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ABSTRACT

This paper challenges the assumption that meaning is in some way magically encoded within texts and argues that questions, when they are used simply as tools to lead readers to a single meaning, are inadequate as a means of reading comprehension assessment. The paper then goes on to describe one of a series of micro case studies that explored alternative strategies for assessment and what happens when assessment is used as an integral part of teaching and learning. Students in two fifth-grade classes in the same school in Australia were introduced to a picture book. The first two pages were read out loud, and then students read silently the next six pages of the text with two interruptions at separate points in the story. In one class, students were given a set of written questions to complete at each interruption point. The other class was asked to complete a sketch of what they thought would happen next (the "Sketch to Stretch" strategy). Results indicated that: (1) use of Sketch to Stretch provided a different type of data on which to make predictions about student understanding of text; (2) alternative non-question techniques can simultaneously fulfill the dual tasks of assessment and teaching; (3) alternative strategies, like drawing, may have the potential to help readers construct qualitatively different mental texts; (4) experimental strategies like Sketch to Stretch provided greater scope for the sharing of responses between readers; and (5) students experienced greater involvement, interest, and concentration in the experimental lessons than in traditional lessons. Findings of this and the other micro case studies give legitimacy to a variety of "non-question" comprehension strategies as vehicles for assessment and learning. (Four tables of data and four figures of student sketches and of other alternative assessment strategies are included; 15 references are attached.) (RS)



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BEYOND THE QUESTION: AN EVALUATION OF ALTERNATIVE STRATEGIES FOR THE ASSESSMENT OF READING COMPREHENSION

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Trevor H. Cairney

Introduction

My concern within this section of the symposium is with the diagnostic assessment of reading comprehension. I am reluctant to use the word diagnostic because of its clinical connotations, but it is a useful term. It is a word based on the Greek 'diagnostikos', which broadly means to be able to make comparisons or to distinguish between specific phenomena.

In this short paper I want to provide insight into field testing in which I have been involved using a range of process-based reading comprehension assessment devices. Each of these has been developed as an outcome of comprehension research (see Cairney, 1989; 1990a; 1990b) exploring the use of alternative modes for heightening student engagement with text.

My work has been a natural outgrowth of a general trend in reading research that has emphasised an interest in reading-writing relationships (Shanklin, 1982; Tierney and Pearson, 1983; Cairney, 1985; 1988), the active role of the reader (eg. Kamil, 1984; Rowe, 1984; Cairney & Langbein, 1989), and a desire to explore the potential of text to offer unlimited meanings (Barthes, 1979; Cairney, 1990a; 1990b; 1990c; Eco, 1979; Rosenblatt, 1978). This work has converged to create my current interest in the assessment of reading comprehension.

It was Barthes who wrote that the text is:

"completely woven with quotations, references, and echoes. These are cultural languages ... that traverse the text from one end to the other in a vast stereophony Every text, being itself the intertext of another text (Barthes, 1979, p. 77)."

It seems that much of comprehension assessment reflects an assumption that what is being assessed is the ability to transfer information that is in some way almost magically encoded within texts. I want to challenge this assumption and argue that reading comprehension is a highly constructive act involving the construction, reconstruction and transformation of meaning. I want to argue that if this complex process is to be assessed, it requires strategies that provide access to this process of meaning making, not simply tests of information transfer or reproduction.

I used the expression "beyond the question" in my title not to devalue the use of questions as a tool for both teaching and assessment, but rather to signal that I have been exploring alternative strategies that attempt to sample a wider cross section of the meanings that readers are constructing as part of the reading process.



ر ا Let me share an example to illustrate what I mean. What follows is a segment from a text about the history of man's attempts to conquer Mount Everest and a question that was used to assess student understanding of the text.

Text segment:

......from then on, Everest was a magnet that attracted mountaineers from many nations. They would come to it to fight against its many perils of ice, wind and snow.....

