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Abstract

Through explicit teaching of synonyms to competent year 3 and 4 readers their vocabulary will be increased and this in turn will improve their ability to make meaning from unfamiliar texts.

The main purpose of this study was to see how the impact of synonyms and increasing vocabulary could assist in increasing the comprehension levels of students in Years 3 and 4 who are competent readers. I have been teaching in the middle years for 3 years now and every year our Professional Learning Team has the same conversation when our initial results come in. "How can these students be competent readers, yet their understanding of the text is low?" This is evident from low Torch, Probe and AIM results.

Research indicates a clear relationship between vocabulary development and reading comprehension. Successful readers have a depth of vocabulary knowledge; in fact studies have indicated that these readers are able to add up to 7 new words to their vocabulary list daily while struggling readers are lucky to add 2 words. This would clearly have an impact on the student's ability to make sense of what they have read.

Through this study I hope to show through clear and explicit teaching that by increasing a students vocabulary through synonyms and getting them to rephrase what they have read (paraphrase orally) they will increase their comprehension of the text.

The study compared two groups of students over a period of 10 sessions. One group was explicitly taught a 5-step strategy of how to work out unfamiliar words in a text so as to gain meaning about what the text is about. This was done in a small pull out group situation during the reading hour. This teaching group was given 10 sessions of around 40 minutes over a period of 5 weeks. The results were then compared to a control group of like students who had no explicit teaching. The results of both these groups were then compared to see if any students had made improvement with their comprehension. Were they now able to work through a text and successfully discuss what the text was about?

As one would expect the group who were given explicit teaching and tools to assist in their reading comprehension made better gains than those students who were given no immediate intervention at all. This is evident in the pre and post test results.

As a teacher I would now hope that these students would feel empowered to use this strategy in their daily classroom practises across all curriculum areas.

Introduction

Students who are effective de-coders do not necessarily possess effective comprehension skills (Joshi 2005). Current research indicates (Ouellette, 2006; Rupley 2005; Joshi 2005) that there is a strong correlation between the acquisition of vocabulary and comprehension.

There are many students who enter the middle years of primary school quiet competent in decoding words; they have reached an acceptable reading level for their age group yet they struggle to make meaning from what they have read. When questioned about what they have read in the text they struggle to go beyond the literal understandings of who, where, when and what in simple narrative texts. To ask them about the characters motives or feelings or the authors intent is more often than not met with blank stares and sheer horror on their faces. They can retell the story in simple language but quite often miss out on a lot of the details of the story. This has huge implications when it is an expectation that student at this level should be engaging in group discussions about the text they have read through literacy circles. In my own classroom I know I have had to abandon these student directed discussions, as they require more scaffolding from the teacher to gain meaning from the text beyond the literal level.

This not only impacts upon their reading comprehension but poor readers are often poor writers because they don't have the vocabulary to add detail to their own writings.

Research indicates (Joshi 2005) the impact of leaving poor vocabulary un-addressed in the early years of schooling in relation to student's comprehension abilities in later years of schooling. Cunningham and Stanovich (cited in Joshi 2005) note that the correlation between vocabulary and comprehension may account for more than 30% variance in reading comprehension by the eleventh grade.

Students in the lower primary levels are taught how to decode unfamiliar words in text but then when they reach year 3 they are expected to make that huge leap into understanding fully what they have read. Somewhere the tools they need to be exposed to in order to do this seems to be not taught or it is assumed they will 'get it'. Reading for meaning does not occur naturally for those students who struggle to make sense of text. They need to be taught explicitly how to tackle unfamiliar words to gain meaning from the text and the tools they need to use to accomplish this.

It is believed that poor vocabulary knowledge is like a "double edged sword" for the student, if intervention does not take place, a phenomenon termed the "Matthew effect" is know to occur (Stanovich 1986, Walberg & Tasi 1983: citied in Joshi 2005). The "Matthew effect" (Stonovich 1986, Walberg 7 Tasi 1983; citied Joshi 2005, p555) describes how poor readers have a reduced opportunity to improve their reading capacity because they limit their choices to texts with familiar vocabulary in addition to reading fewer books. Paradoxically competent readers tend to choose books that challenge their existing vocabulary and read greater numbers of books, thereby continuously enhancing their opportunities to improve their reading.

