesson when the students were reading they were asked to use the skills of visualising in other reading situations. This drew their attention to how it can be used in their other activities.
<table>
<thead>
<tr>
<th>Session: Five</th>
<th>Year Level: 6</th>
<th>Format: Whole Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration:</td>
<td>30 minutes</td>
<td></td>
</tr>
</tbody>
</table>
| Text:        | Falling Leaves Adeline Yen Mah  
Fry’s Readability Year 6 |
| Materials:   | Text, Smart board, Student Journals |
| Goal:        | To teach the skills of visualisation to assist students create a mental pictures as they read to develop greater understanding of texts read.  
To extend the use of the visualisation strategy to be used with a complete paragraph.  
Revise the meaning and steps in R.I.D.E.R. |

**Teaching Strategy**  
Guided Practice/Collaborative Practice

**Before Reading**  
Ask who has read the book. What is the story about? Where / when is it set  
Discuss the need to develop the strategy to extend it to reading paragraphs.  
“When we read a paragraph we need to build the images in our mind for each sentence and have it flow like a short movie.”  
“Make sure you connect the sentences.”  
“Looking at the strategy what would you do if one part doesn’t make sense?”

**While Reading**  
Students read aloud each paragraph.  
Teacher/ students visualize and describe each paragraph in whole group activity. This would be done in a collaborative way. Checking each response to ensure that it  
In pairs, visualize paragraphs and describe their image

**After Reading**  
Verbally review what happened in the session.  
What were the challenges? What did you find easy to do?  
What have you learnt? How did you feel about what we did?  
Journal: What do you know now that you did not previously?  
What did you find easy to do in this session?

**Follow up**  
Following this lesson when the students were reading they were asked to use the skills of visualising in other reading situations. This drew their attention to how it can be used in their other activities.
<table>
<thead>
<tr>
<th>Session: Six</th>
<th>Year Level: 6</th>
<th>Format: Whole Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration:</td>
<td>30 minutes</td>
<td></td>
</tr>
</tbody>
</table>
| Text:       | Falling Leaves Adeline Yen Mah  
Fry’s Readability Year 6 |                     |
| Materials:  | Text, Smart board, Student Journals |                     |
| Goal:       | To teach the skills of visualisation to assist students create a mental pictures as they read to develop greater understanding of texts read.  
To extend the independence of readers to apply the strategy of visualisation. |                     |
| Teaching Strategy | Collaborative Practice/ Independent Practice  
Students read the text and students work with others to visualise and describe their images. |                     |
| Before Reading | Reflect on what the reader has to visualise what you are reading  
Explain that the students will be visualising without teacher support. |                     |
| While Reading | Students read aloud each paragraph  
Student visualize sentence by sentence in whole group activity  
Each student individually visualizes sentence by sentence and describes their image |                     |
| After Reading | Verbally review what happened in the session.  
What were the challenges? What did you find easy to do?  
What have you learnt? How did you feel about what we did?  
Journal: what do you know now that you did not previously?  
How easy was it to find the right words to describe what you saw as you read? |                     |
| Follow up | Following this lesson when the students were reading they were asked to use the skills of visualising in other reading situations. This drew their attention to how it can be used in their other activities. |                     |
### Session: Seven | Year Level: 6 | Format: Whole Class

<table>
<thead>
<tr>
<th>Duration: 30 minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials: Text, Smart board, Student Journals</td>
</tr>
<tr>
<td>Goal: To teach the skills of visualisation to assist students create a mental pictures as they read to develop greater understanding of texts read. To extend the independence of readers to apply the strategy of visualisation using non-fiction texts.</td>
</tr>
<tr>
<td>Teaching Strategy: Collaborative Practice Students read the text independently and students work with others to visualise and describe their images.</td>
</tr>
<tr>
<td>Before Reading: Discuss the topic of the non-fiction text- inventions Identify some of the words that may appear in the text. Make a list of words on the board. Check that the students know what the words mean. Revise what is visualisation.</td>
</tr>
<tr>
<td>While Reading: Students read silently each paragraph Students visualise each paragraph and describe their images in the whole group activity In pairs visualise each paragraph and describe their images</td>
</tr>
<tr>
<td>After Reading: Verbally review what happened in the session. What were the challenges? What did you find easy to do? What have you learnt? How did you feel about what we did? Journal: what do you know now that you did not previously? How difficult was it for you to read this paragraph on your own and try to visualise as you were reading?</td>
</tr>
<tr>
<td>Follow up: Following this lesson when the students were reading they were asked to use the skills of visualising in other reading situations. This drew their attention to how it can be used in their other activities.</td>
</tr>
</tbody>
</table>
### Session: Eight  |  Year Level: 6  |  Format: Whole Class