Question:

In the passage, Mount Everest was compared with a:

- a) blizzard
- b) magnet
- c) battle

Now the required answer was clearly "magnet". But please note what this assessment item does, and does not do. What it does do is test the ability of students to identify a metaphor within a text, but it does little to provide knowledge about the range of responses possible, and the students' reasons for offering them. Why might a student respond by circling a) for "blizzard"? Could a child's selection of c) reflect his/her attempts to construct meaning? This item shows us the students who can and cannot identify this metaphor, in this text, but it does little to provide knowledge about our students as meaning makers.

We need to continue to challenge teachers to examine how questions are used. If used to encourage readers to share meanings and insights they are a powerful tool for learning and assessment. But if they act simply as tools to lead readers to a single meaning that is assumed to be in the text, then they are very limited. This restricted use of questions is designed to narrow a student's focus to a single meaning. The former is designed to build meaning, to open up the "endless possibilities" of text (Cairney, 1990a). One use of questions seeks simply to test whether a unitary meaning has been comprehended, the other is designed to help students construct their own meanings. Student answers to the latter provide us with insights into the nature of the comprehension process that the more restricted use of questions does not.

A further problem with the strategies (alluded to above) that have been used previously to assess reading comprehension, is that they fail to recognize the critical relationship that should exist between teaching and assessment. Teaching and assessment are frequently viewed as separate and largely unrelated activities. As a result, there is often a gap between the type of strategies used for teaching and assessment.

The purpose of this small study was to explore alternative strategies for assessment, and to explore what happens when assessment is used as an integral part of teaching and learning.

Background to this paper

The focus of this paper is perhaps not what most would expect. It is not simply a description of the strategies used. Nor is it a study which correlates data generated by my strategies with those generated with traditional assessment strategies. Both of these approaches are quite legitimate. What I want to do in contrast is provide a detailed description of how these alternative strategies can be used, and what type of information they offer.



I want to do this in the short time available by describing the use of a specific text within an authentic classroom context. In the process, I want to try to provide an insight into the complex interrelationship of teaching, assessment and learning.

In the time I have available I intend to discuss one of a series of micro case studies of specific assessment strategies that I conducted in 1989 within an Australian elementary school. The decision to describe just one case study is motivated by a desire to provide a detailed qualitative analysis of one slice of data, rather than a superficial treatment of multiple slices of data.

Each of these micro case studies followed an identical pattern. Two similar ungraded classes were chosen in the same school, and a text shared with each set of students in the same way. The students were asked to read the text (sometimes orally, sometimes silently, and occasionally using a combination of both), and were assessed during the reading to gain insights into their comprehension. One group always experienced 'traditional' question and answer strategies, while the other experienced a variety of alternative 'non-question' based strategies.

Field Testing of Sketch to Stretch

The example I want to share involved the trialling of a strategy known as Sketch to Stretch (described above). This strategy was trialled in two parallel grade 5 classes (10 year olds) in the same school. Each class was introduced to the picture book The Wedding Ghost (Garfield, 1985) in exactly the same way (see Table 1). The text was introduced by showing its cover, discussing the title, providing a quick biography of the author, and explaining that it was an example of historical fiction. The first two pages of the text were read out loud. After this, students read silently the next 6 pages of the text with two interruptions at separate points in the story.

In one class the students were given a set of written questions to complete at each of these interruption points. For convenience I will call this the control group. Readers in this group were invited each time to respond to the questions by providing written answers. They were told prior to answering them that many interpretations were possible, and that there was not necessarily a single correct answer for each question. The other class was asked to complete a sketch each time. Once again, for convenience, this class will be called the 'experimental' group.

Responses from the 'control' group to the first set of questions (see Table 2) were generally poor. This was surprising because they were relatively simple. Many students were unable to offer suggestions for specific questions. In fact 37.5% of all questions were unanswered.