In order to gain meaning from text students need an increased vocabulary so they are able to articulate what they have read using a variety of synonyms. If one is able to put into their own words what they have learnt they are more likely to use it and remember it. However they are unable to access these tools (a variety of texts) in order to improve their vocabulary. It then becomes the responsibility of the teacher to expose and explicitly teach these struggling readers how to access vocabulary in order to be exposed to more texts so then in turn be exposed to more vocabulary.

The hypothesis is that through explicit teaching of synonyms to competent year 3 and 4 readers their vocabulary will be increased and this in turn will improve their ability to make meaning from unfamiliar texts.

Method

Design

The study uses a case study OXO design. Students will be taught a prescribed procedure to identify and define unfamiliar words in a variety of texts (both fiction and non-fiction) in order to improve reading comprehension. The study compares two groups of like students, a teaching (intervention) group and a control group.

Participants

The students who participated in the study were Year 3 & 4 children ranging in age from 8 to 10 years old. The students selected are all competent readers (that is they have a reading level of 28 or above on a guided reading levelled text that is unseen.) The students however came out low in their TORCH test at the beginning of the year and it is this data that was used to determine the group of students who would best benefit from the intervention sessions. (see table 1 below). As only a selected group of students returned their permission notes this was a huge factor in selecting students to the group.

Table 1 Pre selection test for all students

Student	Age (years)	Pre Test Data TORCH %
A	10	42
B	10	56
C	9	49
D	9	64
E	8	62
F	9	41
G	8	40
H	8	33
I	10	35
J	9	66
K	8	65
L	9	44

Materials

The assessment materials used were what was currently being used in the school at the time. The two main tests used were TORCH and the 'Synonyms Task' test. The Paraphrasing Task was done as a way to determine if the students understanding of text at a sentence level had improved. The texts used at the time were texts being used across the 3 / 4 level to introduce various text genres. The two types of texts that I focused on were Narratives and Information Reports.

Procedure

Twelve students were identified by the classroom teacher to have poor comprehension skills through results obtained in the TORCH pre test at the beginning of the year. These students were then given the Synonym Task as designed by John Munroe to gauge which of the twelve students would benefit most from an intervention program. The students also completed the Paraphrasing Task by John Munroe to determine if their level of comprehension of unfamiliar texts and their ability to use synonyms in context. The twelve students were then divided into two equal groups of six and six - age and gender were the considerations when determining this as I wanted a control group as close to the intervention group as possible. The control six were not given any explicit teaching instructions by the classroom throughout the duration of the sessions, instead they worked individually on set tasks with the rest of the class.

The classroom teacher took the intervention group over 10 X 40 minute lessons over a 5 week period - the students were thus engaged in the explicit lessons twice a week (whenever this would fit into the forever changing timetable of a primary school – in other words the lesson times were not at a consistent time or day throughout the study.) The lessons were conducted in the confines of a normal 3 / 4 composite classroom with the normal disruptions that occur on a daily basis.

The teaching procedure for each lesson was loosely based on John Munroe's (2007) Comprehension – Paraphrasing teaching strategy. Using this strategy and a clear strategy for teaching synonyms a clear structure was presented to the students in the intervention group.

The initial session set up the procedure for the following lessons as each session revisited previously learnt information so the students could articulate what they had learnt and how they had applied their learning throughout the week when they were not under the direct direction of the teacher. I was interested to see if these students were applying the learnt strategies to their reading when I wasn't directing them.

The structure of each session was

- Introduction of the strategy (or after lesson 1 re introducing the strategy)

- Teacher modelling

- Review the action

- Student reflection

At the conclusion of ten lessons all twelve students were reassessed using TORCH, Paraphrasing and Synonym tests.

Results

The results support the hypothesis that through explicit teaching of synonyms to competent year 3 and 4 readers their vocabulary will be increased and this in turn will improve their ability to make meaning from unfamiliar texts.

Table 2: Pre and Post test data

Students in Intervention Group	Pre Test Data TORCH %	Post Test Data TORCH %	Pre Test Synonym Task /29	Post Test Synonym Task /29	Pre Test Paraphrasing Task	Post Test Paraphrasing Task
A	42	54	9	20	7	14
B	56	60	7	12	8	15
C	49	50	8	14	6	10
D	64	68	6	10	6	11
E	62	64	10	12	11	11
F	41	42	4	8	6	10
Students in Control Group						
G	40	43	7	6	5	8
H	33	36	8	9	7	10
I	35	40	4	6	7	9
J	66	70	9	7	9	8
K	65	68	9	9	10	9
L	44	48	6	8	6	8

The intervention group showed a higher overall improvement over all the tasks after the time period than those in the control group. The students in both groups showed an overall improvement in their TORCH scores however considering the pre test results were taken from scores obtained from the beginning of the year and the post test results were obtained half way through term 2 I would expect improvement from all students due to the fact at some stage they have all been involved in explicit teaching within their focus reading group throughout a term and a half.

