

Making visible the coding process: Using qualitative data software in a post-structural study

Mary Ryan

Queensland University of Technology

Qualitative research methods require transparency to ensure the 'trustworthiness' of the data analysis. The intricate processes of organising, coding and analysing the data are often rendered invisible in the presentation of the research findings, which requires a 'leap of faith' for the reader. Computer assisted data analysis software can be used to make the research process more transparent, without sacrificing rich, interpretive analysis by the researcher. This article describes in detail how one software package was used in a post-structural study to link and code multiple forms of data to four research questions for fine grained analysis. This description will be useful for researchers seeking to use qualitative data analysis software as an analytic tool.

Introduction

Transparency of the research process when using qualitative methods is a key issue with regards to the 'trustworthiness' of the data analysis (Cousins & McIntosh, 2005). Particularly within post-structural inquiry, which disrupts the search for authorial certainty and acknowledges the partial, incomplete and constructed nature of the research (Lather, 1991; Prain, 1997), it is important to make visible the researcher's decisions and processes. The intricate processes of organising, coding and analysing the data are often rendered invisible in the presentation of the research findings, which requires a 'leap of faith' for the reader.

This article outlines how qualitative software packages such as *NVivo* (version 7 used here) can be utilised to make the research process visible to the reader. First, I discuss key issues related to the use of such software, then I illustrate its use by explaining in detail the processes facilitated by the software in a post-structural study about the civic participation of youth. The use of software to aid the analysis of qualitative data can not be seen as a mechanical process which is separate from the research methodology (Cousins & McIntosh, 2005). Rather, the software must be used in ways which support and enhance the methodological concerns of the study. Much of the existing literature examining the impact of software on the research process has been written by software developers or trainers (Johnston, 2006). Thus, this detailed description of the coding methods employed to address four research questions will be useful for other researchers seeking to use the software as an analytic tool.

Using computer assisted data analysis software

While the use of such computer assisted programs is now widely accepted in qualitative research as an efficient tool to manage data, it has also come under criticism, particularly the concern that it potentially alienates the researcher from the data. Kelle (2004) suggests that the use of such software programs requires researchers to explicate their data

management strategies in ways that have often been neglected in research methodologies. In this section I outline some of the major criticisms of this tool and explain my own position, including the particular applications which I found useful to use in an illustrative study. A sample section of analysis is included in this article for illustrative purposes. More detailed analyses and findings from this study can be found elsewhere (see Ryan, 2007b; 2008). The focus here is on the use of the software in the processes of organising and linking the data in a first-step broad analysis to develop the categories and themes for fine-grained linguistic analysis.

Early criticisms of the use of computer technology to manage qualitative data suggested that the very nature of qualitative research would be lost as the researcher would be alienated from the data, and analytic strategies would be enforced to reduce the context-relatedness of interactions (Fielding & Lee, 2002; Lee & Fielding, 1991; Seidel & Kelle, 1995). Such binary constructions that suggest *either* using software and saving time *or* coding the data manually to enable rich, interpretive analysis need to be problematised. Kelle (2004) argues that such criticisms are overemphasised, as the coding, indexing, cross referencing and comparison techniques of these software programs are simply different versions of the 'age-old' techniques of data management used implicitly in social science research. The problems associated with such techniques are not new. Rather, they have become more visible by the requirement to explicitly code the data in these types of software programs. Similarly, Johnston (2006) suggests that the transparency afforded by the use of such programs may simply highlight (potential) problems that already exist in qualitative research. Making decisions about the types and numbers of coded categories is difficult with or without the use of computer software. However, one of the benefits of using such software is the flexibility of being able to define and easily alter the coding scheme during the coding process (Kelle, 2004).

