The hypothesis of this study is that explicit teaching of specific reading strategies, using text illustrations as one source of information, activates prior knowledge in year one students and improves accuracy and comprehension of fictional text.


#### Abstract

Successful readers are able to activate prior knowledge effectively and with flexibility. Poor readers have difficulty in using multiple sources of information and often have ineffective systems of processing.

Research suggests that explicit teaching is a key element in improving reading accuracy and comprehension. Strategies used in this study are intended to improve the ability of all students to activate prior knowledge and to be able to articulate those strategies.

The hypothesis of this study is that explicit teaching of specific reading strategies, using text illustrations as one source of information, activates prior knowledge in year one students and improves accuracy and comprehension of fictional text.

The study compares two groups of students; a Control Group and a Teaching Group. The Teaching Group was explicitly taught how to activate prior knowledge and make use of text illustrations as a source of information.

Results indicate support for the hypothesis as a significant majority of students in the Teaching Group improved reading accuracy and comprehension faster than normal progression. This further supports the research into the effectiveness of explicit teaching.


## Introduction

Whilst all students may have participated in the same activities during their first year of formal reading lessons, not all students engage prior knowledge before they commence the task of reading a text. This is particularly true of poor readers who have weak processing skills. Effective readers must be able to retrieve information, make connections and understand the text quickly, using the most efficient systems. All students need explicit teaching in their early years to ensure that they can activate prior knowledge, which in turn improves reading accuracy and comprehension.

The action of reading involves "interactive processing using multiple knowledge sources" and the "tentative and flexible mobilization of systems for particular tasks". (Rumelhart 1994 and Singer 1994, cited in Clay, 2001) These actions specific to reading are referred to as reading schemata. A schema can be seen as a framework within which the reader can form interconnections between what is already known and what is being read.

Reading, as such, is an active process, in which the participants are constantly asking questions, predicting, hypothesizing and making judgments as they read. This interactive processing has as its foundation a wide variety of sources including prior knowledge of the context, and a knowledge and understanding of visual, phonological, language and semantic features. The process involves the reader making a connection with the text to either affirm what is known about this topic or to make flexible changes to previously held information. The reader is able to transform or modify existing knowledge in this interactive process. (Munro 2003) The process is further influenced by personal attitudes and beliefs held by the reader towards such aspects as the topic, author and their perception of themselves as a reader.

Successful readers are able to activate multiple sources of knowledge and begin the tentative selection of systems, which they believe will be most efficient for the task. They have already developed both flexibility and accessibility in their reading schema. They are able to make changes to existing knowledge "actively and economically" and it is done "with the least amount of effort." (Ajideh, 2003) There is considerable evidence from previous research that successful readers use key words, phrases and, in the case of the early reader, illustrations, to create questions and predictions activating knowledge schema both prior to and during the process of reading. The process of using illustrations and other information at the beginning of a text to activate prior knowledge is known as a book orientation. Unfortunately, not all students recognize the importance of taking time to link to prior knowledge. Successful readers form effective links between existing knowledge sources and by using prediction or self-questioning throughout the text. "Smart readers ask themselves very effective questions as they read to reduce their uncertainty about what they are reading; they know when they are more or less on-track" (Clay, 2002)

Similarly a number of studies, including Anderson and Pearson 1984 and Clay 2002, claim that poor readers are more likely to have an ineffective system of processing. They tend to "operate slowly on a narrow range of weak processes." (Clay, 2002) Their knowledge base and retrieval systems may be flawed with inaccuracies and gaps. They may have difficulty selecting the most appropriate system for a particular task. They may ignore the basic steps of activating their prior knowledge and making connections to this text. In their confusion, they may be so focused on the task of decoding the text that they will use the least effective means of achieving this. They tend to ask trivial questions and make predictions that are often not related to the intent of the text. "Poor readers are unlikely to make the inferences required to weave the information given in a text into a coherent overall representation."
(Anderson and Pearson, 1984) Generally, poor readers do not have effective, well-organized knowledge sources and are unable to apply the most appropriate system to a particular task. Explicit systems of activating prior knowledge need to be taught to all readers, particularly poor readers.

This study was begun with the intention of improving questioning and predicting skills in year one students. However it became evident that the majority of students in this study were either inefficiently activating their reading schema, or unable to articulate the processes they were using. This data further supported observations made during the Observational Survey Pre Test period and classroom teaching sessions, where despite specific teacher scaffolding during their first year, students failed to exhibit any connection between activating prior knowledge through careful or even casual observation, of the text illustration.

Although there is a considerable volume of research on the topic of reading difficulties, there appears to be less research into activating prior knowledge in the younger student. Some supportive studies have been done on older students in the area of E.S.L. and the significance of schema in pre reading tasks. There is significant evidence in many studies that students with reading difficulty often have associated difficulty in metacognition and cognitive strategies within the reading schema. (Dickson, Collins, Simmons, \& Kameenui, 1998a; Gersten, Fuchs, Williams, \& Baker, 2001; Wong, Harris, Graham, \& Butler, 2003. cited in Manset-Williamson, Dunn, Hinshaw, Nelson, 2008. Munro 2001, 2002, 2003) Students with reading problems "are most in need of sophisticated reading related metacognition and strategies and yet are typically the least likely to apply them." (Manset-Williamson et al 2008)

Clay and Munro have written extensively about the importance of efficient processing and knowledge sources as a requirement for a successful reader. Clay cites the considerable work of Rumelhart 1994, Singer 1994 and Homes 1970 in the area of interactive processing and systems. Their research includes investigating the reader's purpose, how the reader gathers the information from sources and makes decisions about which will be most effective strategies to use, how they organise that information as they read and respond to all these factors quickly and efficiently. Clay also claims that "it is not appropriate to teach for that type of meta- cognitive awareness in five to six year old children." (Clay 2002) She continues to add that most of the processing needs to be done quickly and effectively so that "attention is paid to the message rather than to the work to get the message." (Clay, 2002) However in other publications, specific to students with reading problems within this same age range, one of the strategies that she encourages is for the child to articulate the methods that they used to solve the reading problem, which would seemingly contradict this earlier statement. Clay obviously recognized that this area needs further investigation when she stated that this area "must be probed in future research" (Clay 2002)

The study of year 3 students by Manset- Williamson et al. focused on the essential elements of the text to activate prior knowledge before reading. It is the intention of this study to explicitly focus on illustrations as a significant, easily accessed, potential basis of activated knowledge processing with younger readers and links to other studies designed to simulate the effective strategies used by good readers.

Munro (2003) says that effective teachers need knowledge about how students learn to implement the best teaching practices. Allington (2006) and Anderson and Pearson (1984) state that effective teaching is a key element in improving reading comprehension. Allington writes extensively on the importance of active thinking in the process of reading comprehension and providing students not only with "explicit demonstrations of the comprehension strategies that literate people use when they read" but how to apply this thinking while reading. According to Anderson and Pearson "becoming a good reader depends upon teachers who insist that students think about the interconnections among the ideas as they read." This interconnection is activated prior to reading the text.

It is therefore the intention of this study to not only explicitly teach several strategies, which could be used to activate prior knowledge, but to give the students in the project the language and confidence to be able to articulate the processes that they use prior to reading a text. It is also the intent of this study to show that students, who are taught explicit strategies, if they have proved successful, will add these strategies to their multiple knowledge sources.

The hypothesis of this study is that explicit teaching of specific reading strategies, using text illustrations as one source of information, activates prior knowledge in year one students and improves accuracy and comprehension of fictional text.

## Method

Design:
This study uses a case study OXoXoXoXoXoXoXoXoXoO design in which the gain in articulated strategies is monitored on a daily basis, while the gain in accuracy and comprehension in fictional texts for year one students is monitored at the conclusion of the study. The study compares two groups of students: a control group and a teaching group. The teaching group is further divided into higher and lower ability based on entry text level ensuring both smaller teaching groups and suitability of chosen texts.

## Participants:

This study of year one students is taken in an outer eastern suburb of Melbourne. English is spoken by the majority of the school cohort, with only three students from homes where two or more languages are spoken. However a significant number of students have migrant grandparents who do not speak English as their first language. The student population comes from a variety of socio economic backgrounds, with a small percentage from market garden or self employed businesses. Two student families in this study receive an EMA allowance.

This school has a year one cohort of twenty six students, who are divided into year a one / two composite, and year prep / one composite. Whilst all year one students were invited to be involved in the project some parents declined. The participants in this study are between the ages of 5.11 and 7 years of age.

The study includes five students from the one/ two composite used as the Control Group, listed as students A-E inclusive on Table 1 and fourteen students from the prep/ one composite class known at the Teaching Group, identified as students F-S. The teaching group is further divided into two sections: higher text level students F-Land lower text level students M-S as shown on Table 1.
Within the teaching group, there are four students, identified as students $M, Q$, $R$ and $S$ who received an additional daily Reading Recovery lesson. Two year one students and the eight preps, not included in the study, were participants in the class activities. It will also be noted in Table 1 that $63 \%$ of this study are year one girls and only $37 \%$ boys.

Table 1 shows that a similar proportion of students in both the Control and Teaching Groups share their attitudes towards both school and reading. Data shows that only a slightly higher percentage of students in the Teaching Group do not like reading.

Table 1: Table showing participants in this study.

|  | Table | Gender | AGE | E.S.L. | R.O.L. | E.M.A | Other issues | Text level | Attitude to school | Attitude to reading |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { © } \\ & \underset{\text { Z }}{\text { In }} \end{aligned}$ |  |  |  |  | بَ |  |  |  |  |  |
| A | 0 | 2 | 83 | 0 | 40 | 0 |  | 28 | 2 | 2 |
| B | 0 | 2 | 80 | 0 | 29 | 0 |  | 28 | 2 | 1 |
| C | 0 | 1 | 77 | 0 | 32 | 0 |  | 18 | 2 | 0 |
| D | 0 | 1 | 71 | 0 | 38 | 0 |  | 17 | 2 | 2 |
| E | 0 | 1 | 83 | 0 | 23 | 0 | 1 | 28 | 0 | 1 |
| F | 1 | 2 | 77 | 1 | 30 | 0 |  | 12 | 2 | 1 |
| G | 1 | 2 | 78 | 0 | 40 | 1 |  | 14 | 0 | 0 |
| H | 1 | 2 | 75 | 0 | 33 | 0 |  | 14 | 1 | 2 |
| I | 1 | 2 | 76 | 1 | 27 | 0 |  | 17 | 2 | 2 |
| J | 1 | 2 | 76 | 0 | 23 | 0 |  | 10 | 1 | 2 |
| K | 1 | 2 | 74 | 0 | 37 | 0 |  | 15 | 2 | 1 |
| L | 1 | 1 | 81 | 0 | 26 | 1 |  | 7 | 2 | 1 |
| M | 1 | 1 | 80 | 0 | 9 | 0 | 3 | 8 | 0 | 2 |
| N | 1 | 1 | 79 | 1 | 37 | 0 |  | 10 | 2 | 2 |
| 0 | 1 | 2 | 76 | 0 | 21 | 0 |  | 9 | 2 | 1 |
| P | 1 | 2 | 78 | 0 | 26 | 1 |  | 5 | 2 | 1 |
| Q | 1 | 2 | 73 | 0 | 9 | 0 | 123 | 2 | 2 | 0 |
| R | 1 | 2 | 77 | 0 | 21 | 0 | 13 | 5 | 2 | 1 |
| S | 1 | 1 | 84 | 0 | 24 | 0 | 3 | 4 | 0 | 0 |

Table 2 displays the strategies used by students prior to reading the test texts. The majority of these strategies were observed, rather than articulated by the students, during the testing. While Table 2 shows that $89 \%$ of students were noted to glance at the illustration, for the majority of students this was little more than cursory, resulting in few key features being articulated and for some activating misinformation. All students were able to predict a key word in the accompanying text; however, the table fails to quantify the number of words given. $21 \%$ were able to make connections to their own experiences and only $16 \%$ were able to articulate reading strategies that they might use or to generate questions about the text. For full details on strategies used prior to each test it is necessary to see Appendix 7.

