Re-articulating Research Design and Research Goals

Greer Cavallaro Johnson, Griffith University, Brisbane

Abstract

This paper discusses how a study of reflective practice was designed to increase the likelihood of moving teachers to more critical reflection. The design facilitates a 2 stage guided pathway. Stage 1 helps teachers establish their institutional status quo in visual-verbal form. Stage 2 is more subversive in that it encourages teachers to challenge their perceived realities. This paper demonstrates how the research design was operationalised by one student teacher (Thad) and an interviewer. First, Thad is 'heard', in sound clips juxtaposed with image clips of the pages of a self-authored picture book, explaining his plans for a non-hegemonic approach to student higher order thinking. Second, Thad and the interviewer co-construct an alternative or negotiated reading of his (first) personal reading, but the student teacher refrains from questioning in a resistant manner the institutional constraints. The paper argues that the interviewer could have recognised more visual-verbal gaps and silences in the dialogue and manipulated those textual spaces to help the student teacher become more critically reflexive. Finally, post-interview, the analyst discusses a fragment of the picture book, demonstrating how to exploit more fully the critical reflection methodology.

A New Approach to Critically Reflective Practice

Until recently, critical inquiry into teachers' work has relied on spoken and written data in the form of teacher-generated logs, journals and stories. A number of studies are beginning to include drawing as a tool to probe ways of knowing about teaching (Johnson, 2001; Black & Halliwell, 2000; Watson & Wilcox 2000; Garner, 1997; Weber & Mitchell, 1995; Elfron & Joseph, 1994). In most cases where teacher drawings are examined, the research has concluded that visual language offers a viable entry point for documenting work-related tensions, allowing greater possibilities for personal growth. In a bid to use drawing as a means of a more critical investigation into teaching as a social practice, Watson and Wilcox (2000, p. 65) suggest that teachers 'could even create a simple drawing depicting oneself engaged in daily practice' and then do a close reading of the artefact prompted by questions that require them to 'read between the lines'. The latter, more critical approach provides a link to the study outlined here.

This paper demonstrates how the design of a research study about teachers' reflective practice using teacher-generated drawings was linked closely to the research goals. The study posed the research question, 'Can a new approach assist student teachers in moving to more critical reflection?' The guidance to participants to become increasingly reflective during the course of the study is offered in two stages. In stage 1 the student teachers are asked to represent any aspect of their professional practice...
in the form of a picture book generated from their own drawn images/collages and words. The picture
book then forms the basis for a 30-minute audio-recorded dialogic interview between the researcher and
the individual (student) teachers. They were asked to refer to both the visual text and the written text, but
particularly to the meanings intended by the visual text. Stage 2 of the reflective methodology is more
subversive in that it encourages teachers to challenge their perceived realities. The talk in the latter
stages of the same interview is based on a set of prompts that is derived from poststructuralism and
therefore is interested in critical inquiry into institutional power, equity and issues of social justice.

Thad's text was singled out for intensive investigation because on first reading by the analyst, it looked
as though it might have achieved the research goals. The teachers in the study were preparing to teach a
range of disciplines. The teacher whose work is profiled here was preparing to teach Science and
Mathematics.

**Background to Reflective Practice 1**

Stage 1 of the reflective process demonstrates how teachers might begin to reflect personally by first
documenting aspects of their practice in the picture book genre and then talking about the meanings they
intended. The purpose of this initial stage of the dialogue is to invite the teachers to interpret their own
visual and narrative text, much in the manner prescribed by a traditional author-based approach to
literary analysis (see Klarer, 1998). According to this approach, the reader/listener seeks to recover the
author's intended meaning and key themes based on knowledge of the author's autobiography and social
and historical context and how the visual and written language is organised to support such intentions.
This method of reading textually-represented practice is premised on aspects of traditional literary
theory that privileges an author's knowledge and control of the texts they write. The incentive to talk
about the visual narrative in this way begins with the more familiar notion of reflective practice that
readers/teachers are knowing subjects: that they are able to produce a transparent, natural and
unproblematic reading of their picture book/practice.

