Explicit teaching of visualisation to a whole class of Prep children will improve listening comprehension in students with low records of oral language.

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#### **Abstract**

Many students in the early stages of learning to read are unable to make sense of what they hear. For many, the ability to develop skills in decoding is an easier and less formidable task than the ability to use comprehending techniques in an integrated and therefore efficient way.

The current research project involves teaching visualising to a whole class of Prep children. The students involved included only girls and were the only Prep class in the school. The students involved were given 10 lessons over a period of two weeks as part of their normal literacy learning with the classroom teacher. Students were first introduced to the use of the strategy using concrete objects, followed by pictures of people, places and actions, then detailed pictures and finally 1 action and 2 action sentences with no picture support. Students were at first explicitly directed to prompts which supported their use of the visualisation strategy, then required to use this without teacher direction.

The aim of the research was to establish whether explicit teaching of the visualisation strategy to a whole class of Prep children made a difference to the listening comprehension ability of Prep children with a low Record of Oral Language.

Despite the whole class being involved in the teaching component of this study, only 9 girls with low records of oral language, were assessed. All nine students improved in their listening comprehension ability following the explicit teaching of visualisation. Some of these students though were less confident of their ability as learners following an assessment of their self efficacy. Some of those who were confident of their learning ability prior to the teaching sessions had a more reserved approach to themselves as learners following the teaching and assessment.

The results of this study support the belief that if students are explicitly taught visualisation skills over a sequenced period of teaching sessions, they are likely to improve in their ability to comprehend a text they listen to.

## Introduction

Many students in the early stages of learning to read can experience difficulty making sense of the texts that they are hearing and subsequently, reading. Wilhelm, (2010) in his article: defines comprehension from the Webster's Collegiate Dictionary as the "capacity of the mind to perceive and understand" This definition is broad enough to be appropriate to relate to both reading and listening comprehension. Listening to a spoken text is more than just hearing a series of words, it is about making sense of what has been said and requires from the listener the ability to use a set of comprehending strategies which help them to understand what they hear. Whether students are listening to instructions, recalling information or listening to a narrative, they begin to connect to the text with the help of these strategies. Language comprehension, according to (Bell 1991 p. 13) involves many such strategies: "the ability to recall facts, get the main idea, make an inference, draw a conclusion, predict/extend, and evaluate." He perceives imagery as an important comprehension strategy, a "mental peg for memory storage." (Bell 1991 p. 17)

Most of the recent research into early literacy development refers to the acquisition of alphabet knowledge. There is a plethora of support for the importance of the development of phonological and phonemic skills in the early years of schooling and yet most of the research on explicit teaching of comprehension seems to focus on the middle and upper years of primary school. It is not surprising then that many students move through the early years of primary school with an experience of learning comprehension skills that can be described as hit and miss. Durkin (1978) as cited in Onofrey, K. & Theurer, J. (2007) noted that while there were *many* assessments of comprehension skills existing in elementary levels in schools, he also suggested that it was apparent that there were few examples of explicit instruction of comprehension. Sadly, according to Pressley, Wharton-McDonald, Hampson, & Echevarria (1998) as cited in (Onofrey et. al) in the past 30 years there is little indication that anything has changed.

Parsons (2006, p.493)) describes comprehension as "a vehicle that enables a reader's experiential journey rather than the destination." When a listener comprehends, he/she needs to be able to make sense of what is heard, and relies on the experience of comprehending, as the vehicle which helps them as they engage with the text. Naughton(2008) sees the process of creating visual images as a "powerful tool" to aid comprehension in reading and to display

what the readers see in a text. While creating images in one's mind can aid reading comprehension and it would be expected that this too would be the case for listening comprehension, it is necessary to keep in mind that while to some degree this should be the case, listening comprehension requires a different way of operating. Lund (1991), as cited in Osada (2004, p. 58), described the unique nature of listening comprehension as existing in "time instead of space". He explained that listening comprehension requires substantially different skills from those required for reading comprehension. Listening comprehension also assumes a level of auditory memory ability, it presumes that students are able to retain information in their memory and connect it to what has come before and after in a logical sequence. They can understand what they hear based on their pre existing knowledge and the new information and they constantly fine-tune their perception of the new information as they listen to each new piece of information. Osada (2004) Children are required to take in new information, follow directions, and accept a large amount of sensory auditory input. This requires predominantly not just the ability to listen to what is being said but make sense of it. This ability to make sense of what they are hearing involves the process of continuous comprehending of the information. A student, who is comprehending well, is able to do this on the run. As children listen, they are not able to return to a piece of spoken text to gain more information, as they would in a written text. It is constantly changing and extending and so they must find strategies which allow them to comprehend the text while they are listening. As students develop in their reading ability they are more likely to make choices about when to reread and review the information they have gained in the text if they are unsure of the meaning or have missed a piece of information. As listeners in a classroom, this choice is not theirs to make." Listeners can not often make the decision to have words or sentences repeated and teachers find it difficult to judge whether or not the students have understood a particular section of the dialogue" Underwood (1989), as cited in Osada (2004, p.62)

Visualisation, the ability to create mental images in one's mind, is one strategy which can allow students to connect to the text as they listen. "Visualizing is an important strategy for students as they move from picture books to chapter books, and is especially important in today's world where everyone is constantly bombarded with sophisticated graphics and little language" Keene & Zimmermann, (1997). as cited in (Gregory and Cahill p.516) Just as reading a picture book with beautiful illustrations allows the reader to make more sense of the story, it follows then that creating supportive illustrations, (images) in one's own mind, similarly help the reader or listener to construct meaning from the text. Gambrell and Brooks (1993) noted that children are more likely to infer, predict and recall what they have read if

they are able to create mental images. Gambrell and Brooks see a direct connection between the teaching of visualisation and the ability to use other comprehension strategies with more success.

Children are speakers and listeners first. They have begun to learn to make sense of what they are hearing long before they arrive at school, as they learn to socialise and connect with their peers and those closest to them. The experiences they have gained will impact on their ability to connect to the text and provide them with many rich possibilities for language learning and development. Cunningham, Zibulksy, Callahan, (2009) Young children bring with them to school a variety of backgrounds and experiences which they are able to use to support their understanding of a spoken text.

While many children may have the experience of rich picture books with diverse texts prior to coming to school, most of their learning has been through experience and so they retrieve information in imagery rather than in a verbal way. Children come to school with their knowledge programmed through experience and so are more likely to have knowledge of those experiences stored in the form of images. (Munro 2010) They have less knowledge through text and so less is likely to have been stored in a verbal form. Despite this, not all readers naturally draw on their ability to retrieve knowledge in imagery form.

Cunningham (2005) referred to in Gregory and Cahill (2010), discussed what they called the 'Velcro Theory.' It indicates that it is easier to connect new information in your mind if you can 'stick it' onto something that is already there. Specifically they are referring here to the ability to make an image in one's mind is likely to be influenced by the images that a young person has already gained from their own experience. According to Parsons (2006, p. 493) Visualization is imperative to a reader's ability to become involved in and experience the "world of the story." It allows readers to become a part of the story world and experience it as if they were in the shoes of the characters.