Table 2. Table showing activated thinking prior to explicit teaching.

| Name |  | Neale Analysis of Reading Ability <br> Activated thinking generated prior to reading the texts - summary of pre test |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 0 | None $=0$ | $\begin{aligned} & \text { picture } \\ & =1 \\ & \hline \end{aligned}$ | key words $=2$ | $\begin{aligned} & \text { own exp } \\ & =3 \end{aligned}$ | $\begin{array}{\|l\|l} \hline \text { read } \\ \text { strat } \\ =4 \\ \hline \end{array}$ | $\begin{array}{\|l} \hline \text { gen } \\ \text { quest } \\ =5 \\ \hline \end{array}$ |
| B | 0 |  | 1 | 2 | 3 |  |  |
| C | 0 |  | 1 | 2 |  |  |  |
| D | 0 |  | 1 | 2 |  |  |  |
| E | 0 |  |  | 2 | 3 |  |  |
| F | 1 |  | 1 | 2 | 3 |  |  |
| G | 1 |  | 1 | 2 |  |  | 5 |
| H | 1 |  |  | 2 | 3 | 4 |  |
| I | 1 |  | 1 | 2 |  | 4 |  |
| J | 1 |  | 1 | 2 |  |  |  |
| K | 1 |  | 1 | 2 | 3 |  |  |
| L | 1 |  | 1 | 2 |  |  |  |
| M | 1 |  | 1 | 2 |  |  |  |
| N | 1 |  | 1 | 2 |  |  | 5 |
| 0 | 1 |  | 1 | 2 |  |  |  |
| P | 1 |  | 1 | 2 |  |  |  |
| Q | 1 |  | 1 | 2 |  |  |  |
| R | 1 |  | 1 | 2 |  |  |  |
| S | 1 |  | 1 | 2 |  |  | 5 |
|  |  |  | 1 | 2 |  | 4 |  |
|  |  |  | 89\% | 100\% | 21\% | 16\% | 16\% |

$0=$ None/ not able to articulate thinking
$1=$ Ideas related to the picture
$2=$ Generated key words found in the text
$3=$ Ideas related to own experiences
$4=$ Reading strategies articulated
$5=$ Generated questions about the text

## Materials:

Students were assessed using the following materials:
Record of Oral Language- Marie Clay 2007
The Record of Oral Language is administered to students at the commencement of the school year to assess the child's ability to manipulate language structures. Sentences are read aloud to the child who in turn repeats these to the assessor. These results were used to indicate possible groupings of students.
Text Level - Alpha Assess Text Testing kit
Students read progressively more difficult texts and answer pre set comprehension questions. Students are placed on a text level according to a formula based on reading accuracy. These results were used to indicate possible groupings of students.
Activated thinking generated prior to reading texts -Observation checklist
The teacher observes the methods and strategies used by students when asked to "tell me what you are thinking about when you look at this page". This occurs prior to reading the text and students can use both
illustrations and text to determine their answer. The results were used to map the progression of activated reading strategies in the students.
Neale Analysis of Reading Ability- Marie Neale (1999 Third edition)
Students read a short passage of fictional text and answer comprehension questions. They are marked on the rate of reading, reading accuracy and their comprehension of the text. Scores are then calculated according to standardized tables. This test enables comparisons between students in the area of accuracy, comprehension and rate of reading giving an associated reading age for each of those aspects. This test forms the basis of many conclusions that have been drawn from this study.
Retell of Neale Readability texts- Observation checklist
Students are asked to retell, in order of sequence, events described in the short texts. The teacher marks all key features on a predetermined checklist and a score is allocated to the student. This was presented at the conclusion of all comprehension activities on each text.
Cloze sheets based on text
Students complete cloze activities based on the text, which has been read and discussed in the small "teacher groups". Students are asked to justify if necessary their choices of word selection.
(Teacher groups = these are a smaller group of students, a maximum of seven in this study, receiving explicit focused teaching for a maximum of twenty minutes per day.)
Question / Prediction - Observation checklist
The teacher uses a predetermined checklist to note the number and type of questions and predictions students make in the "teacher groups" during discussion about the text and illustration. This list is used to determine focused teaching in subsequent sessions.
Strategies used- checklist for partner testing
The students use a predetermined checklist to note the list of strategies their partner is planning to use prior to reading a text. These checklists are used towards the end of the project, when teacher scaffolding has been reduced.
Procedure:
The Control Group assessment included the Record of Oral Language, Text Level as determined by the Alpha Assess kit, Activated Thinking generated prior to reading texts -Observation checklist, Neale Analysis of Reading Ability and Retell of Neale Readability texts- Observation checklist. The class teacher of the Control Group agreed not to include any specific teaching or mention of strategies, which assist in activating prior knowledge during the ensuing study.

The Teaching Group was tested using Activated Thinking generated prior to reading texts -Observation checklist, Neale Analysis of Reading Ability and Retell of Neale Readability texts- Observation checklist and the results of previous testing in Oral Language and Text Level were included. It was decided to break the Teaching Group into two smaller groups of seven for the focused teaching group sessions using information gathered in pretesting.

The Teaching Group consisted of a daily session of one hour held in the prep/ one classroom using the CLaSS model. This was broken into four sections. There was a five-minute Brain Gym session for the whole class prior to the teaching component. Explicit teaching was directed at the whole group for approximately 15 minutes on the daily reading foci. This included the prep cohort of this class. This session was dominated by teacher demonstration, modeled behaviour and modeled thinking strategies.

The class was then divided into three groups. The preps were taken for specific tasks by their class teacher. The two remaining groups of students broke into group 1 and group2. Group1 were those students who had higher scores in the pre-testing. Group 2 had lower scores. Group 1 was given a task to complete independently at their tables, based on the foci of the whole class instruction. Group 2 were taken for explicit focused teaching to activate reading strategies. The groups were then reversed at the end of 20 minutes. Observational checklists were used during the small group sessions.

During these small group sessions there was an emphasis on student participation. Students were encouraged to demonstrate strategies modeled by the teacher in the previous whole group session and to articulate their use of these strategies in discussion. There was considerable use made of positive praise for both attempts and successful use of strategies. The teacher would in the early sessions rephrase student's attempts to demonstrate which strategies they had used and to provide an additional model.

To complete each teaching session there was an additional allocation of 10 minutes of "reflection time". It was in this time that students were able to further articulate the strategies that they had used during that session. This was done on a rotational basis using the Task Board. Each student knew when they were to report and had time to consider their response. Some teacher rephrasing occurred in this time.

The exact procedure of each session, daily foci and teaching aids are included in Appendix 1- The Teaching Procedure. The Teaching Group received nine specific sessions on how to activate their prior knowledge before they commenced reading and how they could continue to ask questions and make predictions as they read.

## Results

Any analysis of the study data requires the following additional information:
Student Q (Teaching Group) has an existing medical problem, which influences her learning potential. Student E (Control Group) was included in the initial data, but excluded in the final data because of a family holiday. A significant proportion of students in the Teacher Group had scores that were so low as to not achieve a Reading Age in accuracy, comprehension or rate of reading in the Neale Analysis of Reading Ability in the pre study test. These student's results were included in this early data analysis to show the subsequent progress made over time.

## Knowledge Sources

An investigation into which knowledge sources the students were using prior to reading a text is part of this investigation.

Students were asked to reply to the question" Can you tell me what you are thinking before you read this text?" They had the opportunity to see both illustration and text during this time. Observations were noted under the following headings: no observable strategies used, student looked at the illustration, student generated key words that were found in the text- including those students who located key words by skimming the text, student was able to relate this text/ illustration to a personal experience, student was able to articulate reading strategies they intended to use and the student was able to generate questions / predictions about the text.
Results in Figure 1 clearly show an increase in the use of strategies that were highlighted in this study. This graph also reflects that all students in this study used some existing strategies prior to reading a text.

Figure 1: A comparison of Pre and Post knowledge sources for the Whole Group


Figure 2: A comparison of Pre and Post knowledge sources in the Control Group only


It is by separating the Control and Teaching Groups in this study that information that is more useful is noted. Figures 1, 2 and 3 indicate that both groups made use of the illustrations as a source of information. The Control Group increased the use of this source from $80 \%$ to $100 \%$, while the Teaching Group went from 93\% to100\%.

Figure 1 would indicate a fall in the generation of key words. However a closer examination of Figures 2 and 3 clearly show that this decline, from $100 \%$ to $60 \%$, was found only in the Control Group. Students in the Teaching Group maintained their ability to generate key words from the text at 100\%. It is clearly evidenced in Figures 2 and 3 that the Control Group had less success in articulating connections between their own experiences and the text going from $60 \%$ to $40 \%$, in direct contrast to the Teaching Group who went from $14 \%$ to $36 \%$. This was an area of significant change for the Teaching Group. The Control Group showed a significant change in their ability to articulate strategies that they planned to employ while reading the text going from $0 \%$ to $40 \%$. This was only a small rise for the Teaching Group, $21 \%$ to $29 \%$. The Control Group demonstrated a lack of articulated questions,
or the ability to make any predictions either in the pre or post test. However, the Teaching Group increased their articulation of questioning and predicting from $21 \%$ to $57 \%$ in the same period, which supports the study prediction.

Figure 3: Comparison of Pre and Post knowledge sources in the Teaching Group only.


Data in this section of the study was based on the Neale Analysis of Reading Ability texts. Figure 4 shows the percentage of students in the study who read each text level in both tests.

Figure 4: Comparison of all students who successfully read each text from the Neale Analysis of Reading Ability


Some students completed a text, but had too many errors for the text to be included in their results. For some students of this age text level 1 was difficult to read and they did not score high enough to have a result in some of the following sections.

## Accuracy

Data from the accuracy section of the Neale Analysis of Reading Ability supports the prediction that the explicit teaching of thinking strategies prior to reading will improve reading accuracy of year one students.

Using the percentile data from the Neale Analysis of Reading Ability there is clear evidence in Figure 5 of gains made in reading accuracy over the period of this investigation particularly in the Teaching Group. Figure 6 reveals the specific areas of gain or loss within the various groups using the percentile data. The data indicates that although 17\% of the Whole Group made losses in accuracy, this was due to $25 \%$ of the Control Group making a loss, with only a $14 \%$ loss made by the Teaching Group.
$11 \%$ of all students maintained their score in accuracy. This is attributed to $50 \%$ of the Control Group maintaining their score.

The overall gain made by $72 \%$ of students is broken down to $25 \%$ of the Control Group and $86 \%$ of the teaching group, which once again supports the hypothesis.
Figure 5: Comparison of Pre and Post percentiles of accuracy on the Neale Analysis of Reading Ability for the Whole Group


Figure 6: Results of percentile gains over time in Accuracy using the Neale Analysis of Reading Ability for the Whole Group, Control Group and Teaching Group.


These results are clearly supported by the additional data found in the analysis of the accuracy stanines - see Appendix 4 for full details of each assessed area of the Neale Analysis of Reading Readability.

Further data supporting progress made in accuracy during this investigation is available in Figure 7, which, using data from the Neale Analysis of Reading Ability, compares the reading age of the student's accuracy pre and post intervention. Additional support from Figures 8A and B
shows the overall gains made by the majority of students in the study. Figure 8 shows that the Whole Group had an $11 \%$ loss in accuracy, which again was due in part to a $25 \%$ loss in the Control Group and $7 \%$ loss in the Teaching Group. One student, Q, who forms $6 \%$ of the Whole Group and $7 \%$ of the Teaching Group, made no recordable gains during the study period in the area of reading age. Overall $83 \%$ of the Whole Group made gains in Reading Age accuracy. This consisted of $75 \%$ of the Control Group and $86 \%$ of the Teaching Group.

Figure 7: Comparison of Chronological and Reading Age scores in accuracy using the Neale Analysis of Reading for the Whole Group.


Figure 8A: Results of reading age gains over time using the Neale Analysis of Reading Ability in Accuracy - at the commencement of the study.


It is significant to observe in Figures 8A that 100\% of the Control Group members were already above their Chronological Reading Age in the area of accuracy prior to the investigation. The study clearly indicates improvement in the Teaching Group when comparing figure 8A and 8B. $36 \%$ of the Teaching Group's initial scores in accuracy were too low to plot. This improved to $7 \%$ over the duration of the study, which in turn increased the number of students in the below chronological age for accuracy from $29 \%$ to $50 \%$ at the conclusion of the study. The number of students in the Teaching Group who
improved their Reading Age in accuracy compared to their Chonological Age increased from $36 \%$ to $43 \%$.

Figure 8B: Results of reading age gains over time using the Neale Analysis of Reading Ability in Accuracy - at the conclusion of the study


## Comprehension

Data from the Neale Analysis of Reading Ability comprehension section supports the study prediction that explicit teaching of thinking strategies used prior to reading will improve subsequent comprehension of texts.

Figure 9 shows the comparison of percentile data using the Neale Analysis of Reading Ability for the Whole Group in which gains and losses are noted. Figure 10 specifically locates the areas of gains within the study groups. This graph shows that while the Whole Group is attributed to 33\% loss and $67 \%$ gain, this can be apportioned to a $50 \%$ loss and gain by the Control Group in their percentile scores. The Teaching Group results indicate a $29 \%$ loss and a $71 \%$ increase in students who improved their percentile scores in comprehension.

Figure 9: Comparison of percentile data using the Neale Analysis of Reading Ability for the Whole Group


Figure 10: Results of percentile gains over time in comprehension using the Neale Analysis of Reading Ability for the Whole Group, Control Group and Teaching Group.


These findings are further supported by evidence in gains in comprehension using stanine data from the Neale Analysis of Reading Ability found in Appendix 7 page 5.

Use of the Neale Analysis of Reading Ability to compare the chronological age and reading age in comprehension reflects a similar trend to that of reading accuracy data. Figures 12A and 12B state the changes over time for the groups in the study.

Figure 11: Comparison of Chronological Age and Reading Age in comprehension using the Neale Analysis if Reading Ability for the Whole Group


Figure 12A: Comparing Chronological Age and Reading Age in comprehension using the Neale Analysis of Reading Ability prior to the study fro the Whole, Control and Teaching Group.


Figure 12B: Comparing Chronological Age and Reading Age in comprehension using the Neale Analysis of Reading Ability at the conclusion of the study for the Whole Group, Control and Teaching Group.


Figures 12 A and B show that $100 \%$ of the Control Group was comprehending text at a level above their chronological age prior to the investigation. However, the Teaching Group moved from 43\% at a level too low to score to $14 \%$ following intervention. Subsequently within the Teaching Group there was an increase from $21 \%$ to $36 \%$ of students who comprehend below their chorological age and an increase from $36 \%$ to $50 \%$ of students comprehending above their chronological age. This further supports the study prediction.
Retell
This investigation included using the strategy of asking students to retell the information that they had read in their own words at the conclusion to each text. A score was allocated to them according to the number of predetermined key words or phrases that they mentioned. To be included in a retell their statements need to occur in the same sequence as they occur in the text. It was the intention of the study to use this information to support student's comprehension of the text.