In the first section of the interview the student teachers were asked to use prompts, provided in written
form. In particular they were asked to discuss and reflect upon:

- the key themes in their picture book;
- those themes in their pictures that they thought might persist for all student teachers at any time
  or place;
- the link between their real teaching lives and their picture books;
- specific aspects of visual and written language that they used to convey their meanings.
In the following segment of talk (Sound Clip 1) Thad displays his autobiographical links to his picture book. Effectively the protagonist, Mr White, is Thad the student teacher, and he examines his circumstances as a student teacher and resolves that he needs to instigate changes to the way students are presently taught (not) to think in classrooms. The interview has been transcribed using the system for conversation analysis designed by Jefferson (1984).

Sound Clip 1

6. T: um I guess cos I mean Mr White was obviously me and um these are ex-these act-some of these experiences I mean they didn't actually happen in the order that I did it in the prac but I kind of wrote it out
7. I: mmhmm
8. T: to make it a story anyway

In later talk there is some switching between Thad's use of first and third person. His use of the third person works to add distance and credibility in that it universalises his story.

418. T: and then this one here is Mr White thinking by himself one day I'll be in a position to change that so this is me dreaming of the future when maybe one day you know I'll get on a board or something like that if I continue with my teaching career
419. I: yeah
420. T: and and do some research myself on to different methods of getting ah of teaching these skills to kids and I've already just for an assignment I had to do for teachers as consumers of research I [already] looked at one in Science using writing tasks in Science for higher order [thinking]

In stage 1 some of the student teachers were critical of the hegemonic teaching/learning practices of their more experienced colleagues (see Johnson,2001). However, at this stage they were not encouraged by the interviewer to become 'critical' in the sense that they would challenge whose interests are served by particular practices. The rationale for beginning a critical approach to reflective practice with what is essentially a 'non-critical' activity is generated from the belief that before student teachers can be expected to talk back to underlying institutional and personal assumptions that impact on their practice, they must first locate and understand the practices in which they are involved. In literary theory terms, they must first read with the text before they can read across or against it (see Johnson, 1999).

This first stage of the reflective practice process is demonstrated in several sound clips of Thad's speaking with the interviewer.
A visual narrative of a teaching experience
Mr. White and His Amazing Journey of Thought.

By Theo Clark. (2000)
One day Mr. White was looking for a book in a shop. He noticed that there were three times as many 'new age' books as books on popular science.

'That is odd!' he thought.

'Do more people believe in astrology and witchcraft than in science? Why do they think they have CD players and television?'
That night Mr. White was watching 'A Current Affair'.
They showed the results of a survey conducted about the proposed model
for an Australian republic. The results showed that most people didn't
know or understand what the changes were or meant.
'That is odd!' he thought for the second time that day.
'Most of these people have no idea.'
At breakfast the next morning Mr. White was reading an article in the newspaper on racism.

"Why are people racist?" Mr. White exclaimed to his dog. "Don't they realise that we are all just human beings? Genetically we share over 98% of our DNA with chimpanzees. We are almost the same as them, let alone other human beings."

"Racism is very odd." He concluded.
Mr. White was training to be a teacher, and a week later he started his final teaching practicum.
He arrived at school and was happy to see that the staff and students seemed to be nice.
After observing for a few weeks Mr. White noticed something.

'Most of the time the students have to answer simple questions,' he thought. 'Most of their learning requires them to remember things only.'
ΔQ = mCΔT
The change in energy = mass x specific heat capacity x change in temp.
Mr. White then thought back to what he had noticed a few weeks earlier. "Now I know why people believe in things that don't make sense and why people don't understand major issues," he thought. Mr. White reasoned that if all throughout their education people are more often than not required to memorise things as a demonstration of their learning and understanding, then no wonder they can't work things out for themselves.
Sound Clip 7
"If people know how to learn and understand things for themselves," remarked Mr. White to another teacher, "they will be able to do almost anything. At the present time, most people don't know how to think or reason."

It was at that moment he decided that it would be his goal "to teach people how to think!"
'NEED TO LEARN TO UNDERSTAND FOR THEMSELVES'
Mr. White is a science teacher so achieving his goal in a science class should be fairly easy he thought, as science is all about reasoning and thinking.

His first lesson in physics was about temperature. The students had to work out for themselves why thermometers are useful, by doing an activity.
Sound Clip 9
In the next lesson the students with Mr. Whites' guidance, designed an experiment. The experiment did not work very well, so they worked out what went wrong and did it again.