"Reading comprehension requires automatic imaging in which parts are visualized and automatically brought together in the form of more images in order to develop a whole of the information read" Bell (1991. P. 20) with this in mind, this study aims to reproduce this natural process of visualizing by teaching some parts in isolation and then explicitly teach students to 'look' for these as part of a whole picture or story. They are required through

explicit teaching to pull the pieces together initially to develop an image from a simple sentence and then from two or more simple sentences. Rupley, Blair and Nichols (2009) specifically noted Rosenshine and Stevens (1995) work on the importance of explicit teaching in which they identified six instructional steps for explicit instruction:

- 1. Review and check previous work.
- 2. Present new material.
- 3. Provide guided practice.
- 4. Provide feedback and corrections.
- 5. Provide independent practice.
- 6. Provide weekly and monthly reviews.

It is likely then, that in the explicit teaching of visualisation, this process will lead to the improvement in student's ability to visualise, and impact on their listening comprehension ability. It is necessary to include within these steps the steady removal of support.

The expectation is that the ability to form an image which includes many components (character, setting, and actions) when listening to a text will become more automatic for those students who have been explicitly taught, in this case the whole class, and will be applied to increasingly difficult texts without the scaffolding of ongoing teacher instruction in the strategy. This strategy once in place and used consistently will become automatic and provide the support for students to comprehend as they begin to read increasingly complex texts as they listen and make images on the run, and as they begin to read.

In the words of Harvey and Goudvis. (2000, p. 97) Visualizing brings joy to reading. When we visualize, we create pictures in our minds that belong to us and no one else."

It is expected that if children are explicitly taught within the context of a whole class the ability to make images in their mind, and consolidate this skill, and the support is gradually released, children will become more proficient at not only the comprehension strategy of visualisation but will develop higher levels of ability to comprehend a spoken text.

The hypothesis of this study is that the explicit teaching of visualisation to a whole class of Prep children will improve the listening comprehension of students with a low Record of Oral Language.

## Method

### **Design**

The present study uses a case study OXO design where the strategy of visualisation was taught to a single stream Prep class. This study <u>does not</u> include a control group as the school used for the study has only one class of Prep students. Lessons were given to the whole class in order to see the effect of whole class explicit teaching and so it was impossible to use a control group in this instance. The outcome of this study is limited to an extent by the absence of a control group.

Aspects of the lesson format were modelled on the Gallagher and Pearson's Gradual Release of Responsibility Model and was used to plan lessons which included a whole class explicit teaching component and paired or individual tasks, designed to consolidate the student's ability to visualise. The study sought to monitor the gain in listening comprehension skills of students who had a low record of oral language and were explicitly taught to visualise within a whole class setting.

## **Participants**

The participants in this study are Prep students who attained a Record of Oral Language of 22 or less in the Pre Test. These students are from a Prep class in an all girls school who had attended school for only 8 weeks up to the time of the first Pre Assessment task. While two of the students in this study have parents who speak another language at home, both of these students speak English as their first language. All other students in the study speak only English at home.

Lessons were taught to the whole class, and assessment was administered to only those who had a Record of Oral Language of 22 or less. Of the students selected, only one student was receiving any additional support beyond the classroom program.

Below in Table 1 are details of the student's background including their gender, their age, any prior intervention and their individual scores on the Record of Oral Language.

**Table 1: Participants Background Information** 

STUDENT	ATTENDANCE	CONTROL = 0	AGE IN MTHS	GENDER	YEARS OF SCHOOLING	EARLIER INTERVENTION	RECORD OF
	no of sessions	TEACHING = 1	AS OF APRIL 1	F/M	IN MONTHS to APRIL 1	NO = 0 RR = 1 BRIDGES = 2	ORAL LANGUAGE
						ERIK = 3 OTHER = 4	
1	8	1	62	F	2	0	14
2	9	1	66	F	2	0	18
3	9	1	71	F	2	0	14
4	10	1	61	F	2	0	12
5	10	1	68	F	2	0	22
6	10	1	63	F	2	4	3
7	10	1	61	F	2	0	19
8	9	1	61	F	2	0	18
9	10	1	66	F	2	0	21

#### **Materials**

Record of Oral Language (Used to select students for the study)

Pre and Post testing materials used include the following:

Listening Comprehension Test, Munro, (2005)

Visualisation test (Shields) adapted for Prep from (Munro), individual assessment (Appendix A)

This test included a sequenced story of 9 steps. Students were assessed individually according to their attention to detail in both the picture and their retell. Scoring included both description and picture. (Appendix B)

Self Efficacy Test (Shields) adapted for Prep from Chapman J.W. & Tunmer, Massey University New Zealand, 2002. (Appendix C)

This test included a simplified explanation of the task and an answer sheet which included 3 rather than 5 faces for students to select from. All questions involved one of three options: I know I can't, I'm not sure, I know I can.

Independent drawings were collected at the end of most classes for continued monitoring.

Session material used includes the following:

Everyday objects such as a towel.

Laminated prompt cards: WHO/WHEN/WHAT/TELL A STORY (appendix

Variety of laminated pictures from clip art including cartoons and photos of *faces*, *settings*, (*Appendix D*)

Variety of laminated pictures from clip art including cartoons and photos of detailed pictures. (Appendix E)

Picture from Grandpa and Thomas and the Green Umbrella by Pamela Allen
Picture Books: Grandpa and Thomas and the Green Umbrella by Pamela Allen
Cat and Fish by John Grant and Neil Curtis

#### **Procedure**

Students were assessed by the classroom teacher prior to teaching the lessons. These assessment sessions were conducted individually in an empty classroom adjacent to the Prep room and lasted approximately forty minutes in total though all tests were not administered consecutively to each child.

The teaching sequence followed this Pre Assessment and was presented over an intensive two week block, teaching a lesson per day, every day of the school week. This timing was decided in order to provide the best opportunity for the students to recall the new learning from the previous lesson.

The lessons were conducted by the classroom teacher as part of the normal Literacy Block in the Prep Classroom. The lessons were presented to the whole class and Pre and Post Assessment was conducted with eight students, who were identified as performing well below their peers on the Record of Oral Language.

Students began by discussing their experience at the beach. They were introduced to the concept of visualisation as a strategy for listening comprehension. They were required over 10 sessions to learn to visualise initially, through the stimulus of concrete objects, such as a

beach towel. A selection of pictures were then selected to identify character/setting and actions, each introduced with the support of a prompt card, which included two aspects of 'story grammar': character(Who) and setting(Where) and an action,(What) These were introduced a session at a time. They were then asked to include in their visualisation, all aspects of a visual image or story together, with the support of the final prompt card. The students were required to continue to visualise by putting together all aspects of the story in their visualisation. Following this students were asked to look at details in a picture from the picture book, Grandpa and Thomas and the Green umbrella and then to attempt to put all of the pieces together to visualise what they saw. In all of the previous sessions, students were required to visualise, draw, explain their visualisation and then compare to the original.

Over the next sessions, they were no longer given visual images but required to *hear and visualise*. They were first given a small one action sentence related to the beach, also from the story Grandpa and Thomas and the Green Umbrella. They were required to visualise and draw and describe their visualisation and compare it to the original. In the following session, the students were given another sentence including two actions though they were still reminded of the prompt cards to support them to 'put the pieces together.'

During the final session the students were given a page of text from the picture story book: Cat and Fish. Illustrations were not shown to the students until the end of this session. Students were required to visualise, draw and describe their visualisations and then compare them to those of the illustrator in the book. At this point students were expected to visualise without teacher reference to the prompt cards, though these were visible in the room.