However, this was a problematic area in the study because of the following issues. Some students had no prior experience in retelling. Some students of this age did not retell in sequence. Others felt that one answer was sufficient for a response and for some they had decoded the words without making any connections to the meaning or intent of the text. Another issue, facing a study of students of this age, is that for some students text 1 of the Neale Analysis was deemed a difficult text, which was reflected in their retell.

Each text had a different number of specific events to retell; consequently, results are given as a percentage of the total score.

It would be very difficult to make any accurate predictions based on the retell data as the cohort does not remain the same in pre and post testing. The data of Figure 13A is the only data which compares a similar cohort and shows that $50 \%$ of the Control Group and $57 \%$ of the Teaching group scored lower in the post test when compared to the pre test. $25 \%$ of the Control Group maintained a similar level while $25 \%$ of the Control Group and $33 \%$ of the Teaching Group made gains between the two tests. (Results of text 2, 3 and 4 are found in Appendix 4 page 7.)

After reviewing these results, it would be the intention of the investigator to suggest that any future studies, using retell as an assessment tool in young students, incorporate the explicit teaching of this skill as a separate strategy or ensure that students are competent in this skill before commencing the study.

Figure 13: Percentage of correct scores on Retell for Neale Analysis of Reading Ability Text 1 pre and post for the Whole Group.


## Rate of Reading

Although it was not the intention of this study to improve the rate of reading, it is clearly noted in Figure 14 that this has been a side effect particularly in the Teaching Group's lowest section. These results show what many previous studies have found in the past, that the rate of reading can actually decrease over time. This is evident in the Control Group.

Figure 14: Comparison showing gains in Percentiles for the Whole Group using the Neale Analysis of Reading Ability for Rate.


Figure 15: Comparing percentile gains over time in rate of reading using the Neale Analysis of Reading Ability


Figures 16, 17A and 17B add further insight into this data. Results show that the Control Group was already reading at a rate higher than their chronological age, which they maintained.

It is within the Teaching Group that most movement occurs. At the beginning of the study $14 \%$ of students in the Teaching Group scored too low to be placed on the chart. This improved to $0 \%$ by the end of the study. At the beginning of the study, there were $36 \%$ of students in the Teaching Group below their chronological age in their rate of reading, which improved to $21 \%$. In addition there was an improvement among students in the Teaching Group who scored above their chronological age from $43 \%$ to $71 \%$.

Figure 16: Comparison of Chronological Age and Reading Age rate using the Neale Analysis of Reading Ability for the Whole Group


Figure 17A: Comparison of Chronological Age and Reading Age rate using the Neale Analysis of Reading Ability for the Whole Group at the beginning of the study


Figure 17B: Comparison of Chronological Age and Reading Age rate using the Neale Analysis of Reading Ability for the Whole Group at the conclusion of the study


## Discussion

This study began with the hypothesis that explicit teaching of specific reading strategies, using text illustrations as one source of information, activates prior knowledge in year one students and improves accuracy and comprehension of fictional text. It also includes a component, which encourages the articulation of these strategies.

Results of the investigation clearly support the original hypothesis and the associated articulation strategy. Data shows that all students were using some strategies to activate prior knowledge before the investigation; however the range of strategies increased in direct correlation with the explicit teaching.

Data also shows that this explicit teaching increases reading accuracy in the intervention group. The Control Group was already reading with accuracy above their chronological age before the study commenced. It is significant that $36 \%$ of the Teaching Group had initial scores too low to plot on the original chart, but after intervention it improved to only $7 \%$, one student- Q . (Student Q's results did not appear to improve to the extent shown by other students in the study)

Whilst there is evidence that students improved their reading accuracy over the time of the intervention, $50 \%$ of students in the Teaching Group continue to have a reading accuracy below their chronological age.

At the completion of the study, comprehension gains in the Teaching Group were at $71 \%$, with a $29 \%$ loss. This compared to the Control Group $50 \%$ loss and $50 \%$ gain. The Control Group already comprehended text above their chronological age before the study. Within the Teaching Group the move from $43 \%$ to $14 \%$ comprehending too low to score is an indication of the success of the strategy; however $36 \%$ of students in this group comprehend at a level below their chronological age. Conversely, there has been a shift from $36 \%$ to $50 \%$ comprehending above their chronological age.

Whilst it was not the intention of the study to improve reading rates, one side effect of the intervention was the improvement in reading rate among the readers with the lowest initial scores. As reflected in other studies the reading rate can drop, as shown by the Control Group, but significant gains were made in the Teaching Group. Their score of $14 \%$ scoring too low to rate dropped to $0 \%$, with an improvement from $36 \%$ to $21 \%$ of students reading below their chronological age, which was matched by an overall improvement from $43 \%$ to $71 \%$ reading above their chronological age.

This project highlighted the difficulty of finding suitable standardized texts for the beginning reader. Some students found Text 1 of the Neale Analysis of Reading Ability a difficult text and made a significant number of errors. Another issue in the study was that albeit making too many errors to have the text included in their results, some students were able to answer both the comprehension questions and retell. This data was not included in the results.

The study also highlighted the difficulty of using a retell as a source of information for students of this age with many students having difficulty giving a sequential retell.

Despite Clay's claim that "it is not appropriate to teach for that type of meta- cognitive awareness in five to six year old children" (Clay 2002 ), this study shows that it is possible to explicitly teach students to improve their retrieval systems and activate their prior knowledge and supports the work of Rumelhart 1994, Singer 1994 and Homes 1970. It is evident that the explicit teaching of these strategies has made improvements to accuracy,
comprehension and reading rate in the majority of year one students in this study. This further supports the claims of many researchers including Allington (2006), Anderson, and Pearson (1984) who write not only of the importance of explicit teaching of the thinking strategies to improve ineffective retrieval systems, but the equally important application of these strategies when reading. While the study by Manset- Williamson et al. (2008) focused on the essential elements of the text to activate prior knowledge before reading, the younger age of students in this study made the use of illustrations the most suitable catalyst for activating prior knowledge. The research cited in the Manset- Williamson et al. study provided valuable information to this investigation regarding the effectiveness of the strategies that can be used to activate prior thinking. Similarly the Manset- Williamson et al. study found that "there also did not appear to be any functional relationship between the introduction of strategy use and the ability to create a retell...Systematic instruction in summarizing does make a difference in a student's ability to retell what they have read (Manset-Williamson \& Nelson, 2005) . Their study suggested, "Adding more explicit strategy instruction related to summary (skills) may further enhance outcomes for students." This further supports the findings of this investigation regarding the difficulties of providing an accurate retell in students of this age without previous explicit teaching.

Allington claims that only a handful of strategies are essential to improving comprehension of which activating prior knowledge is the first element and includes summarising, question generating and thinking. This investigation uses these elements in its study, but recognises that to be truly successful readers these students would need additional explicit teaching in other areas including story grammar and imagery. Additional practice of these strategies would be required in the classroom to ensure automaticity within their multiple knowledge sources and the ability to articulate their processing.

## Implications for teaching

The results of this study quite clearly support not only the value of explicitly teaching these reading strategies, but the importance of explicit teaching in the classroom. This study made improvement to reading accuracy and comprehension within two weeks.

Explicit teaching is based on close observation of both student data and strategies. It requires knowledge of what strategies and skills are required to be successful in that area of study and which of these is the most effective and efficient. This study took into account additional factors by providing graphic tools to assist students of this age to memorise these strategies and made the memorisation part of a game. The project involved considerable use of positive affirmation for student's responses and use of teacher modelling of strategies. Teacher support was gradually withdrawn and students were encouraged to support each other.

Whilst there is evidence that students improved their reading accuracy over the time of the intervention, $50 \%$ of students in the Teaching Group have a reading accuracy below their chronological age and 36\% of students in this group comprehend at a level below their chronological age. There is clear evidence that these students require additional explicit focused teaching. It would be expected that the class teacher continues to support the use of strategies used in this study, to add other strategies and to move into other strategies used during and after reading which improve comprehension. During the course of the study it became obvious that these students also need to learn the processes involved in a successful retell.

Possible directions for future study
Further research is needed to ascertain if this method would be as successful in activating prior knowledge in non- fictional text. This would raise issues in the provision of standardized reading texts, as those found in Neale are fictional.

Another area of potential research could be in the first year of schooling or very early reader. Based on this study it should be successful. Given the younger age of the students, there may be greater reliance on graphic cards to activate prior knowledge, or explicit teacher modeling and scaffolding the process for a longer period. It would be difficult to provide appropriate standardized reading tests for students of this age and reading ability and may involve more observational data.

It may be that this process could be used with older students and include the entire bundle of strategies as suggested by Allington.

Whatever the direction of any further study it can be seen that this study has proved that explicit teaching of specific reading strategies, using text illustrations as one source of information, activates prior knowledge in year one students and improves accuracy, comprehension, and for some reading rate, of fictional text.

## References

Ajideh, P. (2003) Schema theory-based pre-reading tasks: a neglected essential in the E.S.L. reading class. The Reading Matrix. Vol.3. No.1, April 2003

Allington, R. L. (2006) What really matters for struggling readers: designing research based programs. Second Edition. Pearson / Allyn and Bacon

Anderson, R.C. and Pearson P. D. (1984) Chapter 9. A schema- theoretic view of basic processes in reading comprehension. Handbook of Reading Research. Lawrence Erlbaum Assoc

Clay, M.M. (2001) Change over time in children's literacy development. N.Z. Heinemann Education

Manset-Williamson, G., Dunn, M.-Indiana University, Hinshaw, R.- Indiana State University, Nelson, J.M., - University of Montana (2008) The impact of self - questioning strategy use on the text- reader assisted comprehension of students with reading disabilities. International Journal of Special Education. Vol. 23 No1. 2008

Munro, J. (2003) How learners learn: what teachers need to know to be effective. Paper presented at Curriculum Corporation Conference 12-13 June 2003 Perth.

## Testing materials

Neale, M. D., (1999) Neale analysis of reading ability. Third Edition. Australian Council for Educational Research Limited.

## Poems used in teaching sessions

Eggleton, J. (2003) Sails Literacy Series. Reed Publishing (NZ) Ltd Heinemann Primary

## Appendices

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## Appendix 1: Teaching Sessions

## Background information for the Teaching Group:

Sessions were taken in a year one /prep class of twenty-four students during the Reading component of the Literacy block. Based on the CLaSS model, sessions consisted of four parts: 5 minutes brain gym activities, 10 minutes of whole group focussed time, 30-35 minutes in which two sessions were taken with smaller groups working with the teacher on a specific focus and then a 10-minute reflection sharing about the learning of that day with the whole group.

All students attended the whole group explicit teaching/ modelling focci and reflection time. The class was split into three groups for the smaller group session. The class teacher took the prep cohort for reading activities.

Year one students were divided into two ability groups according to the Neale Analysis and other tests. Group 1 generally had higher scores while Group 2 had lower scores. Group 1 and 2 were taken for the same focus consecutively in the same reading block, but texts were changed to suit the reading ability of each group. All students returned to share their reflections about their learning in that session.

Poster sized illustrated poems written by Jill Eggleton from the Literacy Sails Series 2003 were used in the teacher modelled time. These had a small amount of text in a large font, which were visible to students. Large poster sized black and white photos were used in small group work.
Some sessions used enlarged text with black and white line drawings. In some sessions, individual photocopied sheets of text were given to each student.

The researcher created a series of graphic symbols, (see Appendix 3), to ensure that students with short-term auditory memory / low reading levels were able to participate in all activities. This was particularly helpful for the prep component of the class not included in the study.

```
Session 1 17/3/09
Materials: Symbols, poem- "I like flies", whiteboard, paper, textas, big book stand,
    Guided texts level- 5 and 10, assessment sheet, pencil.
Focussed teaching time:
Focus:
To introduce the symbols of the strategies
    Stop
    Look
    What can you see? (Magnifying Glass)
            List the items
    Predict
        What do you predict will be the key words (Key and Lock)
            To unlock the meaning of the text
    Think
    Does this picture make you think about something you already know? (Thinking
    person)
    Say
    What strategies will I have to use to read this text? (Jigsaw)
    Ask/ question
    What questions do I have before I read the text? (Question mark)
    Read
Procedure:
Teacher
```

I am going to show you how to activate your thinking before you read. This will make it much easier for you to read because your brain is already working after al our brain gym. It will also help you to understand what you are reading.

Using the symbols to look carefully at the illustration
Investigate the picture
What can you see? Ensure details given from the illustration
What do you predict it might be about/ characters/ non-fiction/ fiction, key words etc?
Teacher as scribe- whole brainstorm
Using the symbols
Predict the title-think / pair / share
Using the symbols
Investigate the_(poem) think / pair / share
Review what we learnt.

## Small Teaching Groups

Targeted focus using Guided Reading texts at levels 5 and 10
(Alternate group at tables - writing their own questions about the poem)
Same procedure for each group
Using the symbols
Look at the illustration on the front cover of the text
Brainstorm the picture -think / pair / share
Teacher as scribe
Using the symbols
Brainstorm the title
Brainstorm the text
Add to each small group focus the teacher modelled phrase;
"I wonder ..who/ what/ when/ where/ why / how" as possible starters to questions
Review what we learnt
How did we activate our knowledge before we started to read?
Say the cards in sequence again.
Reflection of learning -Expectation that children will say what they learnt/ ask one question that they formulated.

## Session 2 18/03/09

Materials: Symbols, blutac, poem- "Frog"- already partially covered - picture only showing, whiteboard ledge, paper, textas, big bookstand, assessment sheet, pencil, two teacher groups set out the task board.