| **Duration:** | 30 minutes |
| **Text:** | Shauzia Ellis, D. (2003). Fry’s readability Year 6 |
| **Materials:** | Text, Smart board, Student Journals |
| **Goal:** | To teach the skills of visualisation to assist students create a mental pictures as they read to develop greater understanding of texts read. |
| **Teaching Strategy** | Collaborative Practice/ independent practice Students read the text independently and students work with others to visualise and describe their images. |

#### Before Reading
- Ask who has read the book.
- What is the story about? Where / when is it set
- Looking at the cover make some predictions. Discuss other books that are around the same theme.

#### While Reading
- Read silently each paragraph
- Students visualize each paragraph and describe their images in the whole class activity
- Each student individually visualizes each paragraph and then describe the image to a partner

#### After Reading
- Verbally review what happened in the session.
- What were the challenges? What did you find easy to do?
- What have you learnt? How did you feel about what we did?
- Journal: what do you know now that you did not previously?
- How you change your reading?

#### Follow up
- Following this lesson when the students were reading they were asked to use the skills of visualising in other reading situations. This drew their attention to how it can be used in their other activities.
### Session: Nine  
**Year Level:** 6  
**Format:** Whole Class

<table>
<thead>
<tr>
<th><strong>Duration:</strong></th>
<th>30 minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Text:</strong></td>
<td>Shauzia Ellis, D. (2003). Fry’s readability Year 6</td>
</tr>
<tr>
<td><strong>Materials:</strong></td>
<td>Text, Smart board, Student Journals</td>
</tr>
</tbody>
</table>
| **Goal:**     | To teach the skills of visualisation to assist students create a mental pictures as they read to develop greater understanding of texts read.  
For students to practice the visualisation strategy independently reading fictional text.  
Student write their “imagines”. |

| **Teaching Strategy** | Independent Practice  
Students read the text independently and visualise the paragraph and individually write their ‘visualisation’ |

| **Before Reading** | Revise the aspects of visualisation.  
“What do you expect you will be reading about?”  
“What are some of the words you might expect you will read?” |
| **While Reading** | Read silently each paragraph  
Each student visualizes each paragraph  
Each student individually writes their “visualize” of each paragraph |
| **After Reading** | Verbally review what happened in the session.  
What were the challenges? What did you find easy to do?  
What have you learnt? How did you feel about what we did? |
| **Follow up** | Following this lesson when the students were reading they were asked to use the skills of visualising in other reading situations. This drew their attention to how it can be used in their other activities. |
Session: Ten  |  Year Level: 6  |  Format: Whole Class
Duration: 30 minutes

**Text:**
Wild Technology: The amazing natural origins of human inventions.
Smog Readability level: Year 8

**Materials:**
Text, Smart board, Student Journals

**Goal:**
To teach the skills of visualisation to assist students create a mental pictures as they read to develop greater understanding of texts read.

For students to practice the visualisation strategy independently reading non-fiction text.

Student write their “imagines”.

**Teaching Strategy**
Independent Practice
Students read the text independently and visualise the paragraph and individually write their ‘visualisation’

**Before Reading**
Discuss the topic of the non-fiction text- inventions
Identify some of the words that may appear in the text.
Make a list of words on the board.
Check that the students know what the words mean.
Revise what is visualisation.

**While Reading**
Read silently each paragraph
Each student visualizes each paragraph
Each student individually writes their ‘visualize’ of each paragraph

**After Reading**
Verbally review what happened in the session.
What were the challenges? What did you find easy to do?
What have you learnt? How did you feel about what we did?