Post testing was conducted immediately following the final session, beginning on the same day in the afternoon. There was little time between the final session and the post testing for the students to independently use visualisation in other learning or make reference to the prompt cards beyond the formal visualisation sessions. All students assessed were selected at least once during the teaching sessions, to share their visual image with the class and describe and compare their images with the original picture or sentence at a whole class level.

Texts were selected to connect to the student's prior knowledge. All of the participants in the study had some experience of the beach and so this theme was identified to tie through the lessons. The other text used: Cat and Fish was included because there had been some discussion among the students about their pets and one student had recently brought in their pet kitten. These texts were also selected because of the simplicity of the language in the text and the attractive illustrations.

#### **Analysis of data:**

The same assessment tools were used in Pre and Post testing under as near to the same conditions as possible including time of day/language used for instruction/administrator and number of tests administered at one time though the Self Efficacy test was administered first in the Pre Test and last in the Post Test.

The Record of Oral Language test was administered as part of the Observation Survey to identify students to include in the study.

The Listening Comprehension test was included to establish the student's ability to retain items of information in sequence related to hearing a simple story. The same story was used on both Pre and Post test.

The Visualisation test was adapted prior to the study in order to reduce the number of events in the sequence of the story and modify some of the language used either because it was considered unfamiliar to the students or because it was difficult to draw. The scoring was also adapted and consisted of a system which scored each item in the sequence either according to the picture or the retell or both. This was included to establish the shift in the student's ability to visualise following the teaching sessions.

#### The Self Efficacy

The Student data was collated and the average improvement established for all three tests, the listening comprehension, the individual visualisation test and the self efficacy test. While self efficacy was not part of the hypothesis, the self efficacy test was administered in order to establish whether the students saw themselves as learners and whether this changed as they established a new strategy for reading comprehension.

## **Results**

The outcome of this study supports the hypothesis that explicit teaching of visualisation to a whole class of Prep children will improve the listening comprehension of students with low records of oral language. Student's ability to visualise and their improvement in listening comprehension following the teaching unit rose by an average of more than 5 points in both tests. The table below (Table: 2) also identifies the changes in student's self efficacy following the teaching unit.

**Table: 2 Student Pre and Post Test Data** 

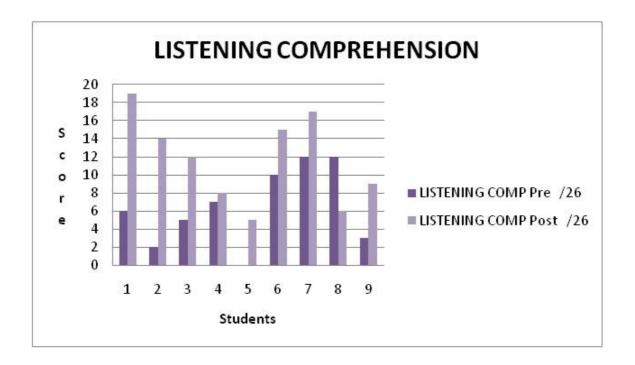
STUDENT	LISTENING COMP	LISTENING COMP	VISUALISATION	VISUALISATION	SELF EFFICACY	SELF EFFICACY
	Pre /26	Post /26	Pre /42	Post /42	Pre /33	Post /33
1	6	19	26	34	29	31
2	2	14	20	22	28	24
3	5	12	20	30	29	29
4	7	8	21	25	22	22
5	0	5	23	29	13	16
6	10	15	19	24	29	24
7	12	17	22	28	23	24
8	12	6	25	26	29	26
9	3	9	21	37	29	28
	6.33	11.67	21.89	28.33	25.67	24.89

#### **Listening Comprehension**

The average listening comprehension score among the 9 students tested was 6.33 on pre test results. The average listening comprehension score among the 9 students tested on post test results was 11.67. This indicates an average improvement in score of 5.34 between pre test and post test results.

All students except for 1 improved their score between the pre and post test with most improving by more than 5 points.

There was a strong upward trend between the pre and post test results for listening comprehension indicating a consistent improvement with the exception of student 8, whose listening comprehension score reduced by half. (refer to Figure 1)



**Figure 1: Listening Comprehension group results** 

#### Visualisation

The average visualisation score among 9 students tested of 21.89 on pre test results.

The average visualisation score among 9 students tested of 28.33 on post test results.

This indicates an average improvement in scores of 6.44 between pre and post test results.

100% of students assessed in this study improved in their visualisation skills between pre and post testing, with the majority improving by 5 points or more.

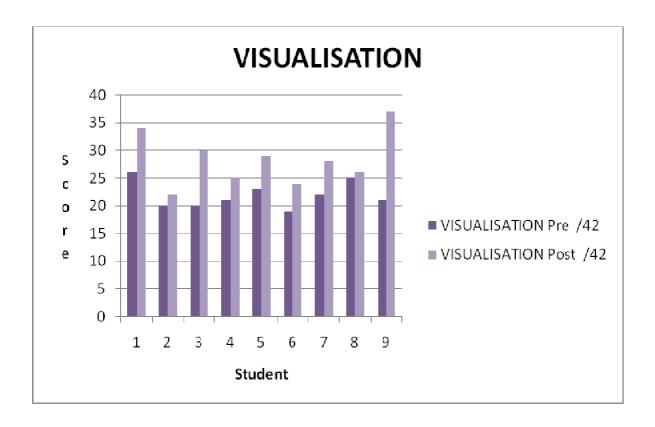


Figure 2: Visualisation group results

#### **Self Efficacy**

The average self efficacy score among 9 students tested of 25.67 on pre test results. The average self efficacy score among 9 students tested of 24.89 on post test results. This indicates a decrease in average scores of -.78 between pre and post test results. This result is inconclusive due to the small sample size.

3 students improved in self efficacy from pre to post test 4 students reduced in their self efficacy and 2 students remained the same.



Figure 3: Self Efficacy group results

#### **Individual Student Results**

#### Student 1

Student 1 improved in all three areas tested.

Listening comprehension increased to a greater extent than the other tests given and self efficacy improved slightly. This student's visualisation ability began above the class average and increased by more than the average class improvement and while her listening comprehension was just below the class average the improvement in this area was also greater than the class average improvement.

Student 1 also made greater gains than the class average in listening comprehension.

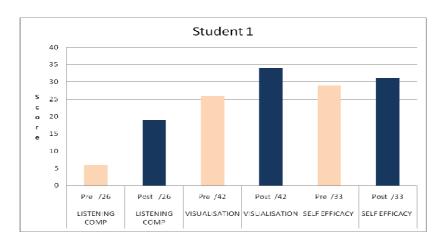


Figure 4: Pre and Post score for Student 1

#### Student 2

While there was a small improvement of 2 points in her visualisation, following explicit teaching, she improved in her listening comprehension to a much larger degree, making a gain of 12 points. Student B's self efficacy did not link to her improvement in other tests as her self efficacy decreased between the two tests by 4 points.

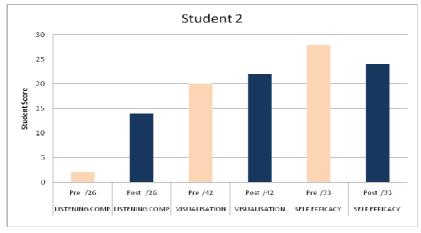


Figure 5: Pre and Post score for Student 2

Student 3 increased in both visualisation and listening comprehension.