Focussed teaching time with the Whole Group - Format as per day one session

## Focus:

## To review the symbols and concentrate on different questions to ask

## Procedure:

Teacher Review (brief):
I wonder what we did yesterday.
Elicit comments from children.
Remember that I showed you a way to activate your thinking before you read.

- To make it much easier for you to read because your brain is already working.
- To help you to understand what you are reading.


## Let us look at the symbols

## Stop

Look - What can you see? (Magnifying Glass)
Predict - What do you predict will be the key words (Key and Lock)

Think - Does it remind you about something you already know? (Thinking person)
Say - What strategies will I use to read this text? (Jigsaw)
Ask - What questions do I have before I read the text? (Question mark)
Read

## Poem - "Frog"

Text and title covered
Using the symbols
Brainstorm ideas about the picture
Teacher as scribe - pair and share activity
Reveal title
Using the symbols
Brainstorm ideas - story / information
How do I know?
Poem text
Using the symbols
Brainstorm ideas - think / pair / share
Read the poem > opinion / reaction of teacher model
Review about questions- " a question asks you something"
Small Teaching Groups (Alternate group at tables - writing their own questions about the poem)
Teacher's group
Use the poem -"Frog"
Special emphasis forming oral "I wonder questions".
Teacher scribes questions on paper
Can we find the answer in the picture/ poem?
Look at the pattern of the poem when it is read
Teacher will indicate if students able to create a question on a score sheet

## Reflection of learning -

Expectation that reporters will ask a good question they found during the teaching time/ work at the tables.
Teacher reflection of the session to include:
We activated our ideas before we began to read
It is important to stop before you begin to read
Remind them of the analogy of the traffic lights.

## Session 3 19/03/09

Materials: Symbols, blutac, poem- - already partially covered - picture only showing, whiteboard ledge, paper, textas, big book stand, black and white photo of the woman on the phone for small group discussion, assessment sheet, pencil, two teacher groups set out the task board. Grid for creating questions- one per child.

## Focussed Teaching Time:

## Focus: to review the symbols and concentrate on types of questioning

Procedure:
Teacher Review:
Elicit comments from children about the things that we do to activate out mind before we read- stickers to anyone who says one of the strategies in the focus.
Remember that I showed you a way to activate your thinking before you read.

- To make it much easier for you to read because your brain is already working.
- To help you to understand what you are reading.

Look at symbols very briefly and say what each one is as I put them up on display

## Stop

Look
Predict
Think
Say
Ask - What questions do I have before I read the text? (Question mark)
Read
Let us look at today's poem.
Poem -The mouse Text and title covered
Using the symbols
Brainstorm ideas about the picture - think/pair and share activity
Teacher as scribe - using a chart to fill in- i.e. to model the activity that one group will use when not in the teaching group)
Create a list of words and actions we expect to find
Reveal title
Poem text
Read the poem
What words did we find?
What questions were answered?
What other questions do we have now?
Re-read the poem- looking at the font and what that tells us about how we are to read it.
Review:
We can predict words that we will find in the text.
Sometimes our questions are not answered.
Small Group Focus:
Phone photo for both groups (Alternate group at tables - writing their own questions about the poem)
Teacher articulates the difference between a question and a prediction.
Compare the concept of prediction by using the phrase," I think"...
Special emphasis on oral "I wonder" questions.
Can we think of other ones?
Who can think of the most?
Sticker for the best/ most interesting and the most.
Review:
Sometimes we do/ do not find the answer in the text.
The difference between a prediction and a question
Reflection of learning -
Expectation that presenters will use a good question they used during the process
Teacher will indicate if students were able to create questions and what type of questions on a question grid.

## Session 4 20/03/09

Materials: Symbols on cards, blutac, poem- " Shiver - Shiver"- already partially covered - picture only showing, paper, textas, big book stand, black and white photo of children with buckets in a dam/ creek for small group discussion, assessment sheet, pencil, two teacher groups set out the task board and the grid for creating questions and predictions- one per child.

Focussed teaching time:

## Foci:

To introduce question and prediction cards.
Procedure:
Teacher Review:
Remember that we are working on a way to activate our thinking before we read.
Can you remember the symbols in order?
Name each one as they are displayed on the white board

Stop >Look > Predict > Think> Say > Ask > Read
Stop at Predict and put up the card
I think ...
Let us remind ourselves about the kinds of questions we can ask ourselves
Use the prepared cards to put up on display
We can ask I wonder ...
Who, what, when, where, why and how
Or I wonder
If...
Today we are going to see if we can predict text by using the clues that the author gives us.

Poem -"Shiver- shiver" Text and title covered
Using the symbols
Brainstorm ideas about the picture - think/pair and share activity
Create a list of words and actions we expect to find
Teacher as scribe
Create a list of questions we want to answer
Teacher as scribe
Create predictions based on the picture and title
Read the poem (two words have been covered)
What do we predict these words might be?
How do we know?
Because it is a poem and words can rhyme in poems what will rhyme with "bugs" and fit into the poem. (Slugs)
Which of our questions have been answered?
What words did we find?
Were our predictions correct?
Re-read the poem-looking at the font.
What clues does the author give us to tell us how to read this poem?
Review:
Can we ask more questions?
Can we make more predictions?
Today we found that we could predict words in this poem because it rhymes
Small Group Focus: (Alternate group at tables - writing their own questions about the poem)
Children in dam/ creek photo for both groups
Special emphasis on "I wonder how and why" questions.
Sticker for the best/ most interesting and the most.
Teacher articulates to students that sometimes we do/don't find the answer.
Use phrase "I think..." to predict
Ask students for the difference between prediction and questions?
(Might be too soon?)
Teacher articulates the difference between a question and a prediction.
Reflection of learning -
Expectation that presenters will use a good question they used during the process
Teacher will indicate if students were able to create questions and what type of questions on a question grid.

## Session 5 23/03/09

Materials: Symbols on cards, blutac, poem- "Lost Shoes"- already partially covered picture only showing, paper, textas, big book stand, black and white photo of construction crew for small group discussion for group 2, photocopied sheets of Ben's diary for group 2, assessment sheet, pencil, set out the task board- two teacher groups and the grid for creating questions and predictions- one per child.

Focussed Teaching Time:

## Focus:

To provide a review of all strategies previously introduced.

## To review questioning and predicting

To predict text based on our knowledge of the language of poetry
Procedure:
Teacher Review:
Remember that we are working on a way to activate our thinking before we read.
Can you remember the symbols in order?
Only put them up after they are stated
Stop >Look > Predict > Think> Say > Ask > Read
Stop at Predict
What can we say when we are predicting? Put up card after stated.
Let us remind ourselves about the kinds of questions we can ask ourselves
Use the prepared cards to display
We can ask I wonder ..
Who, what, when, where, why and how
Or I wonder
If ...
Poem -"Lost Shoes "Text and title covered
Only refer to cards if necessary
Brainstorm ideas about the picture - think/pair and share activity
Create a list of words and actions we expect to find
Teacher as scribe
Create a list of questions we want to answer
Oral only
Create predictions based on the picture and title
Read the poem
What questions have been answered?
What words did we find?
Were our predictions correct?
How could we fill in the covered words- because we know rhyming words/ we know what might belong

Re-read the poem- looking at the features of the poem
Review:
Can we ask more questions?
Can we make more predictions?
Small Group Focus: (Alternate group at tables - answering text/ photo questions)
Group 1 "Ben's diary"- text and written questions
Predict key words/ actions
Special emphasis on "I wonder how and why" questions.
Sticker for the best/ most interesting/ the most.
Did we find the answers to our questions?
Use phrase "I think..." to predict
These students will have specific questions to answer from the text
Review- What did we use to answer the questions?
Group 2 Construction crew photo and teacher created text
Predict key words/ actions

Emphasis on "I wonder how and why" questions.
Sticker for the best/ most interesting and the most.
Did we find the answers to our questions?
Use phrase "I think..." to predict
Review- Do you think we will ever know what is happening.
From our predictions, we could write some interesting stories
Reflection of learning -
Expectation that presenters will use a good question/ prediction they used during the process
Teacher will indicate if students were able to create questions and what type of questions on a question grid.

## Session 6 25/03/09

Materials: Poem- "Big Mistake"- already partially covered - picture only showing, paper, textas, big book stand, photo of a man being bitten by a snake for small group discussion for group 2, photocopied sheets of short text based on the photo, assessment sheet, pencil, set out the task board- two teacher groups and the grid for creating questions and predictions- one per child.

## Focussed Teaching Time

## Focus:

To provide a very brief review of questioning and predicting sequence
To predict text based on our knowledge of the language of poetry
To predict words that we may find in a text based on our observation of both the illustration and title
Procedure:
Teacher Review:
Remember that we are working on a way to activate our thinking before we read.
Let us remember the things that we do > list orally
Poem -"Big Mistake" Text and title covered
Brainstorm ideas about the picture - think/pair and share activity
Create a list of words and actions we expect to find
Teacher as scribe
As students are answering, rephrase their answers to include strategies E.g., Student R must have looked carefully at the picture to predict the word "tree"
Create a list of questions we want to answer
Oral only
Predict the title
Read the poem
What questions have been answered?
What words did we find?
Were our predictions correct?
How could we fill in the covered words- because we know rhyming words/ we know what might belong

Re-read the poem- looking at the features of the poem
Review:
The processes we used
How did they help?
Small Group Focus: (Alternate group at tables - recording their responses.)
Photo of man being bitten by the snake
Group 1and 2 at separate times
Predict key words/ actions
Emphasis on words about how he was feeling
Emphasis on "I wonder how and why" questions.

Give a sticker for the best/ most interesting question/ prediction.
Read the text
Ask questions related to text
Review
What made it easy to read this text?
Review: Did we find the answers to our questions?
What were the most interesting action and naming words we wrote?

## Reflection of learning -

Expectation that presenters will articulate some of the strategies that they used before or during reading the text
Teacher will indicate if students were able to create questions and predictions on an answer grid.

## Session 7 26/03/09

Materials: Poem- " Stegosaurus Dinosaur"- already partially covered - picture only showing, paper, textas, big book stand, photocopied sheet of child assessment of thinking processes- using the symbols, photocopied sheets of short texts - (group 1 The Three Pigs, group 2 The Gingerbread Man), Teacher assessment sheet, pencil, set out the task board- two teacher groups

## Focussed teaching time:

## Focus:

To predict text based on our knowledge of the language of poetry
To predict words that we may find in a text based on our observation of both the illustration and title

## To read a short text using activated thinking processes

Procedure:
Teacher Review:
Remember what we did yesterday when Student $P$ told us everything she was going to do before she read the poem.
Stay at your tables. Get a partner and a pencil
Today I am going to see how well you can remember all those processes that we have to do before we read a text.
I want you to test each other
One child will tell the other one what they can remember and the partner will put a tick on the picture or word. Remember do not show them.
I wonder who will remember every single one.
Collect and Praise.
Come to the floor.
We know what to do, so lets do it on our next poem.
Poem -"Stegosaur Dinosaur" Text and title covered
Brainstorm ideas about the picture - think/pair and share activity
Create a list of words and actions we expect to find
Teacher as scribe
Create a list of questions we want to answer
Oral only
Predict the title
As students are answering, rephrase their answers to include strategies
Read the poem
What questions have been answered?
What words did we find?
Were our predictions correct?
How could we fill in the covered words- because we know rhyming words/ we know what might belong
Re-read the poem- looking at the features of the poem
Review:
The processes we used
How did they help?

Small Group Focus: (Alternate group at tables - recording their responses to questions on a text.)
Photocopies sheets of short text
Group 1 The Three Pigs
Group 2 The Gingerbread Man
Same process for each group
Group 1and 2 at separate times
Activate what we already know about these stories
Predict key words/ actions from the small pictures
Remember they may not be the same as the ones we know.
Ask questions related to text
As students are answering, rephrase their answers to include strategies E.g., Student L must have been thinking about what he knew about dinosaurs to tell us the word "stegosaurus"
Read the text
Review
What made it easy to read this text?
Was it the same as the story we know?
Reflection of learning -
Expectation that presenters will articulate some of the strategies that they used

## Session 8 27/03/09

Materials: poem- " Hippo Sneeze"- poem covered but not title, paper, textas, big book stand, photocopied sheets of short texts as cloze activities- (Sammy Snake), photocopied sheets of the texts as a complete story, master copy of the sheet per child to hear them read individually as a running record, two teacher groups set out the task board.

## Focussed teaching time:

## Focus:

To predict text based on our knowledge of the language of poetry
To read a short text using activated thinking processes

## To articulate strategies that used on unfamiliar words

## Procedure:

Teacher Review:
State the results of yesterday's survey
Everyone remembered to stop, think and ask questions. Some people even remembered everything!
Awards to everyone with special awards to Prep, R and H for getting everything correct.
I am not going to remind you today
I want to see if you can keep all those strategies in your memory and use them today without any clues. I am going to give you another survey next Monday to see if you can still remember them all.