Another criticism, related to the precise, inflexible, context-free, unambiguous requirements for coding using computer technology (Dreyfus & Dreyfus, 1986; Glaser, 2003), is one that needs to be addressed in a post-structural study. I suggest that, while decisions about codes may need to be precise, they do not necessarily need to be inflexible, context-free, nor indeed removed from the methodology of the study or the data itself. In fact Johnston (2006) suggests that researchers must discuss the impact that the software has on their methods for its use to be beneficial for rigorous analysis. Recording key decisions, reflections, variations and emergent ideas ensures 'analytical distance' (Johnston, 2006 p.387) to ensure coding is not superficial. The codes are not generated by the software program without regard for the discursive practices and macro discourses surrounding the data as the term 'context-free' might suggest. The researcher must still decide upon ways to code the data based upon the theoretical framework, the research questions, and the initial sense of the data, which is quite context specific. Computers "cannot resolve essential dilemmas of inquiry, nor eliminate the important role of creativity... and will not ultimately make the work less challenging" (Cousins & McIntosh, 2005 p.597).

In coding the data for the study outlined below, I used a 'top down' approach consistent with post-structural theory as outlined by Miller and Fox (2004) to impose my research

questions upon the data and to locate social and institutional discourses. I oscillated between this approach and the 'bottom up' approach (Miller & Fox, 2004) whereby social realities are built up from ordinary interactions, as I developed the detailed coding topics or nodes from the talk of the participants in the study. Miller and Fox argued that these approaches need not be disparate; rather they suggested that building analytic bridges can be mutually informative particularly in cases where social realities are analysed as embodied performances of broader social discourses.

Qualitative data analysis programs provide considerable potential to bring transparency to the research process (Cousins & McIntosh, 2005; Johnston, 2006; Thompson, 2002). In this study, I developed four overarching code categories (tree nodes) directly from my research questions (top down), yet the sub-categories were developed directly from the topics raised in the data (bottom up). I took a non-linear approach, whereby I moved between the raw (audio and transcribed) data and the coded data categories that I managed within the software, to locate the major discourses or themes within the data. I used the software not as a way to analyse the data, but rather as a way to organise and link it. For example, *NVivo 7* only allows hierarchical coding whereby sub-categories can only be included under one parent node. During my analysis however, I included some sub-categories under more than one of my major discourses or themes to explain the data. The software enabled comparison using the categories that I developed (and could change or add to at any time) based on further analysis of the data. I was still able to highlight inconsistencies and contradictions within the data using the software package as my theoretical framework demanded that I approach the data with such ambiguities in mind. Within this study I subscribed to the notion that codes are not 'factual' or pre-determined structures. Rather, I formulated the codes as "signposts that support the identification of relevant text passages and help to make them available for further interpretation and analysis" (Seidel & Kelle, 1995 p.484).

About the research

The study used here to illustrate the use of the qualitative software was undertaken to question the capacity of socially critical pedagogical and curriculum approaches in schools to be genuinely transformative. It asked whether young people lead lives where social justice and social betterment are paramount. The study sought to understand the extent to which the young participants were prepared to invest in such principles when they were part of a choice generation, with its focus on multiple literacies, lifestyle and consumerism (Ryan, 2007a).

The specific research questions were:

1. What are the embodied multiliterate practices that these young people account for in their talk?
2. Do these young people intellectualise the youth culture and embodied practices that they account for in their everyday lives?

3. How are the participants' embodied subjectivities seen to be shaped through bodily practices of multi-literacies, and through positioning of self and others?
4. What forms of resistance to hegemonic discourses are evidenced through these accounts at this institutional site, and how do they impact on the enactment of a critical agenda?

The participants in the research were a group of white, middle class, Year Nine and Eleven (14-16 year old) students in Queensland, Australia, for whom emancipation *was not* a key issue in their lives. They were identified by their English teacher as highly competent in the critical strand of the English syllabus. This strand of the syllabus requires students to demonstrate an understanding of common principles of social justice, such as equity, diversity and supportive environments, through active civic participation.

Data sources

The data for this research were gathered from a number of sources including the use of students' own multi-modal popular culture texts as an initial prompt for other data generation. Students' texts were either a display advertisement and publicity campaign, or a popular magazine, both aimed at the demographic of their peers. These were constructed as part of normal class activity and were used to prompt individual learning conversations (Holstein & Gubrium, 1997; Thomas & Harri-Augstein, 1985), semi-structured interviews and group discussions. These texts were scanned to include in the data set. Participants were asked to prepare for the group discussions by bringing along some personal artefacts which they felt represented them and the things that were important to them at that time. These artefacts were photographed and also included in the data set.