While there was an increase in listening comprehension, the score was just below the average to begin with and was just above the average in post test results. Though her average improvement in listening comprehension was only slightly below the average.

Her self efficacy did not change.

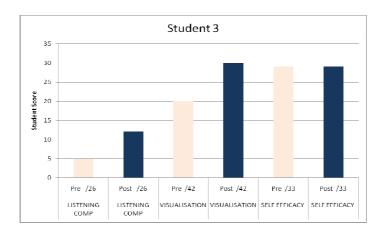


Figure 6: Pre and Post score for Student 3

#### Student 4

Student 4 showed the smallest increase of 19% in Visualisation. Her Listening Comprehension however, improved by only 1 item. While this indicates a percentage increase of 14.3% in Listening Comprehension it was interesting to note that different items in the narrative used for assessment were identified as correct between both tests. Student 4 remained unchanged in her self efficacy. Student 4 showed a much smaller improvement than the average increase of the group of 5.34.

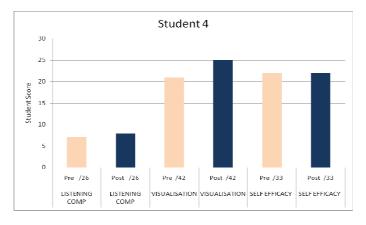


Figure 7: Pre and Post score for Student 4

Student 5 would not attempt to retell any part of the story in the Pre Test for listening comprehension as shown in figure 8.

While listening comprehension was still low the difference between the pre and post test in both visualisation and listening comprehension showed a positive shift. There was a small improvement in this student's perception of herself as a learner as seen in the small increase in self efficacy.

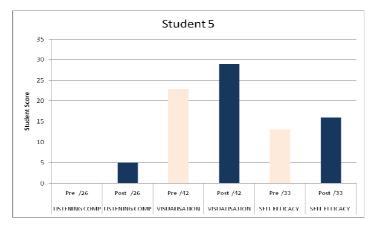


Figure 8: Pre and Post score for Student 5

#### Student 6

Results showed that listening comprehension ability for student 6 improved, as did her visualisation ability. There appears to be a direct link between the improvement in both visualisation and listening comprehension. This student's increase in scores in both visualisation and listening comprehension were just below the average increase for the group though her listening comprehension score started higher than the average in pre test results. Her self efficacy reduced in post test results.

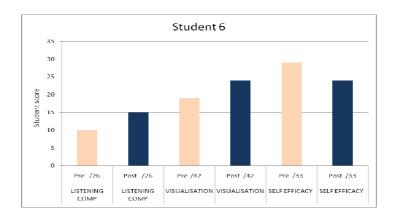


Figure 9: Pre and Post score for Student 6

This student's score from pre to post test improved in both listening comprehension and visualisation and she made a slight improvement in her self efficacy. Her increase of 5 in listening comprehension and 6 in visualisation was just below the average in both cases. There was a small increase in self efficacy which deviated from the downward trend of the group.

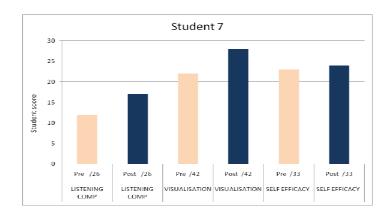


Figure 10: Pre and Post score for Student 7

#### **Student 8**

Student 8 made the most minimal gains. There was a drop in performance in her listening comprehension and interestingly her self efficacy also reduced. Student 8 though started with a higher score than the pre test average in listening comprehension. Student 8 did make small improvements in her ability to visualise but was poorer by 50% in her listening comprehension after the teaching sessions.

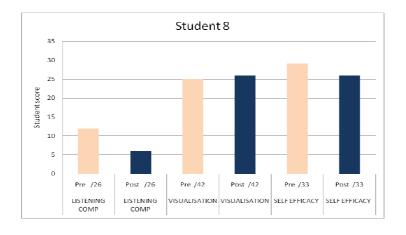


Figure 11: Pre and Post score for Student 8

Student 9 increased most markedly in her visualisation score. Her score increased by 16 points in visualisation which was more than 9 points above the average increase for visualisation. Her listening comprehension did not increase to the same degree. She scored below the average in her pre test and in her post test but made an improvement which was above the average improvement for the group. There was a slight reduction in this student's self efficacy.

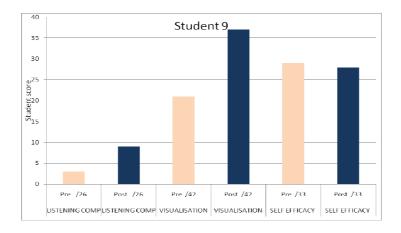


Figure 12: Pre and Post score for Student 9

It appears that despite a variation in the starting points of the group in both listening comprehension and visualisation there was a positive improvement in both tests and therefore an improvement in the use of the skill of visualisation and the level of listening comprehension. Similarly students appeared to have varying degrees of self efficacy, appearing not to match their increased level of listening comprehension or visualisation and the improvement in their skills in these two areas. There appeared to be no pattern to whether this affected their view of their reading/learning ability.

## **Discussion**

The outcome of this study in terms of the results and the anecdotal information gained during the teaching sessions would indicate that teaching a class of Prep children to make images in their mind does improve their listening comprehension skills, particularly those students with low levels of oral language. All students in this study responded positively to the input from the teaching unit and developed the ability to create an image and change it as new information was presented. Some students needed more time to consolidate this visualising strategy than others and made more minor gains as the teaching support was reduced and the content became more complex. In every case the student made a gain in their ability to visualise.

Students became more proficient at comprehending simple stories they heard as a result of increased ability to use the strategy of visualisation, as seen in the average improvement in student data in the listening comprehension post test. (See Figure 1)

The link between the upward trend in visualisation and the upward trend in listening comprehension in this study supports the research of Gambrell and Brooks (1993) who found that teaching children to construct mental images as they read helps them to recall what has been read. One of the students in this study has referred to the use of visualisation in other contexts without prompting. She has been able to reflect on her use of the visualisation strategy when attempting to make sense of information or recall details from a previous lesson. At least two other parents indicated in passing the discussion at home about the use of the visualisation strategy.

Two students warrant mention in reference to the results as the outcome for each student was surprising. Student 6 performed on the Pre test in Listening Comprehension as higher than some of her peers, though she was very low on the Record of Oral Language. The visualisation score was also higher than some of her peers in the Pre test also. The listening component of each of these tests were expected to provide some difficulty for this student.

Student 6 was identified from the Record of Oral Language and observation from the classroom teacher to be in need of intensive one on one support with phonological awareness, prior to the introduction of this study. She was unable to follow simple directions, retain more than one piece of information at a time and was unable to identify or isolate a sound in a word beyond the sounds in her first name or match a sound to a letter beyond those in her first name. For the duration of the lessons carried out in the classroom, this student was

receiving additional support from the school's Reading Recovery Teacher every morning before school, in a 15 minute intensive program working on articulation and phonological awareness.

Not surprisingly student 6 therefore, found it difficult to focus and was subsequently moved to the front of the group after the first session. She was identified as scoring the lowest in the class in the Record of Oral Language, therefore the teacher monitored her more closely during independent drawing of her visualisation and during her description of her images to a partner. This student was among three of the lowest performing students on the Record of Oral Language who were selected most often to explain to the class the details of their visual image.