We all know what to do, so let's do it on our next poem.
Poem -"Hippo Sneeze" Text only covered for first viewing. Some key rhyming words covered for prediction.
Brainstorm ideas about the picture and title - think/pair and share activity
Create a list of words and actions we expect to find
Teacher as scribe
Create a list of questions we want to have answered
Oral only
As students are answering, rephrase their answers to include strategies they appeared to use. Modelling the articulation of strategies Read the poem

Which questions have been answered?
What words did we find?
Were our predictions correct?
Re-read the poem
Small Group Focus: Pre reading of text by Group 1, while teacher working with Group 2
Photocopies sheets of short text "Sammy Snake"
Same process for each group
Group 1 and 2 at separate times
Predict key words/ actions from the small pictures
Ask questions related to text
If necessary, rephrase their answers to include strategies
Read the text individually as a running record
Review
What made it easy to read this text?
Which key words did we find that we predicted?
Reflection:
Students reflect on the processes / strategies they used.
How did they help?
Session 9 30/03/09 Review of all strategies which have been learned in the past 8 sessions
Materials: poem- "Bouncing Grandma"- no covering except rhyming words, paper, textas, big book stand, photocopied sheets of short texts of assessment of activation strategies, photocopied sheets of the texts The pup Group 2 and The dove and the ant Group 1, two teacher groups set out the task board, preps to class teacher
Focussed teaching time:

## Focus:

To predict text based on our knowledge of the language of poetry
To read a short text using activated thinking processes
To articulate strategies, which can be used on unfamiliar words including, check the picture, reread, read on and return, and decode.
Procedure:
Teacher Review:
Survey to see what strategies you will use before reading a text
Same as last week - but this time NO reminders- let's see what has stayed in your memory.
Sheets on tables
Partner testing - no assistance from staff to year ones. Support if required to preps.
How many people will remember them all this time?
Students to hand up sheets when completed
Praise > Floor for session
We all know what to do so let's do it on our next poem.
Poem -"Bouncing Grandma" Only covered some key rhyming words for prediction.

## Ask for ideas

As children give answers, ask them what strategies they used to make predictions Looking for a connection to strategies taught
It may be that some students are using new strategies - e.g. skimming/ scanning which will be included in a list to be created
What kind of questions can we ask?
What kind of predictions can we make?
Read the poem
What words did we find?
What questions have been answered?
Were our predictions correct?
Re-read the poem
Review:

The processes we used
How did they help?
Small Group Focus: (Group 1 pre read text before group session)
Photocopies sheets of short text
Group 1 Text: The dove and the ant
They are to pre-read this text before coming to the teacher group and using sticky labels write down -

Articulated strategies- Questions/ Key words- unknown words/
Predictions
Group 2 Text: The puppy
Teacher scribing suggestions on sticky labels
Articulated strategies- Questions/ Key words- unknown words/
Predictions
Same process for each group
What strategies did you use?
What words are problematic?
How can I find the answer?
Check picture for clues
Read on with initial sound in place
Re-read with initial sound in place
Question- what kind of word belongs
Decode - make sense/ look right/ sound right
Tick the word list if you now know the word
Review: I like the way that some people were using great skills to read this text.
Articulate the strategies they used -finding key words/ looking carefully at the illustration etc.
Reflection of learning -
Expectation that presenters will articulate some of the strategies that they used before or during reading the text

## Appendix 2: Reflection of teaching sessions (brief notes)

Session 1 17/3/09
Assessment:
Children were very restless today- special school activities
They were actively engaged in shared focus time- both year 1 and prep
They were able to name the symbols and their meaning
They missed articulating the most obvious clues in the picture
They were able to brainstorm a list of possible key words
They were able to create "I wonder" questions in small focus groups
There was a problem with size of the groups (too large) for lots of individual responses
The process worked well on non- fictional text about rocks for the higher levelled group, but not as well on the lower group who struggled with text
An adjustment needs to be made in the sessions to focus on pictures/ illustrations, until they have mastered the strategies.

## Session 2 18/03/09

Assessment:
Class teacher absent- children restless, but responsive
There were very quick responses to the cards - even preps able to say what they were and what you do.
The colours of the traffic light works well as did the symbols
Teacher's Aide was able to use this process in her small teaching group with the preps
Small group focus - behaviour issue with student H - disturbing other students Two students absent today -G and J
A more specific chart is required to note if questions are of a particular type.
The issue was raised that sometimes our questions are not answered in a text/ picture

Session 3 19/03/09
Assessment:
The students were restless, but worked well.
Student R disturbing others in the small group when he was preoccupied with his shoe laces- perfect time to remind the group about the stop sign before we read. We activate our thinking about reading not concentrating on shoelaces.
Student $G$ absent
Student I returned from illness
Student N had a problem understanding the task on the sheet and had re- written the phrases.
The phone photo allowed a wide variety of questions to be made by group onebetween 5 and 6 . An average of 5.6 per student
Group 2 used the poem to create their questions. They created between 1 and 4. An average of 2.5 per student (excluding student N )
Student O spent most of her time creating and making her name look "nice".
During reflection time, we had two reporters who were able to say their questions and one who had made a prediction using the phrases "I wonder /I think"
It was difficult for several students to ask a question and not form a statement or prediction, particularly students F, H, R and S
The question grid was a successful assessment tool.

## Session 4 20/03/09

## Assessment:

Whole group does not appear ready for the difference between predictions and questions
Much better at formulating questions and only needed a gentle reminder to create predictions
Table work done very well with every child creating questions

Three students needed to have the task explained to them so it was an opportunity to refresh the rest.
Majority of students had problems realising that the children in the photo were at a lake/ dam
Powers of observation are increasing with students mentioning no shoes on the children's feet, rocks in the background. Etc.
All children were able to create predictions using the phrase "I think..."
Student F had difficulty formulating the correct grammar to use
Student H required some assistance to use the phrase.
All students were able to create both oral and written questions about the photo
Some students were able to create multi-layered questions
Student S-"I wonder why the boy had a spider's web on his leg and when the spider left?"
In both groups written questions ranged in from $3>6$, with an average of 5 in both groups
The reflection time had two good questions
Session 5 23/03/09
Assessment:
Despite the weekend break, students were able to repeat the introduced system and to give both the leading questions and the prediction phrase that had been modelled. However, they produced fewer questions on their answer sheet - averaging 3-4 because they had less time to write today.
In the small groups, all students were actively engaged in the discussion.
Student $P$ who had been passive in previous sessions offered several excellent questions and a prediction.
The text used in group 1 was too long. They read and answered questions only on half of the text. During this session, they were able to say that Ben was also the "l' in the text. They had referenced the pronoun well.

During the Reading Recovery session with Students $R$ and $S$, both looked through the text before reading to "get an understanding" ( S) "to find out what it was about" (R) Student M was looking at the pictures during reading and occasionally before reading the page. Students $R$ and $S$ had already been cross checking meaning with visual information early in their intervention programme.

## Session 6 25/03/09

## Assessment:

The class teacher was absent for part of the day, so this lesson was taken during another time of the day. Unfortunately it meant that several (4) year one students were at Maths extension, leaving only 10 students, plus the preps. The time span was also decreased to 45 minutes.
Consequently, the structure of the programme was changed. It included the introduction of focussed teaching, then only one whole teaching group of year ones, (preps had work to continue) followed by shared reflection time.
During the introduction, student P modelled the activity for tomorrow- being able to articulate the strategies you can use before you read. The students were able to help her with the few items she forgot to mention. She was able to list all seven items on the first list and gave two questions.
During the prediction stage of the whole modelled group poem, students were able to successfully predict six words that were subsequently found in the text.
During the small group focussed teaching session, children were able to predict four of the words that were found in the text. They predicted an additional five words that were close in meaning.
Students were asked to highlight the words they predicted in the short text as they read it the first time. They were able to reference the pronouns with the character without difficulty.
During the reflection time, student L was able to say, "We highlighted the words we predicted in the story".

Student H gave her prediction of what might happen after the snake story. Preps articulated their favourite words from the Big Mistake poem.

Session 7 26/03/09
Assessment:

## Student N absent today

The process of testing each other was very successful. All students participated in the process. Assistance was given to the preps only if necessary. All students were able to complete the task with minimal assistance.
Results ranged from a score of 6 to a top score of 14. (Prep results ranged from 3 to14. The lowest score was able to state -stop, think and ask questions.) See Appendix 6 for complete scores.
Students were very successful at predicting the covered rhyming words in the poemtall, small, all
Group 2- All students knew this story and were able to say some key features of the story. However, one student stated that the story was about a fox. They were all able to predict a significant number of words found in the text. This version had straw, sticks and stone as the building materials. The teacher reminded them "Readers read what authors write."
Student $Q$ had the greatest amount of difficulty reading the text.
Group 1- All students knew the basic story, but again there were significant differences in the characters that they remembered- ranging from a dog, wolf and a fox. Most students in this group were able to state that they could read on, or reread if they did not know the words
Student G had the most difficulty reading this text and continually appealed for assistance without appearing to use any strategy.
Students J and K worked as a team assisting each other. Other students worked as individuals decoding the text.

Session 8 27/03/09
Assessment of session
This was a very successful session
Students were able to successfully predict words, which were found in the text
Students were able to successfully predict rhyming words in the poem.
Students in Group 1 and 2 read their text individually to the teacher.
Students demonstrated that they were able to use strategies prior to reading the text to activate their thinking about the text
They are ready to begin the next phase- strategies that will assist in decoding unfamiliar words.

Session 9 30/03/09 Review of all strategies which have been learned in the past 8 sessions
Assessment:
One suggestion made during the session that you could ask someone to tell you an unknown word. The teacher response was "someone may not be there when they are reading and that you need to have other strategies in place".
This is obviously the area requiring explicit teaching from the class teacher.
The survey was highly successful with 11 students getting 100\%- this included some preps not included in the study
An additional 6 students had a score at / higher than 10/ 14 i.e. higher than 70\% The remaining 3 students were in prep and an additional integration student.
Students $\mathrm{G}, \mathrm{N}$, and Q were absent for the survey and will complete theirs on their return.
During the teacher focus time, the poem was only covered in three places to check rhyming words. It was gratifying to see that all students were looking at the picture first and making their predictions/ questions/ giving key words before they began to read the text.
This would indicate a successful conclusion to the intensive teaching.

The two year one students, who were reflecting on their learning, were able to state a way of finding out what a word was - by pulling it apart and by reading on, but generally as previously stated, this is an area requiring intensive focussed teaching.

| Stop |  | Predict key words |
| :---: | :---: | :---: |
| know? | What <br> strategies will I use? | Ask <br> questions. |
| I wonder who... | I wonder what... | I wonder when... |
| I wonder where... | I wonder why... | I wonder how... |
|  |  | Note: The drawings used in the project would not scan successfully and were replaced by clip art. The text remains the same. The cards were colour coded. Red -stop. Yellow for all processing sections and Green for Read. |

Appendix 4: Complete data file on completion of the intervention
Table 3: General information about students in the study post testing

|  |  | Gender | Age | E.S.L. | R.O.L. | E.M.A | Other issues | Text level | Attitude to school |  | Attitude to reading |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Pre |  |  | Pre | Pre | Post | Pre | Post |
| Name |  |  | n <br> $\stackrel{1}{1}$ <br> 0 <br>  |  | $\begin{aligned} & \mathbf{1} \\ & \mathbf{O} \\ & \text { ס } \end{aligned}$ | $\sum_{\dot{u}}^{4} 0$ |  |  |  |  |  |  |
| A | 0 | 2 | 83 | 0 | 40 | 0 |  | 28 | 2 | 2 | 2 | 2 |
| B | 0 | 2 | 80 | 0 | 29 | 0 |  | 28 | 2 | 2 | 1 | 1 |
| C | 0 | 1 | 77 | 0 | 32 | 0 |  | 18 | 2 | 2 | 0 | 1 |
| D | 0 | 1 | 71 | 0 | 38 | 0 |  | 17 | 2 | 2 | 2 | 2 |
| E | 0 | 1 | 83 | 0 | 23 | 0 | 1 | 28 | 0 |  | 1 |  |
| F | 1 | 2 | 77 | 1 | 30 | 0 |  | 12 | 2 | 2 | 1 | 1 |
| G | 1 | 2 | 78 | 0 | 40 | 1 |  | 14 | 0 | 0 | 0 | 1 |
| H | 1 | 2 | 75 | 0 | 33 | 0 |  | 14 | 1 | 2 | 2 | 1 |
| I | 1 | 2 | 76 | 1 | 27 | 0 |  | 17 | 2 | 2 | 2 | 2 |
| J | 1 | 2 | 76 | 0 | 23 | 0 |  | 10 | 1 | 1 | 2 | 2 |
| K | 1 | 2 | 74 | 0 | 37 | 0 |  | 15 | 2 | 2 | 1 | 1 |
| L | 1 | 1 | 81 | 0 | 26 | 1 |  | 7 | 2 | 2 | 1 | 1 |
| M | 1 | 1 | 80 | 0 | 9 | 0 | 3 | 8 | 0 | 0 | 2 | 2 |
| N | 1 | 1 | 79 | 1 | 37 | 0 |  | 10 | 2 | 2 | 2 | 2 |
| 0 | 1 | 2 | 76 | 0 | 21 | 0 |  | 9 | 2 | 1 | 1 | 2 |
| P | 1 | 2 | 78 | 0 | 26 | 1 |  | 5 | 2 | 2 | 1 | 0 |
| Q | 1 | 2 | 73 | 0 | 9 | 0 | 123 | 2 | 2 | 2 | 0 | 2 |
| R | 1 | 2 | 77 | 0 | 21 | 0 | 13 | 5 | 2 | 2 | 1 | 1 |
| S | 1 | 1 | 84 | 0 | 24 | 0 | 3 | 4 | 0 | 0 | 0 | 0 |