"It is good that it went wrong!" he told the students.

"Now we have to think and reason why it failed."
THEORETICAL ANSWER: 4.2 > 10^3
OUR ANSWER: 2600 ?

Sound Clip 10
Mr. White was happy with the way things were going. He was teaching the content as well as developing the students' ability to think. The only problem was, he eventually realised, that his class was getting behind in the work. To catch up he had to resort to teaching more traditionally, using the chalk and talk method. This made Mr. White sad.
At the end of the practicum his class had gotten through all the work, but Mr. White was still sad. They had not done the unit as he would have liked.

He realised that it is almost impossible for schools to teach students how to think, as the subjects require teachers to cover too much content in too little time.
Sound Clip 12
Mr. White consoled himself by thinking, 'One day I'll be in a position to change that, and then perhaps there will be 3 times as many science books as new age!'
In the first stage of the reflective process Thad challenges the hegemonic or popular view that teachers do not need to teach critical thinking skills, and he maintains strongly that this has an adverse effect throughout students' adult lives. He repeats the point many times that critical thinking is crucial to becoming a fully-fledged member of society. Eventually he describes critical thinking thus: 'another part of that is putting yourself in someone else's shoes as well and seeing the argument from someone else's point of view' (turn 520).
Background to Reflective Practice 2

The second, more innovative stage of the methodology for reflection demonstrates how teachers can be guided to reflect more critically through a poststructurally oriented reassessment of their stage 1 reading of their picture book. Ultimately, this next stage to reflective practice seeks to encourage teachers to (re)read perceived realities and is aimed at 'uncover[ing] contradictory and historically conditioned assumptions within prevailing discourses and challeng[ing] distinctions between representations and the "real"' (Garrick & Rhodes, 1998, p. 182). Within stage 2 there are two possibilities for the teacher/author of the picture book to become more critically reflective. In the less critical mode, it is possible for teachers at this stage to begin to challenge assumptions about professional practice with comments that resemble an alternative or negotiated reading (Hall, 1980; Moon, 1992). An alternative reading is described as a means of re-reading the text whereby the reader begins to question aspects of his or her invited reading. For example, Thad might retain his beliefs in the teaching of critical thinking but question whether this is always the answer given the requirements of present school curricula. It is possible that an alternative reading could lead to a more radical extension of the reflective practice in stage 2—a resistant reading. A resistant reading is a means of reading against the ideological and discursive preoccupations of a base text. For Thad, this could mean reassessing his view and looking into the institutional constraints that prevent his experienced teacher colleagues from practising according to his ideals.

The following example demonstrates how the researcher guides or (re)positions the student teacher to challenge his invited reading presented in stage 1 of the interview. The overall purpose of stage 2 is to problematise Thad's ways of seeing the world, evidenced in stage 1, by focusing his attention on the second part of the interview protocol to prompt his rethinking.

In the second part of the interview you are asked to consider the following questions that encourage you to challenge the natural assumptions you have identified as displayed in your self-authored picture book (extending questions first posed by Smyth (1992, p. 299).

- Where did the ideas and assumptions, identified by you earlier originate?
- What alternative cultural and ideological assumptions have been left out or silenced in your visual and written representation of classroom activities about teaching?
- Are the cultural and ideological assumptions consistent throughout the narrative?
- Are there traces of conflicting discourses?
- What causes you to maintain your theories about teaching?
- What views of power do your theories of teaching embody?
- Whose interests seem to be served by your teaching beliefs and practices?
Reflective Practice 2

The interviewer's repositioning of Thad's invited reading of his professional practice begins just before the next sound clip (Sound Clip 14).