Table 1: Detailed procedures for the text The Wedding Ghost (Garfield)

GROUP	PROCEDURES		
Experimental	 Read the first part of The Wedding Ghost up to P. 5 (Stop after - 'her to pay her fare and bring a gift besides.") Ask the group to sketch what they think will happen next. Read on till P. 9 (Stop after - "He shivered and tore open the parcel.") Ask the group to sketch what the contents of the parcel might be. Continue story up to P. 11 (Stop after - "he turned up his collar and ran like a thief."). Ask the class to answer a series of questions about the story and predict the ending. 		
Traditional	 Read the first part of The Wedding Ghost up to P. 5 (Stop after 'her to pay her fare and bring a gift besides.") Provide written questions to be answered about the story so far. Read on till P. 9 (Stop after - "He shivered and tore open the parcel.") Provide more written questions to be answered about the story so far. Continue story up to P. 11 (Stop after - "he turned up his collar and rar like a thief."). Ask the class to answer a series of questions about the story and predic the ending. 		

Table 2: Questions used with the 'traditional' assessment group during the reading of The Wedding Ghost.

First set of questions

- 1. What is the name of Jack's uncle?
- What are Jack and his family preparing for?
- 3. Who was the one person the Goodmans had not invited to the wedding?
- 4. Why might the Goodmans have left this person off the invitation list?

Second set of questions

- 1. What were some of the presents that Jillian and Jack had received?
- 2. Who were some of the other people watching the opening of the presents?
- 3. Why did Jillian get upset with Jack?
- 4. What was unusual about the last present to be opened?
- 5. How did Jack feel about Uncle Goodman's joking?
- 6. What do you think was in the present?



The level of success on different questions varied considerably. For example:

- * 50% could not name Jack's uncle:
- * 19% were unable to indicate for what Jack and his family were preparing;
- * 31.25% could not suggest who the person was who had not been invited to the wedding;
- * and 50% were unable to suggest why this person was left off the invitation list (something not stated in the text).

Responses to the second set of questions (see Table 2) were once again poor for the control group. Overall students failed to offer answers for 29.1% of all questions with a range from 19% (question 6) to 56.25% (question 3) for specific questions.

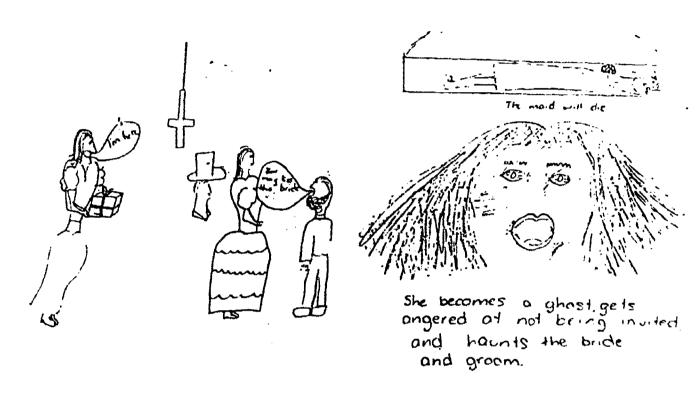
When the quality of responses was examined it became even more difficult to make judgements about student understanding of the story. While many could offer pieces of information from the text (e.g. over 50% could list some presents received, and name the major characters), few seemed to be aware of the subtleties of the relationships 'hat Garfield was attempting to develop, nor the intricacies of the plot. The latter is probably indicated by the failure of most students to offer a satisfactory answer for questions 3 to 6. However, this is difficult to determine given the paucity of data generated by the questions.

In contrast to the control group, there was no difficulty obtaining responses from the experimental group. This is not surprising since the tasks were open, students being required simply to use Sketch to Stretch activities at each point when the reading was interrupted. After the first interruption students were asked to draw a sketch depicting what they thought would happen next. The responses to this suggestion were diverse in detail (see Figure 1), but close analysis of the sketches suggested that there were a number of distinct sub-categories. In all, 75% of students drew sketches indicating a wedding would occur, while the remaining 25% indicated that the ghost of the maid would appear in some form.