After an initial broad sweep analysis of the data from the participants, I decided to weave 'macro' texts through my analysis to illustrate the conflicting discourses that were emerging. I chose a pastiche of texts for this purpose, which illustrated some of the competing macro discourses of contemporary society within which the youth participants, and this study, were a part. Some of the texts were discussed by the participants, for example, *Xbox* games and associated websites or SMS chat material. Some were 'official' documents such as syllabus and policy documents and others were public texts such as high profile newspaper articles of significance at the time. This hybridised approach was taken so that the multi-faceted influences on the youth participants could be reflected. I created links between linguistic elements, contexts and surrounding discourses of these data from the youth participants and those of the macro texts.

Data management

I was attracted to the use of technology to manage and organise the data from this study as it facilitated the electronic linking of data to show relationships and comparisons or contrasts between the data. Multiple positions could be highlighted using the linking facility of the *NVivo* software to enable a fine grained linguistic (micro) analysis to be undertaken on related 'chunks' of data. The data within this study were (re)presented by such diverse texts as printed transcriptions, audio recordings, scanned images,

photographs, websites and written texts in various forms. Thus, I found the linking facility to be a useful way of connecting different sources to illustrate particular topics that related to wider social discourses and histories. Identifying links and associations is a key advantage of using software such as *NVivo* (Göransson, Ehrenberg, Ehnfors, & Fonteyn, 2007) particularly when data sources are increasingly comprised of audio, video and multiple media forms, along with traditional print forms (Cousins & McIntosh, 2005).

Another useful feature of software programs such as the one outlined here, is the quick retrieval feature. The program enabled me to efficiently locate particular sections of data which were related in different ways. I could retrieve print text, as well as using the external data files within the program to retrieve other data which I entered as (re)presentations of the lived experiences of the participants. The facility to develop visual models to enhance understanding of my coding categories was also beneficial in my aim to provide a 'pastiche of (re)presentation' of these participants. To create the pastiche (see sample analysis later in this paper), I used text boxes containing the analysis of the 'macro' texts; visual texts produced by the participants; photographs of important artefacts chosen by the participants; and snapshots of data woven through my analysis, much like a hypermedia environment, where the reader can choose multiple pathways (Landow, 2006; Snyder, 2002). I was able to draw upon the multiple designs of text using the linking facility within the software to assemble my pastiche in more efficient ways than would be possible manually.

Data coding methods

To begin the process of devising my coding categories or nodes (as per *NVivo*), I looked to my research questions. I chose four overarching nodes which would enable me to draw out sections of data for analysis, so that I could ultimately answer the specific research questions that I had posed for my study. The four broad (parent) nodes which have been numbered by the software program are:

1. *Multiple dimensions of meaning (MDM)* which specifically related to research question 1
2. *Intellectualisation* which specifically related to research question 2
3. *Positioning* which specifically related to research question 3
4. *Resistance* which specifically related to research question 4.

The software enabled me to develop tree nodes which show relationships between and within nodes, and consequently between and within data sets. My initial scans of the data were for the purposes of identifying favoured or common topics within the data from the participants in both Year Nine and Year Eleven, and through different levels of data. These nodes were seen as overlapping and intersecting rather than as separate entities, therefore some sections of data were coded in more than one node. I explain each tree node in more detail below. Note that the numbering of each node in the figures that follow reflect the numbers assigned to each node in the *NVivo* program. For example the node 'MDM' is number 1, and the child nodes that sit beneath it are numbered 1.1, 1.2 and so on. Those nodes which have multiple layers, such as 'Positioning' (see Figure 3),

include other levels of numbering such as 3.2.1 and 3.2.1.1 to show the connectedness of the nodes.