This student was the only student in the group to be receiving additional literacy support beyond the classroom. She improved in both her ability to make a visual image and her listening comprehension ability. Monitoring of this student within the teaching sessions and subsequent teacher actions, as stated above, may have impacted on her success in improving in both tests. Surprisingly, student 6's self efficacy reduced from the Pre to Post test, though during administration of the Post Test in self efficacy, she seemed unsure of the requirement of the task, and this may have influenced her choices and therefore the results.

The other student of mention in this study, student 8 (see appendix 1) appeared to make no gains in listening comprehension from the explicit teaching of visualisation. While she improved slightly in her ability to make visual images, her performance in the post test was well below her pre test performance. This student appears to be an anomaly in the results as there is little that sets her apart from her peers. She was one of the youngest but not the youngest student in the class. She missed one session but others missed two or three. She had a low Record of Oral Language (see appendix 1) but some other student's performance was lower on this test. She worked with a variety of partners and her position in the group during teaching sessions and general demeanour would indicate that she was focussed throughout the lessons.

While introductory sessions included limited teacher talk, students with the lowest records of oral language were not able to retain more than two or three items at a time. These students may need in future, more repetitions, or more consistent modelling of the strategy they are

required to learn. In repetition of this study it may be necessary to plan to include the use of teacher support and prompt cards on visualisation in as many different contexts as possible beyond the specific visualisation lessons. Were these students given more opportunities to repeat their learning throughout the weeks of teaching in as many other contexts as possible, they may have made greater gains.

Time elapsing between teaching and testing may have influenced results. After scaffolding has been removed in other situations within a classroom the teacher would be likely to remind students to use the prompts to visualise in order to recall a story. Were the students in this study to have some weeks between the formal teaching of visualisation and the testing it is likely that the skill would be reinforced by the teacher in other contexts, through reminders to use the skill and to use the prompt cards. This is likely to have come more naturally after a few weeks and the students would be more likely to use the skill independently. The recommendation here is to allow sometime for consolidation of the independent strategy before post testing.

The self efficacy post test result and reduction in score from pre to post test was a surprising result. This test was performed to identify whether students had a more positive attitude to themselves as readers/learners after learning a new strategy, in this case visualisation. It would be expected that as students became more proficient in their ability to use a specific comprehension strategy such as visualising, they would develop in their confidence as readers. As this is the early stages of Prep and much of the first term is focussed on supporting students to settle in, develop social skills and carrying out tasks that focus as much on the development of cooperative skills as on the development of fundamental listening and speaking, reading and writing skills, the students may not have considered their position as learners before. They may have become more acutely aware of this as they have been challenged to attempt more complex tasks and therefore had perhaps a more realistic view of their learning ability in the post test.

Explicit teaching may have had a significant impact on the outcomes of the present study. The students in this study all improved in visualisation and all but one improved in listening comprehension. This study includes all of the first 5 of the components identified by Rosenshine and Stevens (1995) in their work on explicit teaching. The opportunities for review, presentation of new material, guided practice, feedback and independent practice

both within the lessons and within the ongoing classroom context were included in each session format. The 6<sup>th</sup> component is not included as part of this study as the teaching and post testing time were too close together. If students had an opportunity to consolidate their learning by using the strategy of visualisation independently in a variety of different curriculum contexts it is likely the post test results may have indicated a higher performance in all three tests.

This study along with much of the research mentioned, such as Durkin (1978) as cited in Onofrey, K. & Theurer, J. (2007) has identified the need for the teaching not only the testing of comprehension. In order to do this it is necessary to began to enable teachers to become more proficient as teachers of reading comprehension. Teachers need to identify the components of comprehension and teach these skills and strategies both in isolation and as part of a fluid process of comprehending. This data has clearly identified the difference explicit teaching of one strategy (in this case visualisation) can make to children's ability to understand what they hear or read. If each comprehension strategy was taught in an explicit and systematic way the likely outcome would be similar to this study and unlike this study have flow on effects to student's self efficacy.

The other important issue to note about the teaching of comprehension is that in order for teachers to do this, it is necessary to provide them with skills and knowledge in order to have a shared understanding throughout a school of what comprehension is and how to teach it. Through professional development, a teacher will more competently identify the components of comprehension and the process involved in comprehending and teaching these explicitly.

#### **Future directions**

This study was limited by the lack of access to a control group. The degree to which these gains may have been made by a control group who was not receiving the intervention, can only be predicted based on similar research of the same strategy to the same age children, such as A Coustley, (2009) This study therefore if repeated in a larger school with more than one Prep class to provide the control group, would more clearly identify the degree of difference the explicit teaching of visualisation skills taught to a whole class of students has

on their listening comprehension, and whether their self efficacy was influenced by the acquisition of new comprehension skills.

The unexpected outcome of the self efficacy test would suggest that more research needs to be performed in this area. It would be interesting to test student's self efficacy following an explicit teaching process such as the one used in this study but performed later in the year when children have had more structured learning experiences and are more likely to view themselves as learners. This may present a different result in the level of increase/or decrease in self efficacy. The focus of this study was not on self efficacy itself but was included to observe the effect an improvement in student's ability to make mental images as they listen to a text and their comprehension of that text may have on their self efficacy. In a future study, the control group may be observed to determine whether there is a correlation in the improvement of self efficacy, without the teaching and with the teaching.

The students in this study were given little time to automatise their skill in visualisation. Anecdotal observation beyond the sessions and following the Post test, would suggest that the students were becoming more proficient at using the visualisation skill in different contexts as an aid to listening comprehension without teacher prompting. In future studies in this area it may be worth considering the lapse time between the teaching of the sessions and the post testing in order to determine if there is any change in students listening comprehension ability if students are allowed more time to practise visualising.

While not within the framework of this research project, studies on children in the early stages of school life might also include in future the assessment and scoring of a *social language*. A research project of this type would perhaps be far more complex to put in place, but it would be interesting to determine the effects of visualisation on the listening comprehension of social language. In this study students were required to comprehend a narrative and retell details in sequence. When a student is faced with less structured dialogue, does the change in expression, inflection, gesture and context for example within a discourse influence the students ability to listen to and comprehend, and would the teaching of a visualisation strategy in this context support a student to comprehend more efficiently a conversation?