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Figure 1: Sketch to Stretch responses after the first interruption for The Wedding Ghost.





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The second sketch occurred just before Jack opened the mysterious present. Students were asked to predict what might be in the present and to sketch it. Once again the responses were diverse (see Figure 2) but tended to fall into a number of distinct categories. The most common responses were to draw a ghost (43%), or some type of letter or instructions (19%). A variety of other objects made up the remainder of the responses. These included, a key (2 students), crucifix, clock, book, key, ring and picture.

Figure 2: Sketch to Stretch responses after the second interruption for the *The Wedding Ghost*.





As well as the questions and sketches used during the reading of the text, an identical post-reading task was provided for each group. It consisted of a series of three open ended questions. Students were told that there were no single correct answers for these questions, and that they were being asked for their opinions about the story. Students were asked to look at the questions (see Table 3), consider their ideas, and write the answers on a sheet provided. The purpose of this final task was to provide comparative data concerning the impact of the alternative assessment tasks on comprehension.

Table 3: Post-reading task questions for The Wedding Ghost

Questions

- Why did he hide the map in his pocket and take it with him?
- Why did he feel like a thief?
- * How will this story end?

Responses to these questions varied between the groups. The first form of analysis was simply to look at the fluency or length of the response by conducting a word count for all students. This revealed for example, that the control group had an average output of 10.0 words for Q.1, 7.5 words for Q.2 and 18.2 words for Q.3. In contrast the experimental method group had average outputs of 9.0 words for Q.1, 11.1% for Q.2 and 28.6% for Q.3 (see Table 4).

Table 4: Mean word counts for responses to question 1 of the post-reading task.

Mean Word Count			
Question	Traditional Group	Experimental Group	
1	10.0	9.0	
2	7.5	11.1	
3	18.2	28.6	
Ave. all Questions	11.9	16.2	

While there is little difference between the groups for question 1 there are significant differences for questions 2, 3 and the average word rate for all questions. While one would not want to place too much importance on word output alone, it seems plausible that this finding reflects the fact that the group that used Sketch to Stretch had been more engaged in the reading, and hence constructed more elaborate mental texts.

Qualitative analysis of the responses supports this conclusion. The purpose of Question 1 was to determine if students were aware of the underlying intrigue that was being developed in the text. Were the students aware that the map would have a great deal of significance later in the story? Had they predicted that it could be linked vitally with events to occur later? Close analysis of the responses indicates that there were



differences between the two groups. Responses of control students showed little evidence that predictions of this type were being made. The most common response (35.3%) suggested Jack took it "because he wanted to work it out" or "to see what the place was". Other responses included "because he wanted to do this" (2 students), "to find the treasure" (2 students), "he was able to read it", and "to get to the river". Only two students saw anything threatening or sinister about the map - "he was afraid of it", "he had an urge in his body".

In contrast, a larger number of the students in the experimental group produced responses suggesting that they saw deeper underlying implications for his removal of the map (38.1%). While a number of students once again said he took it because he wanted to follow the map or determine what it was for (33.3%), or simply that "he didn't know why" (28.6%), the most frequent response indicated that high level predictions were being made. These students saw deeper reasons for Jack's removal of the map. For example:

"Because it was as though it told him to and he wanted to find where the map directed"

"He does not know it could be some mysterious force that pushes Jack and the map together"

"Because he didn't want anyone to read it"

"He feels its got something to do with his marriage"

"Because he was out of his mind"

"He didn't know what it was and was trying not to show anyone".

Responses to question 2 were far less helpful and most students simply suggested that Jack felt like a thief because "he took it". The failure to observe qualitative differences between the groups probably reflects the quality of the question. On reflection, the question was far too obscure for these year 5 students. It was unable to achieve its purpose of uncovering whether students were aware of Jack's growing fear and uncertainty about the events that had taken place.