Multiple dimensions of meaning (MDM)

This is related specifically to research question 1: *What are the embodied multiliterate practices of these young people, and how are they accounted for in their talk?*

To investigate this question I looked to the data for transitive representations of the various designs of meaning that these young people used in their lived practices. I explored the assigned importance of some literate practices over others, the instances of physicality associated with the various designs of meaning which they indicated, and the descriptors of participants which they associated with such practices. Research on new social practices, texts and technology (Kellner, 2002; Lankshear & Knobel, 1997; Luke, 2000) along with Klein's (2000) work on logos and brand names, and Giroux's (2000) notion of corporate pedagogues were useful to describe these designs of meaning for the coding process in terms of broader power and influence on youth. For example, I looked for value assigned to particular bodily practices such as using technology, performing drama, playing music, and having or talking about sex. I also looked for ascribed importance by self and others of particular brand names, technology devices, school practices and life world activities.

This node was designed to pinpoint sections of data that would highlight the multiliterate practices accounted for by the youth participants. I use the term 'multiple dimensions of meaning' in keeping with the multimodal and multi-dimensional nature of our changing world as described in multiliteracies theory (Cope & Kalantzis, 2000) to reflect the multiliterate practices of the youth participants. I found both direct and indirect references to three broad topics within the data, therefore I constructed three child nodes (see Figure 1) to sit under the parent node of MDM.

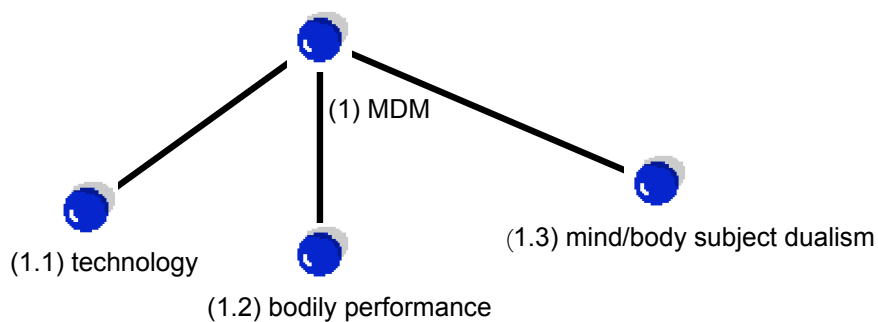


Figure 1: *NVivo* visual model of tree node 'MDM'

These child nodes are:

- technology – including use of, perceived competence and views about
- bodily performance – including participation and views about drama, musical performance and sport, ways of dressing and acting and views about bodily performance of self and others
- mind/body subject dualism – including views about school subjects which favour mind over body or body over mind, and views about teachers' attitudes to such subjects.

Intellectualisation

This is related specifically to Research Question 2: *Do these young people intellectualise the youth culture and embodied practices that they account for in their everyday lives?*

As with Research Question 1, I explored the attributes or descriptors used to represent the various designs of meaning (including visual or gestural text), to give an indication of the intellectualisation of such texts (Education Queensland, 2006). Briefly, this included the use of metalanguage, substantive conversation and deep understanding and knowledge of such practices. The analysis of visual and multimodal text (Emmison & Smith, 2000; Kress & van Leeuwen, 1995, 2001; Tomlinson & Lynch-Brown, 1996) provided useful frameworks for the intellectualisation of such texts, and therefore to the critical analysis of attributes assigned to them.

I was interested in the ways that bodily practices were intellectualised. This included problematising the valuing of particular activities over others, or questioning the ways in which particular actions, speech or dress elicit dominant ideological responses or reinforce particular dichotomies of thought. I also explored the ways in which texts and practices were accepted at face value and described superficially, and the context or parameters within which this happened. For example, I invited the participants to analyse their own multimodal texts so that I could determine the extent to which they could intellectualise their own texts as opposed to others' texts. I also invited them to analyse their own practices and values, to determine the extent that they were willing to interrogate self, and to account for such practices and values in the context of broader discourses.

I developed three child nodes to sit under the parent node of intellectualisation (see Figure 2), which reflect and encompass evidence of this node in the data.

The child nodes are:

- metalanguage – including use of and awareness of the language of text and context analysis
- deep knowledge – including talk demonstrating deep and/or substantive knowledge of texts, contexts, social issues and both life-world and school-world practices
- critical analysis – including the ability to talk about different viewpoints and groups in society, relating local issues or school texts and contexts to broader socio-historical discourses, and analysing own practices and processes of decision-making.