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## **Resources**

Grandpa and Thomas and the Green Umbrella by Pamela Allen, Penguin/Viking, 2006 Cat and Fish by John Grant and Neil Curtis, Lothian Books, Student Data Appendix 1

STUDENT	CONTROL = 0	AGE IN MTHS	GENDER	YEARS OF SCHOOLING	ESL	EARLIER INTERVENTION	RECORD OF	LISTEN	NG COMP	VISUAI	ISATION	SELF EF	FICACY
	TEACHING = 1	AS OF MARCH 1	F/M	IN MONTHS.	NO=0	NO = 0 RR = 1 BRIDGES = 2	ORAL LANGUAGE	Pre /26	Post /26	Pre /42	Post /42	Pre /33	Post /33
					YES=1	ERIK=3 OTHER=4							
1	1	60	F	2	0	0	14	6	19	26	34	29	31
2	1	60	F	2	0	0	18	2	14	20	22	28	24
3	1	72	F	2	0	0	14	5	12	20	30	29	29
4	1	60	F	2	0	0	12	1	8	21	25	22	22
5	1	60	F	2	0	0	22	0	5	23	29	13	16
6	1	60	F	2	0	4	3	10	15	19	24	29	24
7	1	73	F	2	0	0	19	12	17	22	28	23	24
8	1	60	F	2	0	0	18	12	6	25	26	29	26
9	1	60	F	2	0	0	21	3	9	21	37	29	28
								6.33	11.67	21.89	28.33	25.67	24.89

# The Self – efficacy scales have been adapted from those designed by James W Chapman & William E Tunmer, Massey University New Zealand, 2002

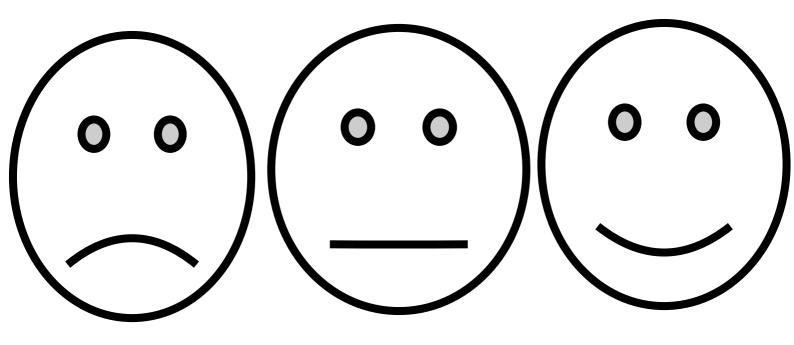
(additional adaptations have been made to improve suitability for Prep)

To administer the questionnaire, the student need to point to the face which best describes their answer. Introduce the sheet of faces with the practice questions. The faces relate to the following three responses: • I know I can't • I'm not sure • I know I can Record the student's response to a question by ticking the appropriate box. Pre – testing phase Post testing phase I'm going to ask you how you feel about some things you do when you read. It isn't a test. There are no right and wrong answers. It is just about you and what you feel. First of all for practice I'm going to ask you how sure you are about doing some everyday things. Each time you can say: I know I can't I'm not sure I know I can П Let's practise with these things. How sure are you that you can drink a glass of water? If you know you can, point to this square (far right), if you are not sure, point to this square, if you know you can point to this square (far left) How sure are you that you can Catch a ball? П П П 2 Eat a cake? Spell supercalifragilisticexpialidocious? 3 Ride a horse? How sure are you that you can Find your favourite part of a story? Work out new words when you read? Understand a sentence that you listen to or read? П Fix any mistakes you make? Remember what happens in the story as you listen to it? Put the ideas in the story in order? 6 7 Say each word when you read? Remember words you have read lots of times already? Make a picture in your mind as you listen to or read a Tell me what the story is about when you have finished 10 Answer questions about the story?

(Score: 1: I can't, 2: not sure, 3: I can) TOTAL = 23

Date: Score

Name:

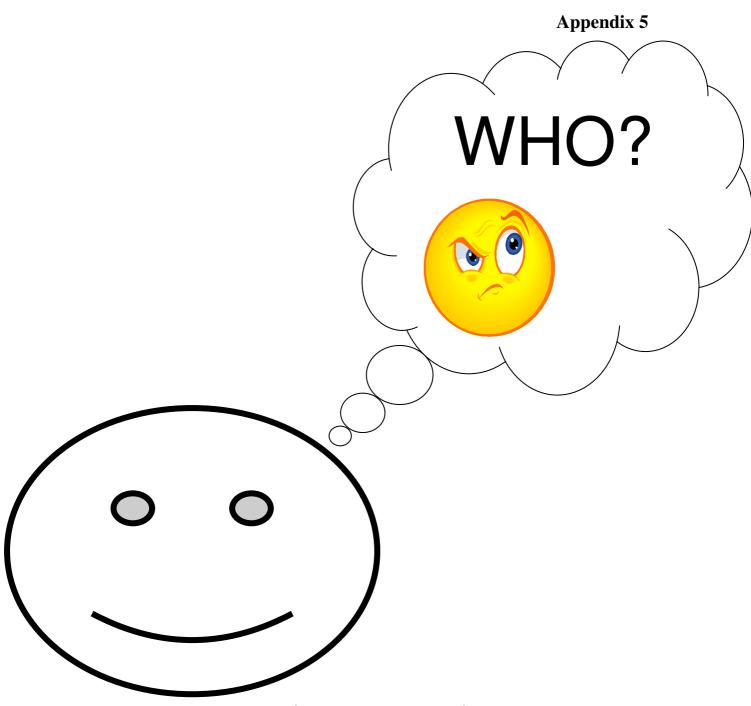


## Visualisation Task – Individual Administration Scoring Procedure

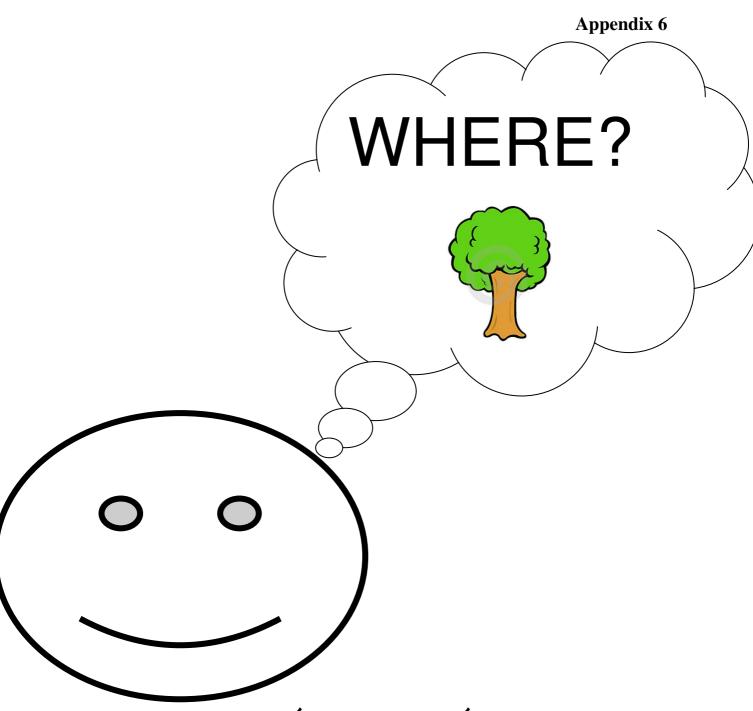
Score each item with reference to both the picture and the oral description.

If content is clearly identified in both or either score as follows.