The intervention group's post test score for the synonym task was very pleasing and certainly highlights the hypothesis that explicit teaching can make an overall difference to a students learning. It was interesting to note that almost every student in the intervention group doubled their per test score in the synonym task. Although persons within the control group made some progress between the pre and post test scores there was not as significant a difference than those scores presented in the

intervention group. In fact it is interesting to note that the post test scores of some students in the control group went backwards by a little – this could be due to the fact that they were not practising the taught skills over a consistent period of time and were initially relying on past experiences to complete the initial test. It highlights the fact that students who struggle with particular skills need to constantly use these in order for them to become part of their every day 'tool box' to access when required.

All students except for two in the control group improved their score with the paraphrasing task, however the students in the intervention group made greater overall gains than those students in the control group.

Student A – improvement was made over all the tasks in fact the student doubled their post scores in both the synonym task and the paraphrasing task. This student is a very competent reader however they tended to read over words that they couldn't make meaning of during reading sessions. This student was an enthusiastic group member and would contribute to the discussions within the group. Through classroom observations it was noted that this student was using the taught 5 – step process throughout the day when engaged in other texts outside the reading hour – this may account why this student made such remarkable gains in such a short period of time.

Student B – this student is also to be commended on the gains they have made overall. This student nearly doubled their pre test scores in both the synonym and paraphrasing tasks. This student is fairly reserved and quiet however the group situation allowed for this student to open up to discussions and they found the use of the prompt cards helpful in remembering the steps to help tackle an unfamiliar word.

Student C – the TORCH post test score for this student was a little disappointing, as they had only improved by 1%, however their scores for the synonym and paraphrasing tasks were almost doubled. This is could be due to the fact that this student is using the skills in isolation and not applying them independently when required. The student is still relying on the teacher for direction on when and how to use the 5- step process. It was noted by the teacher that during the sessions this student would look at what the other students were doing and take the lead from them. When the sessions allowed for the students to independently select unfamiliar words from the text this student was still searching for direction from the teacher. This student will still require heavy scaffolding from the teacher before they feel confident enough to use the process independently.

Student D – this student showed an overall improvement across all post tests and like student B almost doubled all post scores and increased their TORCH score by 4%. Student D's increase score in the TORCH test may indicate that they are able to use the process independently and apply this knowledge to new situations that require it.

Student E – this student made very little gains, in fact their paraphrasing score stayed the same and the synonym score only increased by 2. The fact that this student missed a number of the sessions may explain these results.

Student F – although their score wasn't as significant as the other students in the teaching group it is interesting to note that they doubled their synonym score and increase their paraphrasing score by 4.

Although students in the control group made some gains overall they demonstrated less significant improvement especially in the synonym task than those students in the teaching group. In some instances the scores of these students went backwards and showed no gain in their understanding of new text at all.

Discussion

In reflecting on the results of this study there is support for the hypothesis that through explicit teaching of synonyms to competent year 3 and 4 readers their vocabulary will be increased and this in turn will improve their ability to make meaning from unfamiliar texts. Although these lessons were taught spasmodically and the group encountered regular interruptions to their lessons the overall results support the theory that through explicit teaching students who were struggling to comprehend text were able to make meaning of unfamiliar text by increasing their vocabulary through synonyms.

The results go onto to support what Joshi has found in studies in that …individuals with poor vocabulary have difficulty understanding written text, and that there is a close relationship between vocabulary and comprehension. This is evident with the results from the control group who made no significant gains in their overall scores. The teacher group however were able to increase their vocabulary knowledge through synonyms and thus increase their comprehension of a text – both fiction and factual texts.