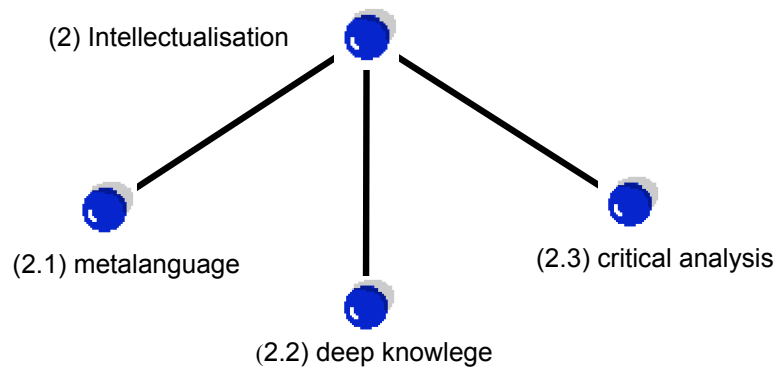


Figure 2: NVivo visual model of tree node 'Intellectualisation'

Positioning

This is related specifically to research question 3: *How are the participants' embodied subjectivities seen to be shaped through bodily practices of multiliteracies, and through positioning of self and others?*

My focus here was on the ways in which the participants represented themselves, their practices and others through their language. I particularly identified how hegemonic discourses were evident through binary thought categories and traces of dominant cultural maps in their accounts. This included the ways that the participants perceived their positioning by others. I looked for instances of textual collusion (Fuller & Lee, 1997) in their accounts and how they used successful collusions as forms of power in their lived experiences or how unsuccessful collusions shaped their lived practices. I explored multiple personae in their interactions with me as researcher, with other texts and contexts, and with each other to get some sense of the diverse subject positions which they took up at different times for different reasons (including solidarity and power). I was interested in what types of students were constructed and validated, what types of teachers or other adults were constructed and what types of discourses were legitimated through language and performance. I looked for ways in which social and corporate institutions shaped the subjectivities of these young people and shaped their lived practices, and how multiliterate practices may have been used to perpetuate hegemonic discourses. For example, I was interested in looking at how these participants 'do school' (Lave & Wenger, 1991) in terms of valuing what the school values, behaving in regulated ways, talking about school, peers and social issues in certain ways, and how they negotiate their ways through the complex discourses of youth, schooling and society (Kenway & Bullen, 2001; Lesko, 2001; Pais, 2003; White & Wyn, 2004).

This node was the most complex of all the nodes, and the complexity is represented in Figure 3. The node was devised to indicate within the data, how the embodied subjectivities of the youth participants are shaped through the positioning of self and others in accounts of both life-world and school-world practices and perceived beliefs.