	Sentence	Score Per Item		Total Score	Cumulative Score
1	The boy and his friend	1	boy	5	5
	rode on their bikes. They	1	friend		
	were having fun	2	bikes		
		1	fun		
2	The two friends chatted to	2	friends	5	10
	each other.	1	chatting		
		2	bikes		
3	They were not watching	2	friends	4	14
	where they were going	1	not watching		
		1	bikes		
4	The bike track became	1	At least one bike	3	17
	narrow and twisted.	1	track		
		1	narrow or twisted		
5	They came to the top of a	1	hill	6	23
	hill.	1	top		
		2	bikes		
		2	friends		
6	Suddenly the bikes went	2	bikes	6	29
	faster. The bikes went two	2	friends		
	different ways.	1	fast		
		1	different ways		
7	Now they were holding	2	bikes	6	35
	their bikes as tightly as	2	boys		
	they could They looked	1	tight		
	very scared.	1	scared		
8	One boy's bike hit the	1	bike	4	39
	stone and he flew into the	1	stone		
	air.	1	air		
		1	boy		
9	His bike was ruined.	1	bike	3	42
		1	boy		
		1	ruined		

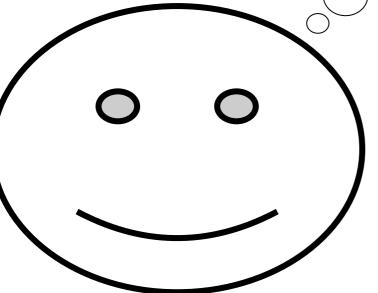


Put a picture in your head of who is in the story.

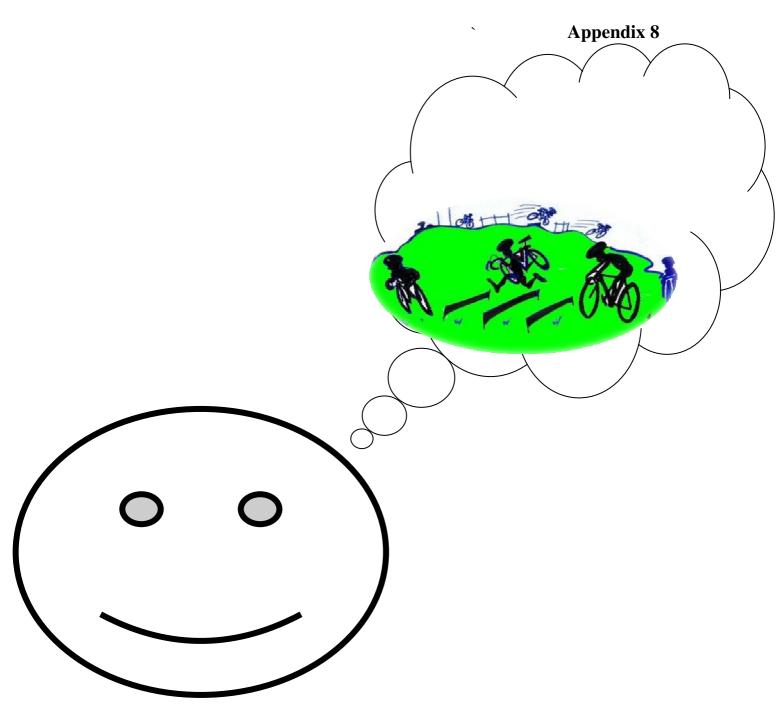


Put a picture in your head of where the story is happening.





Put a picture in your head of what is happening.



Now put all of the pictures together in your head to tell a story.

Teaching Unit Appendix 9

**Introduction** (note: any simple object can be used instead of a beach towel)

Do you all use a beach towel when you go to the beach?

Can you picture your beach towel?

Can you tell me what your beach towel looks like?

(get some descriptions)

When we put a picture of something in our minds it is called 'visualising.'

It is easier to remember and understand what we listen to or read when we put a picture in our minds of what we are hearing.

**Resources**: towel/other objects/two minute timer/paper and pencils (coloured or lead)/prompt cards/picture books: Grandpa and Thomas and the Green Umbrella, Cat and Fish, pictures of people/places/actions/family events/ Pre made blank book.

	Session 1	Session 2	Time
Resources	Towel		
	Paper Coloured pencils		
	Colombia ponons		
	Focus:		
Recall/Review	Introduce visualising skill	Ask students to recall the	
	and describe.	name of the new skill we	
	Introduce the concept of	learned the previous day.	5
	visualisation - creating a	Ask students to practise	
	picture in your head.	visualising the towel once	
		again and try to bring the	
	Ask children to try again to	picture back.	
	'see' their beach towel in their	Teacher draws student'	
	minds.	suggestions on the board.	
		Add to picture with students	
	Talk about keeping the picture	help as each student recalls	
	in your mind and bringing it	more detail or agrees or	
	back again and again.	disagrees with other students.	
	Introduce a towel and	Teacher models the same	
	describe its features. Include	procedure with another	
	shape colour and design.	object which is slightly	
	Invite students to join you in	more complex in detail.	
Model	describing the features of the	Teacher verbalises the	
	beach towel.	picture in their head as the	
	Explain to students that you	students observe the	10 – 15
	are going to look at the beach	object. Draw the picture	
	towel once again and then	on the white board and	
	close your eyes to try to put	verbalise the inclusion of	
	the picture in your mind.	all details such as shape,	
	A als atradauta to time to de 41	colour and design.	
	Ask students to try to do the	Ask students to try to do the	
	same.	same.	

Consolidate	Move beach towel out of sight and ask students to close their eyes and visualise (put a picture in their mind) of the towel.  Ask students to draw the towel including as much detail as they can.  Students return to the group to view the towel and compare their pictures.  Teacher selects 1 or 2 students to share their comparison. (preferably students with a high level of expressive language)	Invite students to move into pairs and follow the same process.  Teacher gives each pair of students a new object (such as a patterned ball, 2/3 D shape or simple utensil like a drinking cup or fork) to hold and describe to a friend.  Picture details such as its shape, colour, and design. Try to include all details in your mind as you make a picture. Students are asked to put the object behind one person back.  In partners, both draw what you visualise. Try to include all details. Compare your pictures to the object.  Try this again with a new object. Follow the same procedure and compare.	15 - 20
Evaluate	Review the name of the new skill we have learned and explain why we use it, with teacher prompts if necessary.	Recall the name of the new skill used today and discuss what was easy or difficult about visualising the object.	5

	Session 3	Session 4	Session 5	Session 6
Recall/Review	Recall objects from session 2 and attempt to visualise and	Recall characters from previous session.	Recall places from previous session.	Recall characters from previous session.
	describe them.	Using WHO cue card prompt students attempt to visualise one of the characters from the previous session.	Using WHERE cue card, prompt students attempt to visualise one of the places from the previous session.	Using WHAT cue card, prompt students attempt to visualise one of the actions from the previous session.
Presentation of new learning	Intro cue card WHO and use with visual image of a person. (enlarged coloured clip art photo or cartoon)	Intro cue card WHERE and use with visual image of a place. (enlarged coloured clip art photo or cartoon)	Intro cue card WHAT (action) and use with visual image of a person engaged in an action. (enlarged coloured clip art photo or cartoon)	Intro final cue card PUT PIECES TOGETHER and use with visual image of a picture that includes all four aspects such as family park or beach scene(ask children to include detail related to each previous prompt)
	Explain that we are going to learn to visualise just the WHO part today and the cue card is to remind us to think about and visualise WHO is in a story.	Explain that we are going to learn to visualise just the WHERE part today and the cue card is to remind us to think about and visualise WHERE the story is happening.	Explain that we are going to learn to visualise just the WHAT part today and the cue card is to remind us to think about and visualise WHAT is happening in the story.	Explain that we are going to learn to PUT PIECES TOGETHER today and the cue card is to remind us to think about and visualise all of the parts of the picture together.
Model	Teacher discusses the details of a character using an enlarged photo similar to those the children will use.	Teacher discusses the details of the place using an enlarged photo similar to those the children will	Teacher names the action depicted on an enlarged photo similar to those the children will use.	Teacher discusses the details of a character using an enlarged photo similar to those the children will use. Teacher holds up
	Teacher holds up	use.	Teacher holds up	PUT THE PIECES