Complete data file on completion of the intervention
Table 4: Age and attendance records of students in the study

|  |  |  |  |
| :--- | ---: | ---: | ---: |
|  | Control <br> Group <br> =0 <br> Teaching <br> $=1$ | Years and <br> months | Number of <br> days <br> absent |
| A | 0 | 6.11 | 0 |
| B | 0 | 6.8 | 0 |
| C | 0 | 6.5 | 0 |
| D | 0 | 5.11 | 0 |
| E | 0 | 6.11 | 5 |
| F | 1 | 6.5 | 1 |
| G | 1 | 6.6 | 4 |
| H | 1 | 6.3 | 0 |
| I | 1 | 6.4 | 0 |
| J | 1 | 6.4 | 1 |
| K | 1 | 6.2 | 0 |
| L | 1 | 6.9 | 0 |
| M | 1 | 6.8 | 0 |
| N | 1 | 6.7 | 4 |
| O | 1 | 6.4 | 0 |
| P | 1 | 6.6 | 0 |
| Q | 1 | 6.1 | 1 |
| R | 1 | 6.5 | 0 |
| S | 1 | 7 | 0 |
|  |  |  |  |

Complete data file on completion of the intervention
Table 5: Activated thinking generated prior to reading the Neale Analysis of Reading Ability in both pre and post tests.

| Neale Analysis of Reading Ability - Standardised Test |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Activated thinking generated prior to reading the texts - summary |  |  |  |  |  |  |  |  |  |  |  |
| PRE |  |  |  |  |  | POST |  |  |  |  |  |
| None=0 | picture $=1$ | key words= 2 | own exper= 3 | read <br> strat <br> $=4$ | gen quest= 5 | None=0 | picture <br> $=1$ | key words= 2 | own exper= 3 | read <br> strat <br> $=4$ | $\begin{array}{\|l} \hline \text { gen } \\ \text { quest= } \\ 5 \end{array}$ |
|  | 1 | 2 | 3 |  |  |  | 1 | 2 | 3 |  |  |
|  | 1 | 2 |  |  |  |  | 1 | 2 |  |  |  |
|  | 1 | 2 |  |  |  |  | 1 | 2 | 3 | 4 |  |
|  |  | 2 | 3 |  |  |  | 1 |  |  | 4 |  |
|  | 1 | 2 | 3 |  |  |  |  |  |  |  |  |
|  | 1 | 2 |  |  | 5 |  | 1 | 2 |  | 4 | 5 |
|  |  | 2 | 3 | 4 |  |  | 1 | 2 | 3 | 4 |  |
|  | 1 | 2 |  | 4 |  |  | 1 | 2 | 3 |  |  |
|  | 1 | 2 |  |  |  |  | 1 | 2 | 3 |  |  |
|  | 1 | 2 | 3 |  |  |  | 1 | 2 |  |  | 5 |
|  | 1 | 2 |  |  |  |  | 1 | 2 |  |  | 5 |
|  | 1 | 2 |  |  |  |  | 1 | 2 |  |  | 5 |
|  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
|  | 1 | 2 |  |  |  |  | 1 | 2 |  |  |  |
|  | 1 | 2 |  |  |  |  | 1 | 2 |  |  | 5 |
|  | 1 | 2 |  |  |  |  | 1 | 2 | 3 |  |  |
|  | 1 | 2 |  |  |  |  | 1 | 2 |  |  |  |
|  | 1 | 2 |  |  | 5 |  | 1 | 2 |  | 4 | 5 |
|  | 1 | 2 |  | 4 |  |  | 1 | 2 | 3 | 4 | 5 |
|  | $\begin{aligned} & 89 \\ & \% \\ & \hline \end{aligned}$ | 100\% | $\begin{aligned} & 21 \\ & \% \\ & \hline \end{aligned}$ | 16\% | $\begin{aligned} & 16 \\ & \% \end{aligned}$ |  | 100\% | 94 $\%$ | $\begin{aligned} & 39 \\ & \% \end{aligned}$ | 33\% | 44 $\%$ |

$0=$ None/ not able to articulate thinking
1= Ideas related to the picture
$2=$ Generated key words found in the text
$3=$ Ideas related to own experiences
4=Reading strategies articulated
$5=$ Generated questions about the text

Complete data file on completion of the intervention
Table 6: Accuracy results in the Neale Analysis of Reading Ability in both pre and post tests.

|  | Neale Analysis of Reading Ability - Standardised Test |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Accuracy |  |  |  |  |  |  |  |
| Name | RAW PRE | $\begin{aligned} & \text { RAW } \\ & \text { POST } \end{aligned}$ | Percentile PRE | Percentile POST | Stanine PRE | $\begin{aligned} & \text { Stanine } \\ & \text { POST } \end{aligned}$ | Reading Age <br> PRE | Reading Age POST |
| A | 45 | 52 | 99 | 99 | 9 | 9 | 8.5 | 8.11 |
| B | 41 | 46 | 97 | 97 | 9 | 9 | 8.1 | 8.6 |
| C | 22 | 24 | 75 | 80 | 6 | 7 | 6.9 | 7 |
| D | 28 | 23 | 87 | 79 | 7 | 7 | 7.1 | 7 |
| E | 41 |  | 97 |  | 9 |  | 8.1 |  |
| F | 22 | 24 | 75 | 80 | 6 | 7 | 6.9 | 7 |
| G | 26 | 22 | 85 | 78 | 7 | 7 | 7 | 6.11 |
| H | 23 | 22 | 76 | 78 | 6 | 7 | 6.9 | 6.11 |
| I | 20 | 21 | 70 | 77 | 6 | 6 | 6.7 | 6.10 |
| J | 14 | 15 | 60 | 69 | 5 | 6 | 6.3 | 6.6 |
| K | 26 | 29 | 85 | 91 | 7 | 8 | 7 | 7.4 |
| L | 12 | 15 | 55 | 69 | 5 | 6 | 6.2 | 6.6 |
| M | 8 | 13 | 34 | 56 | 4 | 5 | X | 6.5 |
| N | 9 | 14 | 39 | 62 | 4 | 6 | X | 6.5 |
| 0 | 11 | 11 | 50 | 47 | 5 | 5 | 6.1 | 6.3 |
| P | 4 | 13 | 18 | 56 | 3 | 5 | X | 6.5 |
| Q | 2 | 4 | 16 | 24 | 3 | 4 | X | X |
| R | 10 | 12 | 45 | 51 | 5 | 5 | 6 | 6.4 |
| S | 9 | 14 | 39 | 62 | 4 | 6 | X | 6.5 |

X= too low to score

Complete data file on completion of the intervention
Table 7: Comprehension results in the Neale Analysis of Reading Ability in both pre and post tests.

|  | Neale Analysis of Reading Ability - Standardised Test |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Comprehension |  |  |  |  |  |  |  |
| Name | RAW PRE | $\begin{aligned} & \text { RAW } \\ & \text { POST } \\ & \hline \end{aligned}$ | Percentile PRE | $\begin{aligned} & \text { Percentile } \\ & \text { POST } \end{aligned}$ | Stanine PRE | $\begin{aligned} & \text { Stanine } \\ & \text { POST } \end{aligned}$ | Reading Age <br> PRE | Reading Age <br> POST |
| A | 16 | 10 | 99 | 88 | 7 | 7 | 8.3 | 7.4 |
| B | 10 | 14 | 86 | 95 | 7 | 8 | 7.1 | 7.11 |
| C | 10 | 6 | 86 | 74 | 7 | 6 | 7.1 | 6.8 |
| D | 7 | 10 | 65 | 88 | 6 | 7 | 6.7 | 7.4 |
| E | 14 |  | 98 |  | 9 |  | 7.10 |  |
| F | 9 | 6 | 80 | 74 | 7 | 6 | 6.11 | 6.8 |
| G | 7 | 10 | 65 | 88 | 6 | 7 | 6.7 | 7.4 |
| H | 9 | 9 | 80 | 83 | 7 | 7 | 6.11 | 7.2 |
| I | 5 | 10 | 61 | 88 | 6 | 7 | 6.3 | 7.4 |
| J | 7 | 5 | 65 | 73 | 6 | 6 | 6.7 | 6.6 |
| K | 10 | 12 | 86 | 93 | 7 | 8 | 7.1 | 7.7 |
| L | 3 | 5 | 32 | 73 | 4 | 6 | 6 | 6.6 |
| M | 3 | 2 | 32 | 21 | 4 | 3 | 6 | 6 |
| N | 2 | 7 | 18 | 76 | 3 | 6 | X | 6.10 |
| 0 | 2 | 1 | 18 | 9 | 3 | 2 | X | X |
| P | 2 | 4 | 18 | 59 | 3 | 5 | X | 6.4 |
| Q | 2 | 0 | 18 | X | 3 | X | X | X |
| R | 1 | 2 | 8 | 21 | 2 | 3 | X | 6 |
| S | 2 | 3 | 18 | 38 | 3 | 4 | X | 6.2 |

$X=$ too low to score

Complete data file on completion of the intervention
Table 8: Rate of Reading results in the Neale Analysis of Reading Ability in both pre and post tests.

|  | Neale Analysis of Reading Ability - Standardised Test |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Rate |  |  |  |  |  |  |  |
| Name | RAW PRE | $\begin{aligned} & \text { RAW } \\ & \text { POST } \end{aligned}$ | Percentile PRE | Percentile POST | Stanine PRE | $\begin{aligned} & \text { Stanine } \\ & \text { POST } \end{aligned}$ | Reading <br> Age <br> PRE | Reading Age POST |
| A | 75 | 56 | 99 | 97 | 9 | 9 | 10.3 | 8.6 |
| B | 53 | 34 | 93 | 72 | 8 | 6 | 8.2 | 7.1 |
| C | 39 | 30 | 84 | 68 | 7 | 6 | 7.2 | 6.11 |
| D | 42 | 39 | 88 | 85 | 7 | 7 | 7.4 | 7.4 |
| E | 37 |  | 81 |  | 7 |  | 7.1 |  |
| F | 29 | 36 | 71 | 78 | 6 | 7 | 6.7 | 7.2 |
| G | 32 | 29 | 76 | 67 | 6 | 6 | 6.9 | 6.9 |
| H | 28 | 25 | 69 | 59 | 6 | 5 | 6.6 | 6.7 |
| I | 27 | 32 | 66 | 68 | 6 | 6 | 6.6 | 6.11 |
| J | 13 | 19 | 28 | 44 | 4 | 5 | X | 6.3 |
| K | 22 | 18 | 57 | 43 | 5 | 5 | 6.2 | 6.3 |
| L | 34 | 22 | 77 | 54 | 6 | 5 | 6.11 | 6.5 |
| M | 20 | 27 | 53 | 63 | 5 | 6 | 6.1 | 6.8 |
| N | 24 | 24 | 59 | 57 | 5 | 5 | 6.3 | 6.6 |
| 0 | 21 | 34 | 55 | 72 | 5 | 6 | 6.1 | 7.1 |
| P | 11 | 26 | 19 | 61 | 3 | 6 | X | 6.8 |
| Q | 24 | 18 | 59 | 43 | 5 | 5 | 6.3 | 6.3 |
| R | 25 | 62 | 60 | 98 | 6 | 9 | 6.4 | 9 |
| S | 26 | 39 | 63 | 85 | 6 | 7 | 6.5 | 7.4 |

$X=$ too low to score

Complete data file on completion of the intervention
Table 9: Results of retelling the texts from the Neale Analysis of Reading Ability in both pre and post tests

|  | Retell of Neale's Texts. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Retell level 1 |  |  |  | Retell Level 2 |  |  |  | Retell Level 3 |  |  |  | Retell Level 4 |  |  |  |
| Name |  | $\bigcirc$ |  | $\bigcirc$ |  | $\bigcirc$ |  | $\bigcirc$ |  | $\bigcirc$ |  | $\bigcirc$ |  | $\bigcirc \bigcirc$ |  | $\bigcirc$ |
| A | 7 | 100\% | 6 | 100\% | 7 | 78\% | 5 | 50\% | 7 | 58\% | 0 | 0\% |  |  |  |  |
| B | 5 | 71\% | 3 | 50\% | 2 | 22\% | 4 | 40\% | 1 | 8\% | 0 | 0\% | 0 | 0\% | 1 | 8\% |
| C | 7 | 100\% | 5 | 83\% | 4 | 44\% | 2 | 20\% |  |  |  |  |  |  |  |  |
| D | 2 | 29\% | 4 | 67\% | 1 | 11\% | 2 | 20\% |  |  |  |  |  |  |  |  |
| E | 4 | 57\% |  |  | 4 | 44\% |  |  | 5 | 42\% |  |  |  |  |  |  |
| F | 4 | 57\% | 5 | 83\% | 3 | 33\% | 2 | 20\% |  |  |  |  |  |  |  |  |
| G | 4 | 47\% | 6 | 100\% | 5 | 55\% | 5 | 50\% | 3 | 25\% |  |  |  |  |  |  |
| H | 6 | 86\% | 4 | 67\% | 1 | 11\% | 4 | 40\% |  |  |  |  |  |  |  |  |
| I | 2 | 29\% | 4 | 67\% | 2 | 22\% | 6 | 60\% |  |  |  |  |  |  |  |  |
| J | 5 | 71\% | 6 | 100\% | 4 | 44\% | 3 | 30\% |  |  |  |  |  |  |  |  |
| K | 5 | 71\% | 3 | 50\% | 2 | 22\% | 5 | 50\% |  |  | 3 | 30\% |  |  |  |  |
| L | 5 | 71\% | 3 | 50\% |  |  | 4 | 40\% |  |  |  |  |  |  |  |  |
| M | 4 | 47\% | 5 | 83\% | 0 | 0\% |  |  |  |  |  |  |  |  |  |  |
| N | 3 | 43\% | 4 | 67\% |  |  | 3 | 30\% |  |  |  |  |  |  |  |  |
| 0 | 5 | 71\% | 2 | 33\% |  |  |  |  |  |  |  |  |  |  |  |  |
| P | 3 | 43\% | 2 | 33\% |  |  |  |  |  |  |  |  |  |  |  |  |
| Q | 2 | 29\% | 0 | 0\% |  |  |  |  |  |  |  |  |  |  |  |  |
| R | 3 | 43\% | 2 | 33\% |  |  |  |  |  |  |  |  |  |  |  |  |
| S | 4 | 47\% | 2 | 33\% |  |  |  |  |  |  |  |  |  |  |  |  |

## Appendix 5:

Table 10: Gains in accuracy, comprehension and rate of reading using the Neale Analysis of Reading Ability for whole, control and teaching groups.