Sound Clip 14

Thad's take up of that repositioning is as follows. He (mis)understands the prompts in terms of challenging his own perceived realities expressed in his explanation of his picture book. In as far as he summarises his non-hegemonic position on teaching, at the end of Sound Clip 14, Thad is being critical of the practices of others but not of his own. He explains,

484 T: I really don't see most people where I work out I work at [a large department store] in the city and most people there don't know how to think about stuff they just you know they get petty over pathetic little things and they 'cos they don't know how to analyse a situation properly and then see what's the

Subsequently, Thad begins to veer towards an alternative reading of his stage 1 talk when he discusses how he would practise teaching critical thinking to his students if he had the chance. The interviewer asks whether, in teaching, he is asking people to confront their [racist views], To this Thad replies, 'that hasn't come into my teaching yet because I just haven't had that as an opportunity but ... I'd like to say why do you have that opinion' (turn 506, bold type used for emphasis). This talk picks up on the point made on page 21 of the picture book when Thad writes that Mr White 'realised that it is almost impossible for schools to teach students how to think, as the subjects require teachers to cover to much content in too little time'.

In stage 2 the interviewer encourages this more critical approach through a greater willingness to engage in co-constructive reflective talk with the student teacher. More importantly, together the interviewer and Thad do not question whether or not he will be able to practice his preferred way when he begins professional practice as a first year teacher. This finding is consistent with the critical reflections produced by other participants in the study: in the main, the student teachers did not critique their present circumstances to the extent that they provided a resistant reading.

Elsewhere, I have proposed that conservatism in teacher education might be a reason that participants did not exploit the methodology for a radically resistant form of critical reflection (Johnson, 2002). Looking back at the transcribed research interview, some time after the interview took place, another significant reason has emerged. It could well be that the interviewer did not probe Thad's responses extensively enough to assist him in the co-construction of a resistant reading of his perceived realities as a change agent in a new professional environment. There is evidence to support this view, as seen in the
546 T: so if you look at those kind of things and um so yeah I think I mean I really think yeah you can teach that kind of um eval-evaluating of things in almost any subject you know well maybe not in French or something learning different languages you might not be able to do it but

547. I: mmhmm
548. T: you can still as long as teachers understand that's what it I think one thing nearly every school I've gone to says we are all teachers of English right so even in Science we or Maths you need to be able to correct students on their English and things like that
549. I: yes
550. T: well I think we should all be stu-or teachers of thinking as well
551. I: OK

During the interview (refer to Sound Clip 15) the researcher signals that she will extend the interpretation of the picture book in a later analysis.

**Sound Clip 15**

652. I: you know you you'd said well I'd prefer to do it this way but there are constraints and and I understand that and it was just that's the way in which I'm developing the the analysis to to confront some of these and I guess to explain um more in an object-oh not objective but a more ideological way um the perspective that I see that you've got on teaching

653. 8. T: mm yeah
654. I: so that will be the next step that I'll do
655. T: yeah so
656. I: and um so is there anything else you'd like to add?

Instead, the interviewer could have worked closer towards the research goals and used elements of the following analysis to co-construct a resistant reading with the student teacher at the time of the interview, rather than in a separate written analysis later.

**Background to Reflective Practice 3**
A more intensive probing of the student teacher's comments in the interview could be informed by a rearrangement of the meaning of the picture book. That is, the interviewer could return to a focus on the drawings in the picture book by using some of the principles of Membership Categorisation Analysis (henceforth MCA) (Sacks, 1992; Emmison & Smith, 2000), and Foucauldian Discourse Analysis (henceforth FDA). MCA provides a useful means for showing first how the teacher's visual narrative text constructs power relations between teachers. Subsequently, the work of Foucault (1972, 1977, 1982) is a viable means of demonstrating why the visual representations of power in the visual narrative can be linked to larger institutional discourse and power relations in school settings. As argued by Miller and Silverman (1995), such an analytic synthesis 'shows how the movement of power within institutional settings may be studied empirically by attending to the mundane details of the ....' (p. 745) [visual language through which teachers reflect].

For brevity I now turn to a single page (page 14) of Thad's picture book, chosen as it presents a complicating event in the story, to demonstrate a means of pursuing the research goals more rigorously. Following a method outlined by Baker (1997) for spoken text, Thad could have been guided 'to locate the central categories (of people, or places, or things' (p. 142) including any standard relational pairs or contrast pairs observable in the visual and verbal text. The interviewer and Thad could have 'work[ed] through the "activities" associated with the categories in order to fill out the attributions connection that members produce' ... 'to find the courses of social action that are implied: descriptions of how categories of actors do, could or should behave' (p. 143).