It was interesting to note that student A was able to use the 5 step process in other curriculum areas that required comprehension of text that was not teacher directed in a focused learning group. This indicates to the classroom teacher that this student was able to apply learnt knowledge in other relevant situations that required understanding of text. This supports Stonovich, Walberg & Tasi when they discuss the 'Matthew effect' if a student learns a new skills and is able to apply it to other texts then they will increase their vocabulary knowledge because they will be able to expose themselves to a larger variety of texts.

The results obtained by student E shows the importance of regularly being exposed to the skills in order to retain and use the new information. This student missed out on a number of sessions and consequently their overall score was not as high as those student s that were regular to all group sessions. In fact this students overall gains were on par with the control students who received no intervention from the teacher t all.

The gains made by those students in the control group were not totally unexpected as they were within earshot of the teacher as the sessions were being taught. These students have also been exposed to the strategies of paraphrasing in pervious years. The students in the control group have also been involved in small focused reading groups where they would have been exposed to the strategies of synonyms and

paraphrasing however this would have been done in an incidental way and not as explicit and definitely not over a consistent amount of sessions with an explicit focus on synonyms and word meanings in mind.

When asked how the students found the sessions their feedback was insightful as all students felt they had improved in their overall understanding of text and they all enjoyed the use of the prompt cards as '*this helped with my thinking.'*
Student A was able to go on to say how they have used the prompt cards when they were required to research a topic of interest to themselves in order to make an oral presentation to the rest of the class. (As a class we were looking at the structures and features of Information Reports.) This student could be seen getting out the prompt cards and working through the process to aid in their understanding of the information text they were reading as part of their research. It shows that if struggling students are given the correct tools to use when faced with reading problems they will be able to use them if required. In the juniors years we are constantly reminding the students of the strategies and tools they need when decoding words yet sometimes we fail to give or remind our older readers the strategies they require we just assume they will know how to tackle the situation.

Through this study it has been proven that through explicit teaching of strategies students are able to overcome the hurdles that are preventing them from becoming better readers and especially in the middle years better equipped to gain a fuller understanding of the text they are reading.

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Appendix 1

Introductory Lesson

Text: Trefin (Narrative Text)

Introduce the strategy to the students:

We are going to work together on strategies we can use throughout our lives to help us when we come to a word in a text that we find difficult to understand – in other words what can I do as a reader when I come across a word I don't know the meaning of when I am reading?

(On cards of different colours are the following prompts)

- Say the word aloud, making sure I am pronouncing it correctly.
- Does it look like any other words I know?
- Read the text before and after the word to establish context
- Establish the words meaning (if I can't get this from reading the words around it I can consult a word dictionary or thesaurus)
- Suggest synonyms for the word

Teacher Modelling:

*"Ceridwen was a witch who lived many, many years ago in the wild **rugged** mountains of North Wales.*

The teacher takes the first sentence of the text and proceeds to self-talk through the strategy.

- Say the word aloud, making sure I am pronouncing it correctly. **('rugged")**
- Does it look like any other words I know? **(rug)**
- Read the text before and after the word to establish context **(wild rugged mountains)**
- Establish the words meaning (if I can't get this from reading the words around it I can consult a word dictionary or thesaurus) **(something to do with the look of the mountains – maybe high, rough like a rug – look up word in a dictionary taking into account the sentence the word is in – context of the word)**
- Suggest synonyms for the word that would make sense in the context of the sentence **(rocky, rough, uneven)**

Re state what we did:

What did we do when we came to an unfamiliar word in the text?

We read the word aloud and pronounced it correctly.
We thought about other words we already knew that looked like the word.
We read the text around the word to gain meaning.
We decided what the word meant.

We suggested synonyms for the word.

Are there any questions?

Students Practise:

The students then have the opportunity to put into practise the steps the teacher has modelled.

The next sentence of the text is read aloud to the group and the students suggest a word – one they are unfamiliar with.

With the aid of the prompt cards and the assistance of the teacher the group work through the stages to work out the unfamiliar word articulating the steps as they go through each one.

Every time we meet we are going to practise these steps to help improve our reading skills.