## Appendix 6:

Table 11A The results of strategy assessment in the Teaching Group.

|  | Stop |  | Look carefully |  | Predict key words |  | What do I know |  | Strategies to use |  | Ask questions |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name | $\begin{aligned} & 27- \\ & \text { Mar } \end{aligned}$ | $\begin{aligned} & \text { 30- } \\ & \text { Mar } \end{aligned}$ | $\begin{aligned} & 27- \\ & \text { Mar } \end{aligned}$ | $\begin{aligned} & 30- \\ & \text { Mar } \\ & \hline \end{aligned}$ | $\begin{aligned} & 27- \\ & \text { Mar } \end{aligned}$ | $\begin{aligned} & \text { 30- } \\ & \text { Mar } \end{aligned}$ | $\begin{aligned} & \hline 27- \\ & \text { Mar } \end{aligned}$ | $\begin{aligned} & \hline 30- \\ & \text { Mar } \end{aligned}$ | $\begin{aligned} & \hline 27- \\ & \text { Mar } \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 30- \\ & \text { Mar } \\ & \hline \end{aligned}$ | $\begin{aligned} & 27- \\ & \text { Mar } \end{aligned}$ | $\begin{aligned} & \hline 30- \\ & \text { Mar } \end{aligned}$ |
| F | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| G | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| H | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| I | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 |
| J | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| K | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| L | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| M | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| N | A | 1 | A | 1 | A | 1 | A | 1 | A | 1 | A | 1 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| P | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Q | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| R | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
|  | 92\% | 100\% | 100\% | 100\% | 100\% | 100\% | 85\% | 86\% | 100\% | 92\% | 92\% | 100\% |

Table 11B: The results of strategy assessment in the Teaching Group.

|  | who |  | what |  | when |  | where |  | why |  | how |  | predict- <br> I think |  | Read |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name | $\begin{array}{r} 27- \\ \text { Mar } \end{array}$ | $\begin{aligned} & 30- \\ & \text { Mar } \end{aligned}$ | $\begin{array}{r} 27- \\ \text { Mar } \end{array}$ | $\begin{aligned} & 30- \\ & \text { Mar } \end{aligned}$ | $\begin{array}{r} 27- \\ \text { Mar } \\ \hline \end{array}$ | $\begin{array}{r} 30- \\ \text { Mar } \\ \hline \end{array}$ | $\begin{array}{r} 27- \\ \text { Mar } \\ \hline \end{array}$ | $\begin{aligned} & 30- \\ & \text { Mar } \\ & \hline \end{aligned}$ | $\begin{array}{r} 27- \\ \text { Mar } \\ \hline \end{array}$ | $\begin{array}{r} 30- \\ \mathrm{Mar} \\ \hline \end{array}$ | $\begin{gathered} 27- \\ \text { Mar } \end{gathered}$ | $\begin{aligned} & 30- \\ & \text { Mar } \end{aligned}$ | $\begin{array}{r} 27- \\ \text { Mar } \\ \hline \end{array}$ | $\begin{array}{r} 30- \\ \text { Mar } \\ \hline \end{array}$ | $\begin{array}{r} 27- \\ \text { Mar } \\ \hline \end{array}$ | $\begin{aligned} & 30- \\ & \text { Mar } \end{aligned}$ |
| F | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| G | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| H | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| J | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 |
| K | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| L | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| M | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| N | A | 1 | A | 0 | A | 1 | A | 1 | A | 0 | A | 1 | A | 1 | A | 1 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| P | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Q | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 |
| R | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| S | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|  | 62\% | 93\% | 62\% | 79\% | 62\% | 86\% | 46\% | 93\% | 69\% | 93\% | 77\% | 71\% | 77\% | 86\% | 62\% | 86\% |

Results of strategy assessment in the Teaching Group.
Table 11C: The results of strategy assessment in the Teaching Group.

|  | Total score |  |  | Total score \% |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  | $27-$ | $30-$ |  |  |  |
| Name | Mar | Mar |  | $27-$ | Mar | | Mar |
| ---: |
| F |

## Appendix 7：

Table12 A：The results of thinking before reading the Neale texts in both pre and post tests．

|  |  | Neale Analysis of Reading Ability－Standardised Test |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Activated thinking generated prior to reading the texts |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Text 1 ＝Bird |  |  |  |  |  | Text 1 ＝Kitten |  |  |  |  |  |
| Name |  | PRE |  |  |  |  |  | POST |  |  |  |  |  |
|  |  | $\begin{aligned} & \text { O} \\ & \stackrel{0}{0} \\ & \vdots \end{aligned}$ | $\begin{aligned} & \Gamma \\ & \text { II } \\ & \text { 仓ٍ } \\ & \text { 흘 } \end{aligned}$ |  | $\begin{aligned} & \overline{0} \\ & \stackrel{\grave{㐅}}{㐅} \\ & \sum_{0}^{0} m \end{aligned}$ |  | $\begin{aligned} & \stackrel{\rightharpoonup}{\otimes} \\ & \stackrel{0}{0} \\ & \stackrel{\rightharpoonup}{0} \\ & \stackrel{\rightharpoonup}{\mathscr{D}}{ }^{\circ} \end{aligned}$ | 0 0 0 0 O |  |  | $\begin{aligned} & \grave{0} \\ & \stackrel{\grave{㐅}}{\widehat{\circ}} \\ & \sum_{0}^{\circ} m \end{aligned}$ |  |  |
| A | 0 |  | 1 | 2 | 3 |  |  |  | 1 | 2 |  |  |  |
| B | 0 |  | 1 | 2 |  |  |  |  | 1 | 2 |  |  |  |
| C | 0 |  | 1 | 2 |  |  |  |  | 1 | 2 | 3 |  |  |
| D | 0 |  |  | 2 | 3 |  |  |  | 1 |  |  | 4 |  |
| E | 0 |  | 1 | 2 | 3 |  |  |  |  |  |  |  |  |
| F | 1 |  |  | 2 |  |  |  |  | 1 | 2 |  | 4 |  |
| G | 1 |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  | 4 |  |
| H | 1 |  | 1 | 2 | 3 |  |  |  | 1 | 2 |  |  |  |
| I | 1 |  | 1 | 2 |  |  |  |  | 1 | 2 |  |  |  |
| J | 1 |  | 1 | 2 | 3 |  |  |  | 1 | 2 |  |  |  |
| K | 1 |  | 1 | 2 |  |  |  |  | 1 | 2 |  |  | 5 |
| L | 1 |  | 1 | 2 |  |  |  |  | 1 | 2 |  |  | 5 |
| M | 1 |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| N | 1 |  | 1 | 2 |  |  |  |  | 1 | 2 |  |  |  |
| 0 | 1 |  | 1 | 2 |  |  |  |  | 1 | 2 |  |  | 5 |
| P | 1 |  | 1 | 2 |  |  |  |  | 1 | 2 | 3 |  |  |
| Q | 1 |  | 1 | 2 |  |  |  |  | 1 | 2 |  |  |  |
| R | 1 |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  | 4 |  |
| S | 1 |  | 1 |  |  | 4 |  |  | 1 | 2 | 3 | 4 |  |
|  |  |  | 89 $\%$ | 95 $\%$ | 26 $\%$ | 0 | 16 $\%$ |  | 100 $\%$ | 94 $\%$ | 17 $\%$ | 28 $\%$ | 22 $\%$ |

None＝not able to articulate thinking
Picture＝ideas related to the picture
Key word＝generated key words in text
Own experiences＝ideas related to own experiences
Reading strategies＝articulated reading strategies that they would use Generated questions about the text

Table12 B: The results of thinking before reading the Neale texts in both pre and post tests.

|  | Neale Analysis of Reading Ability - Standardised Test |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Activated thinking generated prior to reading the texts |  |  |  |  |  |  |  |  |  |  |  |
|  | Text 2 = Road Safety |  |  |  |  |  | Text 2 = Surprise Parcel |  |  |  |  |  |
|  | PRE |  |  |  |  |  | POST |  |  |  |  |  |
| Name | O O O ¢ |  |  | $\begin{aligned} & \frac{11}{\omega} \\ & \frac{0}{x} \\ & 0 \\ & \sum_{0} \end{aligned}$ |  |  | O 0 ¢ \% |  |  |  |  |  |
| A |  |  | 2 |  |  |  |  | 1 | 2 | 3 |  |  |
| B |  | 1 | 2 |  |  |  |  | 1 | 2 |  |  |  |
| C |  | 1 | 2 |  |  |  |  | 1 | 2 |  | 4 |  |
| D |  |  |  | 3 |  |  |  | 1 |  |  |  |  |
| E |  | 1 | 2 | 3 |  |  |  |  |  |  |  |  |
| F |  |  | 2 | 3 |  |  |  | 1 | 2 |  | 4 |  |
| G |  | 1 | 2 |  |  |  |  | 1 | 2 | 3 | 4 |  |
| H |  | 1 | 2 | 3 |  |  |  | 1 | 2 | 3 |  |  |
| I |  | 1 | 2 |  |  |  |  | 1 | 2 | 3 |  |  |
| J |  | 1 | 2 |  |  |  |  | 1 | 2 |  |  | 5 |
| K |  | 1 | 2 |  |  |  |  | 1 | 2 |  |  | 5 |
| L |  | 1 | 2 |  |  |  |  | 1 | 2 |  |  | 5 |
| M |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  |  |
| N |  | 1 | 2 |  |  |  |  | 1 |  |  |  |  |
| 0 |  | 1 | 2 |  |  |  |  | 1 | 2 |  |  | 5 |
| P |  | 1 | 2 |  |  |  |  | 1 | 2 | 3 |  |  |
| Q |  |  |  |  |  |  |  |  |  |  |  |  |
| R |  | 1 | 2 |  |  |  |  | 1 | 2 |  | 4 |  |
| S |  | 1 | 2 |  | 4 |  |  | 1 | 2 | 3 | 4 |  |
|  |  | 83\% | 94\% | 22\% | 6\% | 6 $\%$ |  | 100\% | 88\% | 35\% | 29\% | 24\% |

None $=$ not able to articulate thinking
Picture= ideas related to the picture
Key word= generated key words in text
Own experiences = ideas related to own experiences
Reading strategies= articulated reading strategies that they would use
Generated questions about the text

Table12 C: The results of thinking before reading the Neale texts in both pre and post tests.

|  | Neale Analysis of Reading Ability - Standardised Test |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Activated thinking generated prior to reading the texts |  |  |  |  |  |  |  |  |  |  |  |
|  | Text 3 = Ali |  |  |  |  |  | Text 3 = Circus |  |  |  |  |  |
|  | PRE |  |  |  |  |  | POST |  |  |  |  |  |
| Name | O 01 ¢ ¢ |  |  | $\begin{aligned} & \bar{\omega} \\ & \stackrel{\rightharpoonup}{㐅} \\ & \sum_{0}^{\infty} \\ & \end{aligned}$ |  |  | 0 <br> 0 <br> 0 <br> 0 <br>  |  |  |  |  |  |
| A |  | 1 |  |  |  |  |  | 1 |  |  |  |  |
| B |  | 1 | 2 |  |  |  |  | 1 |  |  |  |  |
| C |  | 1 |  |  |  |  |  | 1 |  |  |  |  |
| D |  | 1 |  |  |  |  |  | 1 |  |  |  |  |
| E |  | 1 | 2 |  |  |  |  |  |  |  |  |  |
| F |  |  |  |  |  |  |  | 1 | 2 | 3 | 4 |  |
| G |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  | 4 |  |
| H |  | 1 |  | 3 |  |  |  | 1 | 2 | 3 |  |  |
| I |  |  |  |  |  |  |  | 1 | 2 | 3 |  |  |
| J |  |  |  |  |  |  |  |  |  |  |  |  |
| K |  | 1 | 2 |  |  |  |  | 1 | 2 | 3 |  | 5 |
| L |  |  |  |  |  |  |  |  |  |  |  |  |
| M |  |  |  |  |  |  |  |  |  |  |  |  |
| N |  |  |  |  |  |  |  |  |  |  |  |  |
| 0 |  |  |  |  |  |  |  |  |  |  |  |  |
| P |  |  |  |  |  |  |  |  |  |  |  |  |
| Q |  |  |  |  |  |  |  |  |  |  |  |  |
| R |  |  |  |  |  |  |  |  |  |  |  |  |
| S |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 100\% | 50\% | 13\% | 0\% | 13\% |  | 100\% | 56\% | 44\% | 22\% | 11\% |

None $=$ not able to articulate thinking
Picture $=$ ideas related to the picture
Key word= generated key words in text
Own experiences = ideas related to own experiences
Reading strategies $=$ articulated reading strategies that they would use
Generated questions about the text