The first part of the task entails locating membership categories in Thad's picture book so as to discuss how power relations are built up through textual organisation and the visual language. The second involves showing why such a power relationship might act to constrain Thad in his desire to over-ride his experienced colleagues' practices and include critical thinking skills in his professional work as a beginning teacher. Baker (2000) argues that 'categories and categorisation work lock discourses into place, and are therefore ready for opening to critical examination' (p. 99) and that critical textual examination means recognising 'the ideological order that the ... text pre-supposes' (p. 106).

In accordance with the principles of poststructural literary theory, I interrogate not only the visual-verbal text but also the spoken account produced in the research interview for gaps and silences. Gaps are places in the text where readers are invited to make connections by drawing on their 'common sense' understanding of the world. Silences result from the fact that textual gaps enable readers to avoid questioning certain cultural values (Moon, 1992, p. 54).

Double click on this icon to view an analysis of a section of the picture book using MCA and CDA, presented in Powerpoint.
The description of how the contrast pairs are textually mediated (in the PowerPoint presentation above) using membership categorisation produces a very different, more critical reading than that produced by Thad in the interview. Of utmost importance is the linking of the contrasting pairs (explained in the PowerPoint slides with contrasting discourses). Talk to this effect would enable the student teacher to connect his re-reading of his picture book with the political nature of the institution he is about to enter. He might re-consider the nature of his and others' 'power' that he has described in visual language, and compare it with his spoken account in the interview.

As a means of resistance against institutional power, Foucault (1982) offers the following advice to Thad (alias Mr White).

> a power relationship can only be articulated on the basis of two elements which are really indispensable if it is really to be a power relationship: that 'the other' (the one over whom the power is exercised) be thoroughly recognized and maintained to the very end as the person who acts: and that, faced with a relationship of power, a whole field of responses, reactions, results and possible inventions may open up. (p. 220)

Had these suggestions for further repositioning been followed by the interviewer, Thad might have questioned his potential power to initiate such large changes in the school setting so early in his career. With these conceptual additions to the research design, the research goals could have been achieved more fully. In practical terms, Thad could have been better equipped to fight back against opposing institutional discourses with resistant practices.

**Concluding Comments**

The purpose of this paper was to demonstrate how the two-staged design of a study into teachers' reflective practices was linked to the research goals: to encourage greater degrees of critical reflection even to the point of interrogating non-hegemonic proposals. Using one student teacher as an instance, I have shown the extent to which this link did occur and offered reasons for why it did not occur more
fully. It has been argued that the student teacher (Thad) did not exploit the critically reflective methods fully and that more prompting from the interviewer might have achieved this research goal. Up to this point, he has not addressed in sufficient critical depth the assumption that he will be able to teach the different way he describes. Nor has he considered the long-term institutional constraints (or freedoms) for teachers who base their work on 'making a difference'.

More importantly, I have shown how the research interview process could become more successful for both participants if it were guided by some of the principles of MCA and Foucauldian discourse studies. In further research, the principles of MCA and FDA should be written into the second stage of the interview protocol and used as prompts to support discussion. For example, the interviewee could have been asked to refocus on the visual text and to comment on any hidden assumptions that might be noticed by a non-author. It would be possible then to return to some of the assumptions made in the interview talk, and to ask, what if other colleagues are not receptive to your suggestions? How could you understand their perspective through the concept of Discourse? (Gee, 1996).

Finally, there is no suggestion that the interviewer or the student teacher should be seen as failures in any way. Nor should the analyst who looked at the data in retrospect be seen as the omniscient narrator in the research story. Rather, the aim has been to reflect critically on the use of the methodology within the parameters of the present study and to make sensible observations about the possibilities for increasing the critical component of teacher reflection in future research, within an environment that seeks to hand over control of the methodology to those professionals reflecting on their practice.

Acknowledgements

A shorter, version of this methodology, using different data, was presented at the Discourse on Discourse - The Language of Work and Education Conference November, 2001, at University of Technology, Sydney, Australia. I wish to acknowledge the help of Elizabeth Stevens who is working as a Senior Research Assistant with me on this project funded by the Australian Research Council Large Grants Scheme. I also acknowledge the technical help given by Michele Leiminer in the preparation of the sound clips and the PowerPoint files. The student teacher (Thad) has given formal written consent for his work to be used for my research, publication and teaching purposes.
References


