Action research in literacy teaching

Abstract

One of the challenges that students need to face in reading text is to respond to errors in an analytical and constructive way. This research was developed to look at the effect that explicit teaching intervention might have in assisting a student in developing self-efficacy strategies to process reading at the word level in a textual context.

The project consisted of taking a 10 year old Year 4 student who did not qualify to receive funded help from the Special Education Program since she did not meet the eligibility criteria, and to introduce her to "self-talk" strategies to improve her reading at the word level. She was, in fact, experiencing considerable difficulty reading and understanding texts beyond that of an early Year 2 level when tested on Reading Recovery text levels and it was believed that this was an appropriate time to intervene in the student's learning and teach her some self management strategies. In her reading, she typically read without hesitation at all, never checking to see if what she read sounded correct or made sense.

The student was given reading intervention strategies over a period of three weeks, four times each week. These 12 sessions were of 30-35 minute duration. In the first four sessions, the subject was instructed to pause when she thought she did not know how to read a word correctly and then to analyse the word more closely. In the following four sessions the subject analysed the error in the context of the sentence and the passage read up to that moment. The last four sessions combined both strategies.

In this research, it was found that the combination of the two strategies proved to be the most effective in reducing the proportion of errors and increasing the percentage of words read correctly. The results indicate that a combined approach in the teaching of skills for reading - in this case word decoding followed by contextual referral of the word - improves reading effectiveness.

Introduction

In the middle years of schooling there are a number of students who do not qualify for special education services but still experience difficulty in their learning and are identified as having reading difficulties. Richards and Morse (2002) who work in special education and whose research interests include reading strategies state that:

> *Few distinctions are observed between students in regular education programs who read below the 25th percentile on standardised tests but are not classified as learning disabled, and students who receive special education services. Further, there are many students with significant reading difficulties who are not formally*

identified and served in any program beyond what is provided in their regular education. (p.2)

It was the aim of this project to identify such a student for a research study where the focus was on reading strategies to help with reading at the word level.
Currently a large number of Catholic schools in Victoria are trained to use the ClaSS project design. Crevola and Hill (2001) developed the design based on their research over a number of years into maximising literacy outcomes. They claim: " *Students who fail to make progress in literacy during the first two years of school rarely catch up with their peers.* " (p.5)
This research however, aims to show that even at a later stage of primary education (Year 4 in this instance) and, given only a three week period of time, small but significant changes in reading can occur with appropriate intervention. A student can be taught techniques that result in more accurate and therefore more effective reading. The approach used in the research supports the beliefs of Crevola and Hill (2001) who claim that certain factors predict whether students make progress at school:

These include:

high expectations of school achievement
engaged learning time
structured teaching focused on the learning needs of students (p8)

A significant number of students in their middle years of primary education fall behind in their ability to read texts targeted at their age group. With poor decoding skills in place to help a student efficiently read more difficult texts, the student loses meaning. Bruce and Robinson (2000) state that:

Recent Australian surveys suggest that somewhere between 10% and 20% of primary school children have persistent and significant problems in learning to read (House of Representatives Standing Committee on Employment, Education and Training, 1992, Waring, Prior, Sanson & Smart, 1996). Research indicates that for the majority of poor readers the basic source of their difficulty is failure to develop accurate and efficient (i.e., automatic) word recognition skills (Stanovich, 1986, 1992). Poor decoding skills may, in turn, place comprehension processes at risk…(p. 1)

…… there are also some positive implications for educational practice. This may be particularly so in the area of metacognitive functioning, i.e., in awareness and regulation of appropriate strategies for identifying unfamiliar words (Spedding & Chan, 1993, 1994, Staovich, 1986). In particular, research by Spedding and Chan (1993, 1994) confirmed that Year 5 poor readers' problems with word identification may reflect deficiencies in the metacognitive abilities that underlie this skill. Poor readers of this age group were found to be inferior in

metacognitive abilities involving the use of orthographic cues, morphological cues and context cues. (p. 2)

Bruce and Robison (1999) found that when they taught experimental subjects methods to improve word identification skills, they were happy with the progress of poor readers despite the restricted coaching and modelling time. In their intervention, subjects were trained to:

(i) *Consider the Context (semantic and syntactic cues), (ii) Compare with known words (phonemic and orthographic cues), and(iii) Carve up the word parts (structural and morphological cues). To help students monitor and control their use of those strategies (cues), they were taught to use the Clever Kids' Motto: (i) Be flexible, and(Ask: Does it make sense?* (p.4)

Many skills are required by students and need to be explicitly taught and reinforced to students with difficulties in reading. These include awareness of the role of vowels, the use of suffixes and prefixes, the decoding of long words including compound words, the study of irregular and sight words and interesting letter patterns in some words, eg, *qu, gh,ck*. This is made very apparent in a valuable teacher resource written by Davidson and Wicking who discuss this in more detail and note: "Phonological awareness skills such as the ability to rhyme, segment words, isolate sounds within words and add and delete sounds, facilitate the student's acquisition of reading and spelling." (p.5)

A struggling reader who has fallen behind in her ability to decode text appropriate to her age level would seem an appropriate subject to target with reading strategies to improve self- efficacy in reading. As Clay (1993) explains:

…the low progress reader or reader at risk tends to operate on a narrow range of strategies. He may rely on what he can invent from his memory for the language of the text but pay no attention at all to visual details. He may disregard obvious discrepancies between his response and his words on the page. He may be looking so hard for words he knows and guessing words from first letters that he forgets what the message is about. Unbalanced ways of operating on print can become habituated when they are practised day after day. (p.9)

It would seem valuable then to give struggling students in their middle years of primary schooling an opportunity to break some of the habits of poor readers and introduce some new habits of proficient readers. Although the optimum time to create good reading habits may be best achieved in what is commonly referred to as "the early years" (Prep – Year 2), this is not to say that students in their middle years of schooling will not respond positively to self management strategies.

The present research aims to extend the current research by investigating whether strategies to focus on stopping to decode an error in text or strategies to focus on word meaning in text or an application of both techniques produces the most efficient outcome.

The aim of the project was to test if a student's ability to read words accurately whilst reading texts could be raised if the student was taught self- efficacy strategies to be applied at the word level.

The research aims to test a technique for teaching reading where a student can become more aware that errors can, firstly, be reread using word analysis strategies and that this can be followed by checking for word meaning in context. If one asks the question, "What is a strategic reader?", there may be many considerations to examine how a strategic reader can control over the process of extracting meaning from a series of print cues. Depree and Iversen (1994) say a reader should, among other things, be able to:

> *search for and use cues from the meaning of the story, the structure of the language, and the visual and phonological information contained in the print;*
> *monitor their own reading behaviour by checking these cues one against the other;*
> *correct mistakes by taking the initiative for making the cues match;*
> *continue to discover new things about reading for themselves by making links from known to unknown information.* (p. 19)

The publishers of materials written for teachers of students in their early years of learning to read support the integration of visual information with meaning. The contributing authors of *Early Years* (1997) note that: "*Developing readers need support to learn to use and integrate the visual information – letters, words and phonic relationships – in conjunction with structure and meaning within the processes of reading and writing*" (p.6)

Prediction: Teaching middle years students who have difficulties reading texts the strategy of stopping at a word they are not sure, trying to read the word using decoding skills, and then to marry this strategy with that of checking for text meaning, will improve reading outcomes.

Method

The research used a case study in which the gain in percentage of words read correctly in text was calculated after 4, 8 and finally 12 teaching sessions.

The subject chosen was a 10 year old student in Year 4 who, when tested on the WISC-111 by a psychologist, was found to have considerable difficulty across the academic curriculum but whose results did not make her eligible to apply for integration aide support. The report recommended that the student could benefit from an individualised instructional program which had a high component of one-to-one and small group instruction to facilitate her learning and hence progress. Because the subject had arrived in Australia in Year 1 with limited English, this made her ineligible for the Reading Recovery Program offered to some Year 1 students who fall below the minimum reading level targeted for Year 1. It was believed that the student might have difficulties with reading

due to the ESL nature of her background. For this reason it was felt that she needed time to adjust to living in Australia and acquiring a second language.
Some data collected before the project began was considered. The subject was tested on text reading to determine her Reading Recovery Level of reading. She was found to be reading at in instructional level 17. She was also found to be on the 7th percentile score for a Year 4 student on the *Orthographic Reading Test*. On a *Probe Student Assessment Sheet* (Prose Reading Observation, Behaviour & Evaluation of Comprehension, Triune 1999), the student was able to read a non-fiction text, set for analysing students aged 7.5- 8.5 years, with an accuracy rate of 88.3%. In all three tests her scores were below the expected range for an average Year 2 student.