	WHO prompt and closes his/her eyes to model visualising the WHO and describing details of character.  Draw on whiteboard and discuss similarities and differences.	Teacher holds up WHERE prompt and closes his/her eyes to model visualising the WHERE.  Draw on whiteboard and discuss similarities and differences.	WHAT prompt and closes his/her eyes to model visualising the WHAT.  Teacher acts out action and selects children to attempt to visualise and copy.  With support children identify differences between teacher and child attempt and another child tries again.	TOGETHER prompt and closes his/her eyes to model visualising the whole picture.  Draw on whiteboard and discuss similarities and differences.
	Hand out pictures of characters: 1 between 2	Hand out pictures of places: 1 between 2	Hand out pictures of actions: 1 between 2	Hand out pictures of family outings: 1 between 2
Consolidate	In partners students discuss characteristics of the person such as hair colour and face shape.	In partners students discuss details of the place such as what is in the picture, ( a park may have benches, trees,	In partners students observe simple picture of actions.	In partners students discuss what they see in the picture including all details introduced from previous three sessions.
	Students are shown prompt card again and asked to visualise the person/face they have.  Students return to tables to draw picture of visual	playground equipment)  Students are shown prompt card again and asked to visualise the place they have.	Students are shown prompt card again and asked to visualise the action they have.  In turn each partner tries to model/act the	Students are shown prompt card again and asked to try to include the who/where and what of the picture and put the pieces together.  Students return to tables to draw
	image. (use a two minute timer to keep drawing component brief) Students return to partner to describe their drawing of the	Students return to tables to draw picture of visual image. (use a two minute timer to keep drawing component brief) Students return	action from the card. The other partner tries to visualise their action and then repeat it. (students repeat this task until	picture of visual image. (use a two minute timer to keep drawing component brief) Students return to partner to describe their drawing of

	shared picture.  (teacher observes students to identify and make note of any students having difficulty)	to partner to describe their drawing of the shared picture. (teacher observes students to identify and make note of any students having difficulty)	their partner identifies that they have got it right)(use a two minute timer to keep drawing component brief)	the shared picture. Students compare with each other and then with the picture and discuss details left out.
	Students compare with each other and then with the picture and discuss details left out.	Students compare with each other and then with the picture and discuss details left out.	(teacher observes students to identify and make note of any students having difficulty)	
Review	Students reflect on their experience using the WHO card.	Students reflect on their experience using the WHERE card.  Did this help	Students reflect on their experience using the WHAT card. (Reflect on difficulties of the task)	Students reflect on their experience using the PUT THE PIECES TOGETHER card.
	them to visualise. Discuss.	them to visualise. Discuss.	Did this help them to visualise. Discuss.	Did this help them to visualise. Discuss.

	Session 7	Session 8	Session 9	Session 10
Recall/ Review	Review each prompt: WHO/WHERE/WHAT /PUT THE PIECES TOGETHER Children try to visualise one of each of these from the previous session.	Review each prompt: WHO/WHERE/WHAT /PUT THE PIECES TOGETHER Ask students to try to bring back the picture in their mind from the sentence they heard in the previous session.  Ask one or two students to recall from their picture in their mind	Review each prompt: WHO/WHERE/WHAT /PUT THE PIECES TOGETHER Ask students to try to bring back the picture in their mind from the sentence they heard in the previous session.  Ask one or two students to recall from their picture in their mind	Review excerpts from previous lesson and try to visualise the sentences. Describe.  Teacher listens for use of who where what detail in descriptions.  Ask what students are doing to help themselves understand and remember the story.
	Explain that now we are going to try to use what we have learned about visualising to try to visualise not what we see but what we hear.	what they remember.  Explain that today we will do the same thing as we did yesterday and try to visualise what we hear but the sentence will be longer.	what they remember.  Explain that today we will listen to a part of the story and use what we have learned about visualising to create the pictures in our mind.	Explain that we will practise using visualisation to retell a story that we are going to listen to. Intro and discuss cover of Cat and Fish.
Consolidate	Read a simple sentence that includes (1 action) and involves the visualisation of all three prompts  WHO/WHERE/WHAT  Grandpa and Thomas went to the beach.	Tell children that they will need to listen very carefully to hear all of the parts of the sentence.  Ask children to close their eyes and try to visualise this time while	Tell the children you are not going to remind them of the different parts of visualising. You want them to put the whole picture together as they listen to the sentences.	Read 3 pages from the story without illustrations, stop at the end of each page to give students time to 'visualise' read to the end.
	(adapted from Grandpa and Thomas and the green umbrella) Teacher models to students the use of the visualising strategy and verbalises what he/she	the sentence is being read.  Read a sentence that includes (2 actions) and involves the visualisation of all three prompts	Read excerpts from Pamela Allen's Grandpa and Thomas and the green umbrella (2 pages) without access to illustrations.	Return to text and reread page by page.(this text is unseen by the students) Using a pre prepared format (big book with
	sees. Ask students to close their eyes and visualise	WHO/WHERE/WHAT Grandpa and Thomas spread out the big picnic rug and put up the green umbrella in the sand(adapted from Grandpa and Thomas	(wait between each sentence allowing children time to visualise )	blank pages) ask selected children to describe each page from their visual image as teacher scribes. Children then individually draw a quick picture to match

	Using two minute timer students return to tables and draw individual pictures (include detail related to each prompt)/describe to partner and compare similarities and differences between pictures.	Ask students to close their eyes and visualise Using two minute timer students return to tables and draw individual pictures (include detail related to each prompt)/describe to partner and compare similarities and differences between pictures.	Children draw 2 sequence of events (include detail related to each prompt in each box)	the each page of the text. (use timer here and only black and white colours) Students return to the whole group and selected students are asked to share their drawing. As a class, children select which picture best describes the sentence which includes all details from prompt cards.
	Return to the large group and listen again to the sentence:  Grandpa and Thomas went to the Beach.  Teacher introduces the original picture and explains that this is the illustrator's visual image of the sentence.  (children are introduced to this picture for the first time)  Compare their pictures to the original picture from the book which matches the sentence.	Return to the large group and listen again to the sentence:  Grandpa and Thomas went to the Beach.  Teacher introduces the original picture and explains that this is the illustrator's visual image of the sentence.  (children are introduced to this picture for the first time)  Compare their pictures to the original picture from the book which matches the sentence.	Return to the large group and listen again to the excerpts:  Grandpa and Thomas went to the Beach.  Teacher introduces the original pictures and explains that this is the illustrator's visual image of the sentence.  (children are introduced to this picture for the first time) Compare their pictures to the original picture from the book which matches the sentences.	Repeat this for each page.
Review	Children reflect on their visual image of the sentence. Ask children to identify whether they needed to do anything differently today to what they did yesterday.	Children reflect on their visual image of the sentence. Ask children to identify whether they needed to do anything differently today to what they did yesterday.	Selected students share how well they have used the visualisation strategy.	Selected students share how well they have used the visualisation strategy. Students briefly share other times when they can use the visualisation strategy.