Sessions 2 & 3

Activity	Tasks
Introduction Review previous lesson Text orientation	Review the process taught in the introductory lesson – Restate the teacher talk " Today we are going to look at a process that will help us work out the meaning of unknown words in a text" Display the prompt cards for the students to see (reread each of these and discuss what actions we do for each one) Introduce the focus text to the students 'Hungry hill" (a Narrative)
Teacher Modelling Text reading Review process	Read the first sentence and model the process with a selected key word / words Teacher to articulate the process as they do it – give the words and actions to the students. Point to the card to show which step you are engaged in – make it very explicit to the students so they will know what is required when they practise the skills
Student Practise Whole group text reading	Students then read the next sentence and work through the process with a word preselected by the teacher. Students clearly articulate the steps they are going through as they work out the word – pointing to the prompt cards as they work through each one.
Restate the process	Students restate the process and clearly articulate what they did to 'attack' the unfamiliar word in the text. Today we learnt how to find the meaning of an unfamiliar word in a text by • Reading the word aloud and pronouncing it correctly. • Thinking of other words we know that look like the word • Reading the text around the word to gain meaning. • Deciding what the word meant. • Suggesting synonyms for the word.

Sessions 4 & 5

Activity	Tasks
Introduction Review previous lesson Text orientation	Review the process taught in the previous lesson – Restate the teacher talk " Today we are going to look at a process that will help us work out the meaning of unknown words in a text" Display the prompt cards for the students to see (reread each of these and discuss what actions we do for each one) Introduce the focus text to the students 'Zoo Visit" (a Recount)
Teacher Modelling Text reading Review process	Read the first two sentences and model the process with words selected by the students. Teacher to articulate the process as they do it – give the words and actions to the students. Point to the card to show which step you are engaged in – make it very explicit to the students so they will know what is required when they practise the skills
Student Practise Whole group text reading	Students then read the next two sentences and work through the process with words preselected by the teacher. Students clearly articulate the steps they are going through as they work out the word – pointing to the prompt cards as they work through each one.
Restate the process	Students restate the process and clearly articulate what they did to 'attack' the unfamiliar word in the text. Today we learnt how to find the meaning of an unfamiliar word in a text by • Reading the word aloud and pronouncing it correctly. • Thinking of other words we know that look like the word • Reading the text around the word to gain meaning. • Deciding what the word meant. • Suggesting synonyms for the word.

Sessions 6 & 7

Activity	Tasks
Introduction Review previous lesson Text orientation	Review the process taught in the introductory lesson – Restate the teacher talk " Today we are going to look at a process that will help us work out the meaning of unknown words in a text" Display the prompt cards for the students to see (reread each of these and discuss what actions we do for each one) Introduce the focus text to the students "The tenth planet" (Information Report)
Teacher Modelling Text reading Review process	Read the first paragraph and model the process with pre- selected words Teacher to articulate the process as they do it – give the words and actions to the students. Point to the card to show which step you are engaged in – make it very explicit to the students so they will know what is required when they practise the skills
Student Practise Whole group text reading	Students then read the next paragraph and work through the process with words they select. Students clearly articulate the steps they are going through as they work out the word – pointing to the prompt cards as they work through each one.
Restate the process	Students restate the process and clearly articulate what they did to 'attack' the unfamiliar words in the text. Today we learnt how to find the meaning of unfamiliar words in a text by • Reading the word aloud and pronouncing it correctly. • Thinking of other words we know that look like the word • Reading the text around the word to gain meaning. • Deciding what the word meant. • Suggesting synonyms for the word.

Sessions 8, 9, 10

Activity	Tasks
Introduction Review previous lesson Text orientation	Review the process taught in the introductory lesson – Restate the teacher talk " Today we are going to look at a process that will help us work out the meaning of unknown words in a text" Display the prompt cards for the students to see (reread each of these and discuss what actions we do for each one) Introduce the focus text to the students "Movie Review" (Information Report)
Teacher Modelling Text reading Review process	Read the first paragraph together and model the process with words the students select from the text. Teacher to articulate the process as they do it – give the words and actions to the students. Point to the card to show which step you are engaged in – make it very explicit to the students so they will know what is required when they practise the skills
Student Practise Whole group text reading	Students then read the next two paragraphs and work through the process with words they select. Students clearly articulate the steps they are going through as they work out the word – pointing to the prompt cards as they work through each one.
Restate the process	Students restate the process and clearly articulate what they did to 'attack' the unfamiliar words in the text. Today we learnt how to find the meaning of unfamiliar words in a text by • Reading the word aloud and pronouncing it correctly. • Thinking of other words we know that look like the word • Reading the text around the word to gain meaning. • Deciding what the word meant. • Suggesting synonyms for the word.

Text used for these lessons – Primary Writing Book D *R.I.C Publications* (2006)