**Follow up**
Following this lesson when the students were reading they were asked to use the skills of visualising in other reading situations. This drew their attention to how it can be used in their other activities.
Appendix 5
Texts used in the lessons

<table>
<thead>
<tr>
<th>Book</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falling Leaves</td>
<td>Adeline Yen Mah</td>
</tr>
<tr>
<td>Shauzia</td>
<td>Deborah Ellis (2003). Allen &amp; Unwin NSW</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Book</th>
<th>Author</th>
</tr>
</thead>
</table>

Appendix 6

STAR strategies

<table>
<thead>
<tr>
<th>Finding the main idea</th>
<th>Recalling facts and details</th>
<th>Understanding sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognising cause and effect</td>
<td>Comparing and contrasting</td>
<td>Making Predictions</td>
</tr>
<tr>
<td>Finding word meaning in context</td>
<td>Drawing conclusions and making inferences</td>
<td>Distinguishing fact from opinion</td>
</tr>
<tr>
<td>Identifying author’s purpose</td>
<td>Interpreting figurative language</td>
<td>Summarising</td>
</tr>
</tbody>
</table>

Strategies to Achieve Reading Success.( 2006)
Hawker Brownlow Education, Heatherton, Australia.
Appendix 7

Readability of texts used in the in lessons

Fry’s Readability

<table>
<thead>
<tr>
<th>Book</th>
<th>Author</th>
<th>Fry’s Readability</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falling Leaves</td>
<td>Adeline Yen Mah</td>
<td>Year 6</td>
<td></td>
</tr>
<tr>
<td>Shauzia</td>
<td>Deborah Ellis 2003 Allen &amp; Unwin NSW</td>
<td>Year 6</td>
<td></td>
</tr>
</tbody>
</table>

Smog Readability for non-fiction texts

<table>
<thead>
<tr>
<th>Book</th>
<th>Author</th>
<th>Smog Readability</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wild Technology The amazing natural origins of human inventions</td>
<td>Phil Gates (1995 Kingfisher Publication London)</td>
<td>Year 8</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 8

Screen print of the Smartboard. An example of text sitting beside the R.I.D.E.R. acronym

The Elevator stopped. The doors slid open. And there was the Chocolate room and the chocolate river and the Oompa Loompas and in the middle of it all the great bed belong to the old grandparents. "Charlie!" said Grandpa Joe, rushing forward. "Thank heavens you're back!" Charlie hugged him. Then he hugged his mother and his father. "Is she here?" he said.

Grandma Georgina? Nobody answered. Nobody did anything except Grandpa Joe, who pointed to the bed. He pointed but he didn't look where he was pointing. None of them looked at the bed except Charlie. He walked past them all to get a better view, and he saw at one end the two babies, Grandma Josephine and Grandpa George, both tucked in and sleeping peacefully. At the other end...

Don't be alarmed, " said Mr Wonka, running up and placing a hand on Charlie's arm. " She's bound to be just a teeny bit over plussed. I warned you about that."

"What have you done to her?" cried Mrs Bucket. " My poor old mother!"

Prepped against the pillows at the other end of the bed was the most extraordinary-looking thing Charlie had ever seen! Was it some ancient fossil? It couldn't be that because it was moving slightly! And now it was making sounds! Croaking sounds—the kind of sounds a very old frog might make if it knew a few words. "Well, well, well," it croaked. "If it isn't dear
Appendix 9

Book marks

R Read
I Image
D Describe
E Evaluate
R Repeat

Examples of the bookmakers made by the students in the intervention group.
Appendix 10

Samples of student Visualisation Journals

Student B

I now think that visualization is when you paint a picture in your head while reading a novel. Hazeggs.

It was harder to imagine it because I hadn’t read it before so I had to read over again to get the right picture. And I might not of had experience with the scene so it would of been harder.

Student H

It is easier that when you have trouble with a word. I won’t skip it anymore.

Student K

It’s harder to relate to the book if you have no past experiences that are similar to the text. Reading becomes more easier when you do use reader.

Student M