A longer text where the student was able to read with about 80% accuracy was selected. The text, which was long enough to last for the twelve sessions, was photocopied. The photocopied text was used to highlight words that the subject read incorrectly. This highlighted text was then read by the student a second time. In this second reading, the student was given support to decode the words and employ the ”self-help “ strategies she had been taught to use. It involved modelling and reciprocal learning.

The research was carried out in three main stages:

1. During the first stage, the student was taught to stop and focus on where she thought she might make an error. She was then taught to attempt to read the word after applying some word analysis strategies, eg, “chunking”, “onset and rime” recognition, looking for words within words, etc. For the student it was referred to as “stretching out the word, trying to work it out and putting it back together again”
2. In the second stage, the student was taught to check to stop and focus on a word she might not be sure of and see if her reading of the word sounded like a real word and then, if it did sound right, did it maintain meaning in the context of the sentence and the context of the passage.
3. In the third stage, the student was encouraged to combine the strategies applied in stage one and stage two (word analysis and word meaning in context) and then to go back and reread the sentence to check.

Cue cards were used to help prompt the student with what she needed to do when attempting to read a difficult word. These were prepared in bright colours.

For the first stage:

1. **Stop** (using red text)
2. **Stretch the word out into chunks eg be-long-ing** (in green text)
3. **Put it back to make a word** (in black text)

For the second stage:

1. **Stop**

2. **Try what the word might be**
3. **Does it sound like a word?**
4. **Does it make sense in the sentence?**
5. **Does it make sense in what I am reading?**

For the third stage the student was prompted to recall all the steps she knew she had learnt to do i.e.,

Stop
Stretch the word out in chunks
Put it back together again

Then to check the following

Does it sound like a word?
Does it make sense in the sentence?
Does it make sense in what I am reading?
Go back and read from the start of the sentence

The aim ultimately was to improve the student's word reading ability by encouraging the student to stop and focus carefully on words she might have difficulty reading, thus empowering her to attempt to read for word accuracy and meaning.

Results

The results of each session were entered onto a table called *Sessions' Summary for Student (S)*. Each session was numbered. The number of words of text read was recorded. The number of errors counted was entered. A percentage for words read correctly was calculated. A comment was entered for each session. The table is presented as follows:

Sessions' Summary for Student (S)

SESSION NUMBER	NUMBER OF WORDS IN TEXT	NUMBER OF ERRORS	% WORDS READ CORRECTLY	COMMENT ON SESSION
1	87	17	80.4	The first part of session was spent establishing a suitable text. It wasxplained that in the next 3 sessions, S would be concentrating on stopping to try to stretch out any difficult words into chunks and then put them back together again to read the word. This was called the "stop, stretch it out then put it together again" strategy. Cue cards were introduced. After the text was read by S, errors were highlighted. These were then used to demonstrate the strategy. Cue card strategies were discussed in detail.
2	124	33	73.4	S reminded of strategy that she was explained last session. **NB** S lost a complete line of 12 words. This left her looking lost. (This line was left out of the calculation.)
3	92	21	77.2	S distressed by a severe cold
4	117	35	70.1	S returned after being absent due to a severe cold. Still unwell. It was explained that next session a new helpful strategy would be introduced. Used today's errors as an example.
5	89	16	82.0	Before beginning to read, S was reminded of the new strategy where re-reading for word, sentence and topic sense (called the "make sense? / sound right?" strategy.
6	97	22	77.3	S was asked to recall and use the new reading strategy, .before beginning to read.
7	104	17	83.7	S asked to recall and use the new strategy before reading
8	70	19	72.9	S asked to recall and use the new strategy before reading
9	83	18	78.3	Introduced the idea that the two strategies could be combined i.e., stopping, stretching out the word, putting it back together again, and then checking it for word, sentence and context sense..