Table12 D: The results of thinking before reading the Neale texts in both pre and post tests.

|  | Neale Analysis of Reading Ability - Standardised Test |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Activated thinking generated prior to reading the texts |  |  |  |  |  |  |  |  |  |  |  |
|  | Text 4 = Jan |  |  |  |  |  | Text $=4$ Dragon |  |  |  |  |  |
|  | PRE |  |  |  |  |  | POST |  |  |  |  |  |
| Name | $\begin{aligned} & 0 \\ & 0 \\ & \text { id } \\ & \text { in } \end{aligned}$ |  |  |  |  |  | $\begin{aligned} & 0 \\ & \stackrel{0}{0} \\ & \frac{0}{5} \end{aligned}$ |  |  | $\begin{aligned} & \stackrel{\rightharpoonup}{0} \\ & \stackrel{\rightharpoonup}{⿺} \\ & \stackrel{y}{0} \cong \end{aligned}$ |  | $\begin{aligned} & \stackrel{\rightharpoonup}{\mathrm{U}} \\ & \stackrel{\rightharpoonup}{\stackrel{\rightharpoonup}{\circ}} \\ & \stackrel{\rightharpoonup}{\mathrm{E}} \end{aligned}$ |
| A |  | 1 |  |  |  |  |  | 1 | 2 |  |  |  |
| B |  | 1 |  |  |  |  |  | 1 | 2 |  |  |  |
| C |  |  |  |  |  |  |  |  |  |  |  |  |
| D |  |  |  |  |  |  |  |  |  |  |  |  |
| E |  | 1 |  |  |  |  |  |  |  |  |  |  |
| F |  |  |  |  |  |  |  |  |  |  |  |  |
| G |  |  |  |  |  |  |  |  |  |  |  |  |
| H |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| J |  |  |  |  |  |  |  |  |  |  |  |  |
| K |  |  |  |  |  |  |  |  |  |  |  |  |
| L |  |  |  |  |  |  |  |  |  |  |  |  |
| M |  |  |  |  |  |  |  |  |  |  |  |  |
| N |  |  |  |  |  |  |  |  |  |  |  |  |
| 0 |  |  |  |  |  |  |  |  |  |  |  |  |
| P |  |  |  |  |  |  |  |  |  |  |  |  |
| Q |  |  |  |  |  |  |  |  |  |  |  |  |
| R |  |  |  |  |  |  |  |  |  |  |  |  |
| S |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 100\% | 0\% | 0\% | 0\% | 0\% |  | 100\% | 100\% | 0\% | 0\% | 0\% |

None = not able to articulate thinking
Picture $=$ ideas related to the picture
Key word= generated key words in text
Own experiences = ideas related to own experiences
Reading strategies= articulated reading strategies that they would use
Generated questions about the text

## Appendix 8:

Table 13 A: Types of thinking in Teaching Group prior to reading texts.

|  | Activated thinking generated prior to reading the texts |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 17/03/2009 |  |  |  |  |  | 18/03/2009 |  |  |  |  |  |
| Name | $\begin{aligned} & 0 \\ & \text { II } \\ & \vdots \\ & \vdots \\ & \hline \end{aligned}$ |  |  |  |  |  |  |  |  | $\begin{aligned} & \bar{\omega} \\ & \stackrel{\rightharpoonup}{\star} \\ & \sum_{0}^{\circ} m \end{aligned}$ |  |  |
| F | Absent |  |  |  |  |  |  | 1 |  |  |  | 5 |
| G | Absent |  |  |  |  |  |  | 1 |  |  |  | 5 |
| H |  | 1 | 2 |  |  | 5 |  | 1 |  |  |  | 5 |
| I |  | 1 | 2 |  |  | 5 |  | 1 |  |  |  | 5 |
| J |  | 1 | 2 |  |  | 5 | Absent |  |  |  |  |  |
| K |  | 1 | 2 |  |  | 5 |  | 1 |  |  |  | 5 |
| L |  | 1 | 2 |  |  | 5 |  | 1 |  |  |  | 5 |
| M |  | 1 | 2 |  |  | 5 |  | 1 |  |  |  | 5 |
| N |  | 1 | 2 |  |  | 5 |  | 1 |  |  |  | 5 |
| 0 |  | 1 | 2 |  |  | 5 |  | 1 |  |  |  | 5 |
| P |  | 1 | 2 |  |  | 5 |  | 1 |  |  |  | 5 |
| Q |  | 1 | 2 |  |  | 5 |  | 1 |  |  |  | 5 |
| R |  | 1 | 2 |  |  | 5 |  | 1 |  |  |  | 5 |
| S |  | 1 | 2 |  |  | 5 |  | 1 |  |  |  | 5 |

Table 13 B: Types of thinking in Teaching Group prior to reading texts.

|  | 19/03/2009 |  |  |  |  |  | 20/03/2009 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name | $\begin{aligned} & \text { O} \\ & \text { © } \\ & \vdots \\ & \vdots \end{aligned}$ |  |  | $\begin{aligned} & \bar{\phi} \\ & \stackrel{\rightharpoonup}{㐅} \\ & \sum_{0}^{\infty} m \end{aligned}$ |  |  | $\begin{aligned} & \text { O} \\ & \text { © } \\ & \text { © } \end{aligned}$ |  | $\begin{aligned} & \stackrel{\\|}{0} \\ & \stackrel{\text { B}}{0} \\ & 3 \\ & \stackrel{\rightharpoonup}{\dot{\Delta}} \end{aligned}$ | $\begin{aligned} & \frac{\\|}{0} \\ & \frac{0}{㐅} \\ & 0 \\ & \frac{\zeta}{3} \end{aligned}$ |  |  |
| F |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| G | Absent |  |  |  |  |  |  | 1 | 2 |  |  | 5 |
| H |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| I |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| J |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| K |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| L |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| M |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| N |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| 0 |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| P |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| Q |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| R |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| S |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |

Table 13 C ：Types of thinking in Teaching Group prior to reading texts．

|  | 23／03／2009 |  |  |  |  |  | 25／03／2009 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name | $\begin{aligned} & \text { O} \\ & 0 \\ & \text { © } \\ & \text { Z } \end{aligned}$ |  |  | $\begin{aligned} & \bar{\omega} \\ & \stackrel{\rightharpoonup}{㐅} \\ & \sum_{0}^{\infty} m \end{aligned}$ |  |  | $\begin{aligned} & \text { O} \\ & \text { II } \\ & \text { O} \\ & \hline \end{aligned}$ |  |  | $\begin{aligned} & \bar{\omega} \\ & \stackrel{\rightharpoonup}{㐅} \\ & \sum_{0}^{\infty} m \end{aligned}$ |  |  |
| F |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| G | Absent |  |  |  |  |  | maths extension |  |  |  |  |  |
| H |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| I |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| J |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| K |  | 1 | 2 |  |  | 5 | maths extension |  |  |  |  |  |
| L |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| M |  | 1 | 2 | 3 |  | 5 |  | 1 | 2 |  |  | 5 |
| N |  | 1 | 2 |  |  | 5 | Absent |  |  |  |  |  |
| 0 |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| P |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| Q |  | 1 | 2 |  |  | 5 |  | 1 | 2 |  |  | 5 |
| R |  | 1 | 2 |  |  | 5 | maths extension |  |  |  |  |  |
| S |  | 1 | 2 | 3 |  | 5 |  | 1 | 2 |  |  | 5 |

Table 13 D ：Types of thinking in Teaching Group prior to reading texts．

|  |  |  |  |  |  |  | 27／03／2009 assessment sheet |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 26／03／2009 |  |  |  |  |  | N Absent |
| Name | $\begin{aligned} & 0 \\ & \stackrel{0}{0} \\ & \stackrel{\delta}{2} \end{aligned}$ |  |  |  |  | $\begin{aligned} & \stackrel{\rightharpoonup}{0} \\ & \stackrel{\rightharpoonup}{訁} \\ & \stackrel{\rightharpoonup}{\bar{\sigma}} \curvearrowleft \end{aligned}$ | 30／03／2009 assessment sheet |
| F |  | 1 | 2 | 3 |  | 5 |  |
| G |  | 1 | 2 | 3 |  | 5 | G Absent until last ten mins |
| H |  | 1 | 2 | 3 | 4 | 5 |  |
| 1 |  | 1 | 2 | 3 |  | 5 |  |
| J |  | 1 | 2 | 3 | 4 | 5 |  |
| K |  | 1 | 2 | 3 | 4 | 5 |  |
| L |  | 1 | 2 | 3 | 4 | 5 |  |
| M |  | 1 | 2 | 3 |  | 5 |  |
| N |  |  | Abs |  |  |  | Absent |
| 0 |  | 1 | 2 | 3 |  | 5 |  |
| P |  | 1 | 2 | 3 |  | 5 |  |
| Q |  | 1 | 2 | 3 |  | 5 | Absent |
| R |  | 1 | 2 | 3 |  | 5 |  |
| S |  | 1 | 2 | 3 |  | 5 |  |

None $=$ not able to articulate thinking
Picture $=$ ideas related to the picture
Key word＝generated key words in text
Own experiences＝ideas related to own experiences
Reading strategies＝articulated reading strategies that they would use
Generated questions about the text

Appendix 9. Score sheet for questions
Date:30/3/09

|  | Who wonder... | What | When | Where | Why | How |  | Predict | 1 | 2 | 3 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Name |  |  |  |  |  |  |  |  |  |  |  |  |
| F |  |  |  |  |  |  |  |  |  |  |  |  |
| G |  |  |  |  |  |  |  |  |  |  |  |  |
| H |  |  |  |  |  |  |  |  |  |  |  |  |
| I |  |  |  |  |  |  |  |  |  |  |  |  |
| J |  |  |  |  |  |  |  |  |  |  |  |  |
| K |  |  |  |  |  |  |  |  |  |  |  |  |
| L |  |  |  |  |  |  |  |  |  |  |  |  |
| M |  |  |  |  |  |  |  |  |  |  |  |  |
| N |  |  |  |  |  |  |  |  |  |  |  |  |
| O |  |  |  |  |  |  |  |  |  |  |  |  |
| P |  |  |  |  |  |  |  |  |  |  |  |  |
| $\mathbf{Q}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| R |  |  |  |  |  |  |  |  |  |  |  |  |
| S |  |  |  |  |  |  |  |  |  |  |  |  |

Appendix 10: Score sheet for Neale Pretest Retell

| Name: | Date: |  |
| :--- | :--- | :--- |
|  | Retell from Neale Analysis. |  |
| Level 1 Bird | Level 3 Ali |  |
|  |  |  |
| bird - her, she | Ali - his |  |
| hopped up to my window | sheltered in an old temple |  |
| I = boy / girl | shoulder knocked a secret spring |  |
| gave it some bread | thrown into an underground room |  |
| made a nest | darkness |  |
| in my garden | walls covered in jewels |  |
| I look after her little ones | knew desert travellers often imagined things |  |
|  | rested for a while |  |
|  | looked for a way to escape |  |
| Level 2 Road Safety | amazed to find the jewels still there |  |
|  | he had found a palace |  |
| Kim stopped | buried long ago |  |
| on her way to school |  |  |
| middle of the traffic | Level 4 Jan |  |
| lay two children |  |  |
| their bicycles had crashed into each other |  |  |
| Kim ran quickly to help them | Jan - a diver - her |  |
| no one was hurt | buckled on diving belt - weights |  |
| children pointed to the television camera | dropped off launch |  |
| they were making a road safety lesson | Skipper Kells supervised the air hose |  |
|  | Score / 9 | to prevent tangling |
|  | Leo followed the air bubbles in the dingy |  |
|  |  | Jan searched under water |
|  | surfaced frequently with crayfish |  |
|  |  | when almost finished - required number |
|  | grey nurse shark coming towards her |  |
|  |  | Jan retreated cautiously |
|  | without signalling for assistance |  |
|  | creature brushed by- ignoring her |  |
|  | baby sharks emerging from rocky grooves |  |
|  | shark concerned about babies |  |
|  |  | Jan motionless |

## Appendix 11: Score sheet for Neale Post test Retell

| Name: | Date: |  |
| :---: | :---: | :---: |
| Retell from Neale Analysis. |  |  |
| Level 1 Kitten | Level 3 Circus |  |
| black cat -she | lion's final act in progress |  |
| came to my house | Jack waiting to clear the ring |  |
| put her kitten by the door | thunder made the lions restless |  |
| she went away | Tina - trainer stumbled |  |
| now I have her baby | whip fell |  |
| for a pet | youngest lion sprang towards her |  |
|  | Jack leaped inside the cage |  |
| score / 6 | cracked the whip |  |
|  | his action helped Tina regain control |  |
| Level 2 Surprise Parcel | after that Jack decided his future work |  |
|  | score / 10 |  |
| surprise parcel came |  |  |
| for Jane and Peter | Level 4 Dragon |  |
| on Saturday |  |  |
| Peter looked at the strange stamps | roaring of dragon led the knight to its territory |  |
| Jane undid the parcel | crossed marshes |  |
| shouted with delight | dragon charged |  |
| uncle | whipped tail around the knight's horse |  |
| sent skates for Jane | horse and rider collapsed |  |
| Electric train to for Peter | knight realised he would have to attack |  |
| children had wanted them for a long time | creature off guard |  |
| score /10 | knight crouched - as if wounded |  |
|  | monster prepared |  |
|  | knight struck beneath its wing |  |
|  | groan |  |
|  | villagers knew they were safe |  |
|  | score /12 |  |
|  |  |  |
|  |  |  |