Responses to question 3 provided by far the most striking indication of differences between the groups. This question had been included to enable students to predict the ending, and in doing so, to provide a window into the texts they had constructed as part of the reading. Were they aware that this story was likely to move in unexpected directions? Had they predicted the map may be linked closely with the uninvited guest? Was there evidence that they were aware of a number of underlying themes which appeared to be emerging in the story (eg. jealousy)?

The responses suggest that students in the traditional method group were largely unaware of these things, whereas the experimental group was aware that something mysterious was going to happen. Responses from the traditional group fell into two major categories - "they lived happily ever after" (35.3%), or, "he found the treasure" (47.0%). One student indicated that "the Wedding Ghost would get him", but the remaining responses were all quite specific and in some cases unrelated to the text - "the person following him will get caught", "he will start crying like a baby", "Jack will kill himself".

In contrast, the responses from experimental group students fell into two quite different categories. By far the largest number of students (42.9%) indicated that a ghost would appear in some form (the nurse) and would either come between Jack and Jillian or simply ruin the marriage, stopping it from going ahead. Another group of students (23.8%) felt that either Jack or Jillian would die. Only two students felt that Jack and Jillian would be married. The remaining individual responses included - "... he will turn into Jack the Ripper ...", "... he will find some treasure ...", "... they will have a holiday".

It appears that the experimental students were aware that the story had a number of deeper layers of meaning, and that something mysterious or sinister was about to happen. This suggests that this group had constructed qualitatively different texts as part of the reading.

Discussion

While only a small slice of the data from my research study has been reported here I believe a number of conc'usions can be drawn. First, the use of strategies like Sketch to Stretch provide a different type of data on which to make predictions about student understanding of texts. While it could be argued that the use of questions could have been made more elaborate in order to tap some of the process data, the drawings nevertheless, provided different data.

Second, the evidence within this study suggests that alternative non-question techniques have the potential to simultaneously fulfil the dual tasks of assessment and teaching. Strategies like Sketch to Eretch have great potential for stimulating student engagement with texts. While this is not to deny that questioning can also fulfil these dual roles, the use of alternative strategies appear to provide different windows on the reading process.

Third, the data also suggest that the use of alternative strategies like drawing, may have the potential to help readers construct qualitatively different mental texts.

Fourth, the varied outcomes on the post-reading task may suggest that an additional factor influencing the different impact of the experimental strategies compared to questioning, is that the former provides greater scope for the sharing of responses between readers. Strategies like Sketch to Stretch, oral discussion, character rating scales etc, gain their strength from the fact that they invite and encourage readers to share responses and insights about reading. In doing this they implicitly 'invite' readers to read on to make new discoveries. In contrast, one suspects that students who are subjected to the traditional written question format are simply being encouraged to read on so another task can be completed. This suggests that for some readers, deep engagement with text requires more support.

Fifth, when students experienced the experimental lessons they displayed greater involvement, interest and concentration. Students enjoyed the lessons and often wanted the teacher to continue after the allotted time. In contrast, within the traditional lessons the same students displayed more limited attention spans, appeared to be less involved in the reading and lesson activities, and were generally glad when the lesson was over.

Implications for classroom practice

A number of alternative assessment strategies have already been field tested as part of this study.



These include the following:

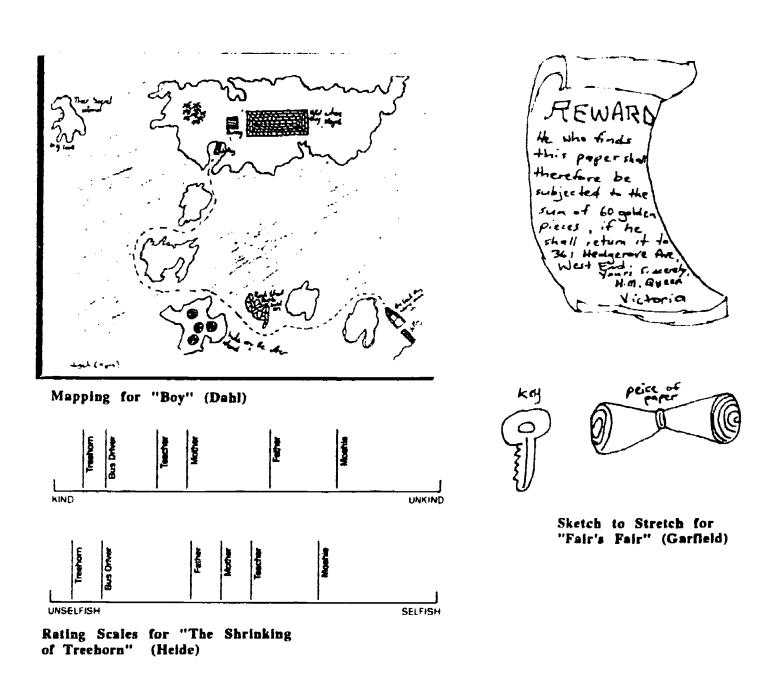
a) Story mapping

Story mapping is a simple strategy that requires students to draw a pictorial representation of a setting for a narrative text (Cairney, 1990a). Students are asked to imagine the setting (or part of the setting) for a particular story and to produce a representation of it as it would appear from the air (see Figure 3).

b) Sketch to stretch

This strategy also uses drawing but is linked closely with text prediction and imagery (Cairney, 1990a). At specific points within a narrative text students are asked to produce a sketch which represents what they think will happen next, what has just taken place, how they visualize a particular event or character etc (see Figure 3).

Figure 3: Sample assessment strategies used as part of the project (Cairney, 1990a)





c) Character rating scales

Character rating scales require students to make judgements about characters in accordance with a series of personality traits (Cairney, 1990a), for example, intelligence, kindness etc. Students are either given the traits or are asked to suggest them. They then provide a rating of specific characters using a sliding scale that represents each personality trait (see Figure 3).

d) Talk to the Author

I first developed this strategy purely for teaching (Cairney, 1986; 1990c), but recently have been exploring its use as an assessment device. Essentially it involves a written dialogue between a reader and the implied author (see Figure 4). Readers are encouraged to ask questions of the author, disagree with him/her, seek clarification, offer opinions, add extra information. This strategy can be used with either narrative or factual texts.

Figure 4: Example of the Talk to the Author Strategy (Cairney, 1990b)



A number of additional strategies are still to be trialled. The next stage of the project will study these additional comprehension strategies, will involve longer periods in the classrooms, and observation of both structured and unstructured responses.

The most important implication of this study to date is that it gives some legitimacy to a variety of 'non-question' comprehension strategies as vehicles for assessment and learning. The data suggest that rather than being simply enjoyable alternative activities, they have the potential to produce qualitatively different responses from students. They also appear to provide different diagnostic data for teachers, and lead to different levels of engagement with text.

The findings also point to the need for teachers of reading to rethink the role assessment plays in their reading classroom. I believe that we need a new set of principles for assessment, which in brief are as follows:

- * Assessment should wherever possible examine the processes of meaning construction involved in reading;
- * The data one attempts to obtain may take any form as long as they provide insights into the meanings readers are constructing; there are multiple ways to assess comprehension;
- * All data is interpretable and should provide insights into the processes employed by students;
- * Assessment is integral to what is happening in the classroom;
- * Assessment tasks should reflect the complexity of the act that is being assessed;
- * Assessment tasks should aid reading by heightening reader engagement with text.

I believe that if we are to produce more readers in our classrooms who actively engage with texts, then we need to rethink our instructional strategies, and to incorporate assessment as an integral part of our teaching. Part of the answer, is to consider alternative models for assessment and teaching. In short, we need to find ways as teachers to invite readers to expand the meanings they construct as they read; and in the process, find ways to make predictions about the complexity of the meaning making that is occurring as they read. We need to integrate assessment with teaching, not simply provide tests to determine if students can reproduce meanings that we as teachers have decided are 'in the text'.



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