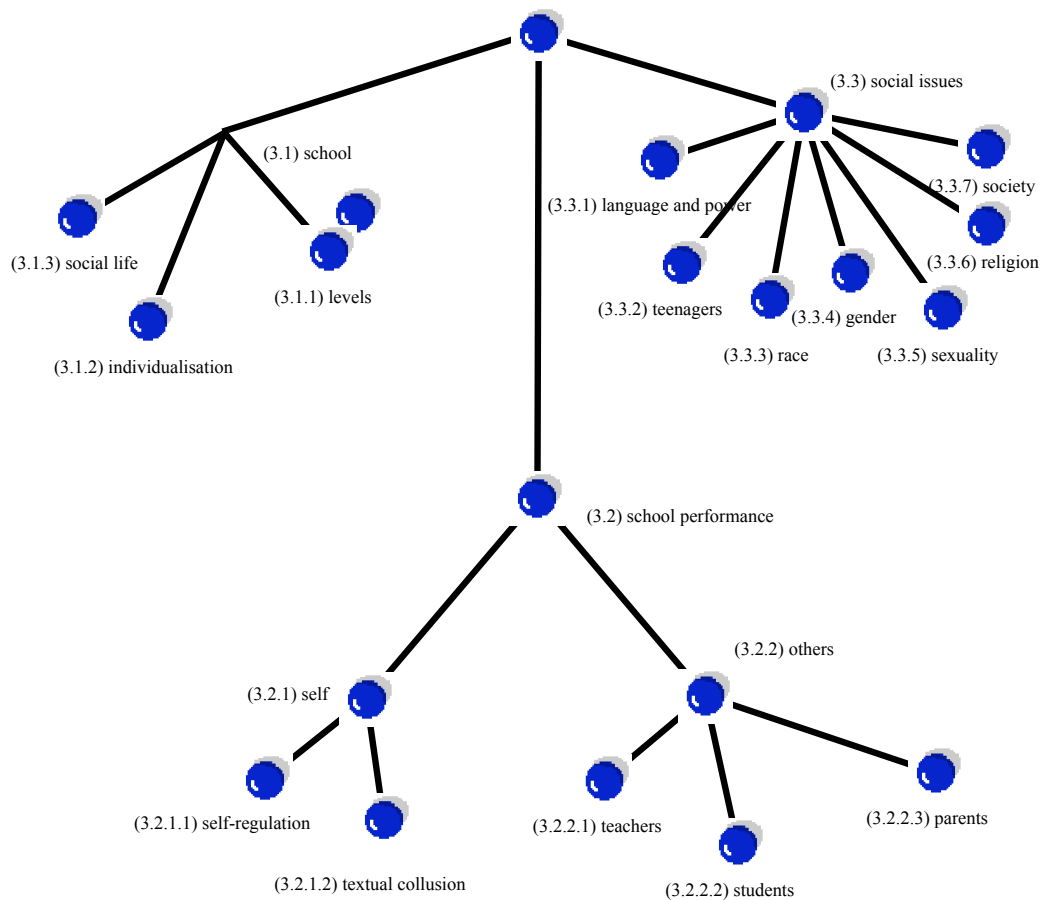


Figure 3: *NVivo* visual model of tree node 'Positioning'

There are a number of layers within this node, which begin with three child nodes which were developed as major topics within the data – school, school performance and social issues. For ease of reading, I take each of these child nodes in the first layer in turn, and describe the layers which sit beneath it.

School (see child node on left of model in Figure 3) – this child node includes three subsequent child nodes which sit beneath it. These nodes are:

- levels – including talk about levels of importance in subjects at school, degrees of value perceived to be placed upon particular aspects at school, and views about the appropriateness of such levels of importance or value at school
- individualisation – including evidence of the importance of individual success and achievement, views about individualistic notions at school

- social life – including talk about social aspects of school, friends, lunchtime activities, conflict and conflict resolution with peers, and views about the importance of social aspects of school.

School performance (see child node in centre of model in Figure 3) - this child node has two subsequent child nodes which sit beneath it, which in turn, have child nodes which sit beneath them. The first layer under school performance includes the two nodes of 'self' and 'others', to draw out accounts of positioning of self and others. Under the 'self' node, there are a further two child nodes:

- self-regulation – including both direct and indirect reference to how the participants regulate their own behavior to fit with school values or discourses
- textual collusion – including evidence showing direct and indirect reference to how the participants collude in texts and contexts at school.

Under the 'others' node, there are three subsequent child nodes:

- teachers
- parents
- students

Each of these child nodes includes accounts of how the participants position the practices and beliefs of these three groups with whom they have contact in the school community.

Social issues (see child node on right of model in Figure 3) – this child node includes seven subsequent child nodes which sit beneath it. These nodes are:

- language and power – including talk about the power of language, use of language to indicate power and views about the importance of language and power relationships
- teenagers – including talk that characterises teenagers as distinct from other groups, so-called typical teenage behavior, views about teenage practices and beliefs, and views about media constructions of teenagers
- race – including talk that refers to racial issues, to different races of people, views about the importance of racial issues, own experiences with race and racism
- gender – including talk referring specifically to gender and gender equity, views about gendered practices and beliefs, views about gender issues, talk about own practices in relation to gender
- sexuality – including specific reference to sexual preference, accounts of sexual behavior, views about sexual behavior of self and peers, and reference to sexuality as a means to discriminate or judge the behavior of self or others
- religion – including talk about religious beliefs and practices of self and others, evidence of religion as a basis for discrimination or high morality, and talk about different religions or spiritual groups
- society – including talk about social issues in society, views about actions related to such social issues, talk about own experiences of and actions for social causes.