10	44	7	84.1	Revised the combination strategy before reading
11	94	12	87.2	Revised the combination strategy before reading
12	114	12	89.5	Revised the combination strategy before reading

These results were then graphed to show the student's reading effectiveness in each session by plotting the percentage of words read effectively, progressively for each session. These can be seen in the following table referred to as the *Student Reading Effectiveness* table.

The average accuracy for each block of four sessions was also calculated and the results shown in the following table referred to as the *Effectiveness Each Stage* table.

It is interesting to note that in sessions 2, 3 and 4, the word reading accuracy dropped significantly before it began to improve and show steady rises in sessions 9, 10, 11 and 12. This might be explained by the fact that the introduction of a new habit at first altered the student's normal reading pattern and made her aware just how many mistakes she was making. It could indicate that learning a new habit leads to a reduction in performance whilst an old habit is replaced with a new habit. At the time of her lowest percentage of words read correctly, the subject also suffered from a severe cold, which could have contributed to her poorer performance.

Although the object of this study was to measure success purely in terms of the percentage of words read accurately, it might be valuable to note that it was observed that the types of errors being made in the course of the teaching over the twelve sessions gradually became phonemically, syntactically and contextually closer to the original word. The student almost stopped creating pseudo-words and predominantly made errors that were careless in nature rather than profoundly different words. When her errors were pointed out to her, she was often able to self-correct these. Prior to the explicit teaching, the student did not know what to do to improve her word accuracy in text. When asked, "What could you do if you don't know a word?" she replied with "Just try it." But she could not explain how.

The results indicate that the student, who had had difficulties in word accuracy reading, benefited from explicit instruction in word analysis. The student's word reading accuracy of text rose by almost 10% by the end of the twelve sessions over the period of three weeks. Therefore, reading behaviour was changed. The student had become aware that simple strategies could be employed to read text more successfully

This would indicate a need for explicit teaching for students who are still developing strategies to help them cope with reading. The student in this case was not aware what strategies to use to analyse difficult text and so chose to simply read as best she could without pausing to deconstruct and then reconstruct difficult words and also take context into account.

Discussion

Some students are aware that there are a number of strategies that they can employ to successfully decode and read text successfully. They have become explicit self-instructors. However, we know that a number of students do not demonstrate successful use of these strategies and experience difficulties in their reading. It may be that these students have

missed out some key learning opportunities due to absenteeism
missed early years of schooling due to transfer to Australia from another country
received an inadequate amount of reading intervention
received inappropriate reading intervention
have a background that does not support the reading needs of the student.

For some third wave students there is a need for specific intervention to build up word recognition abilities. Where students experience problems in reading difficult words in texts, explicit teaching is required.

It is important to note that in this research a narrative text was deliberately chosen in order to assist the subject to read in a meaningful context Although the text was accompanied by colourful illustrations and clearly could have supported the reader if she used these, the illustrations were only referred to if the student had tried unsuccessfully to read an unfamiliar word a second time and the illustration conveniently provided a visual example, eg. a picture of some galahs. The reading strategies were introduced using a typical story text which in this case was a narrative about a family of animals surviving the harsh conditions and hazards of the environment because, as. Munro and McCusker (2002) explain:

We are all aware that focusing on words is insufficient for learning to read. Young readers need to be able to understand what written sentences say. One type of text that has been shown to assist the reading growth of third wave readers is decodable text. This is text that has the normal story or narrative structure that maximises the use of specific sound-letter relationships that the students have learned and that minimises the use of the letter-sound relationships and sight words not yet taught. (p 50)

In this research, the reading behaviour of a third wave student who experienced reading difficulties was changed. The student began by reading a carefully selected level of text that fitted in with the student's needs in that it contributed to classroom study. The text presented a level of difficulty that was challenging enough to provide sufficient examples for error analysis (20% error), but not so difficult as to overwhelm the student in her reading. By the end of the intervention the subject was reading with almost 90% accuracy (only 10% error) and showing steady improvement. The teacher reported that the subject had shown improvement in her reading and that she now used the strategies when she came to hard words. The student herself recognised the benefit of using the strategies, commenting how they helped her read.

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