Resistance

This is related specifically to research question 4: *What forms of resistance to hegemonic discourses are evidenced through these accounts at this institutional site, and how do they impact on the enactment of a critical agenda?*

In addressing this question, I looked to the data for instances of resistance to hegemonic discourses in the participants' accounts of self and others. I explored ways in which multiliterate practices were used to break down dominant structures of binary thought or hegemonic assumptions about the subject of student or teenager or the discourses of school. I looked for accounts of how resistance was perceived and played out. I explored instances of resistant readings of self, whereby participants challenged their subjectification processes and began to re-account for themselves. For example, some of the participants were unwilling to interrogate self in any critical way, nor to criticise the discourses of schooling at play in their lives, yet they were able to readily resist discourses in popular media such as magazines, which they found inappropriate and stereotypical.

This node has two child nodes which sit beneath it (see Figure 4). It was developed to track evidence of resistance to hegemonic discourses in society, including institutional discourses of schooling.

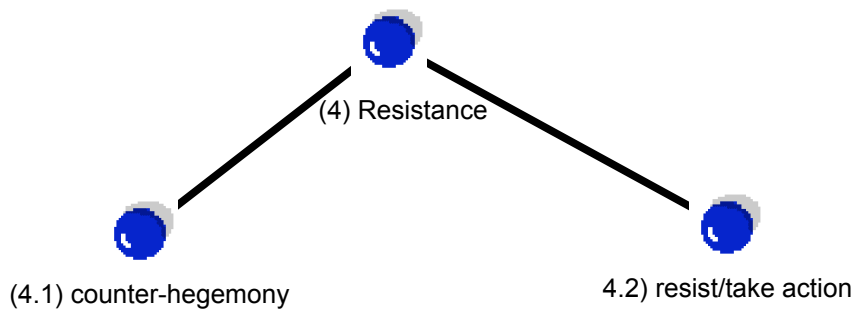


Figure 4: NVivo visual model of tree node 'Resistance'

The two child nodes are:

- counter-hegemony – including resistance to hegemonic discourses of teenagers as rebellious and youth as cyber-intense
- resist/take action – including evidence of the participants resisting institutional discourses, evidence of social action for social justice causes in the participants' life-worlds, and evidence in the participants' talk that shows resistance to racism, sexism, classism and so on.

Locating the discourses within the data

As explained earlier, I used a non-linear approach to my data coding and analysis, whereby I moved between the raw and transcribed data, the coded categories within the software, and the macro discourses informing the study and the context within which it lies. Once I had developed the hierarchical tree nodes and coded the data accordingly, I looked again to the broader social theoretical issues (Fairclough, 2003) which informed this study. During the analysis, I manipulated my coded categories (nodes) to sit loosely under three organising discourses which were recurring throughout the data. These are the discourses of youth, the intentional discourses of schooling and the discourses of society. There is considerable overlap between these three areas, therefore some coded categories were considered under more than one area in my analysis. For example the node 'Intellectualisation' and its child nodes, were analysed under the 'Intentional discourses of schooling' heading, yet the child node of 'Positioning self' was considered under both the 'Discourses of youth' and under the 'Intentional discourses of schooling' headings as the talk related to both areas. A feature of the software program enabled me to see such overlaps of codes within any section of the data. Any sections of the transcribed data sets could be viewed with 'coding stripes' along the right-hand side of the document which indicated all codes for that document and hence coding overlaps on any section were clearly apparent.

During my analysis, I looked at each organising principle in turn by generating 'coding reports' using the facility within the software, whereby any chunks of data that I had coded under a particular node could be included in a report which indicated information about the node, the participant, the interview number and the location of the data chunk itself. See Figure 5 below for an example of this information.

Node:	/MDM/technology
Treenode address:	(1 1)
Created:	3/11/2005 - 11:34:53 AM
Modified:	15/11/2005 - 9:46:44 AM
Documents in Set:	All Documents
Document 1 of 13	Interview 1 Matt
Passage 1 of 3	Section 0, Paras 20 to 39, 1583 chars

Figure 5: *NVivo* coding report details

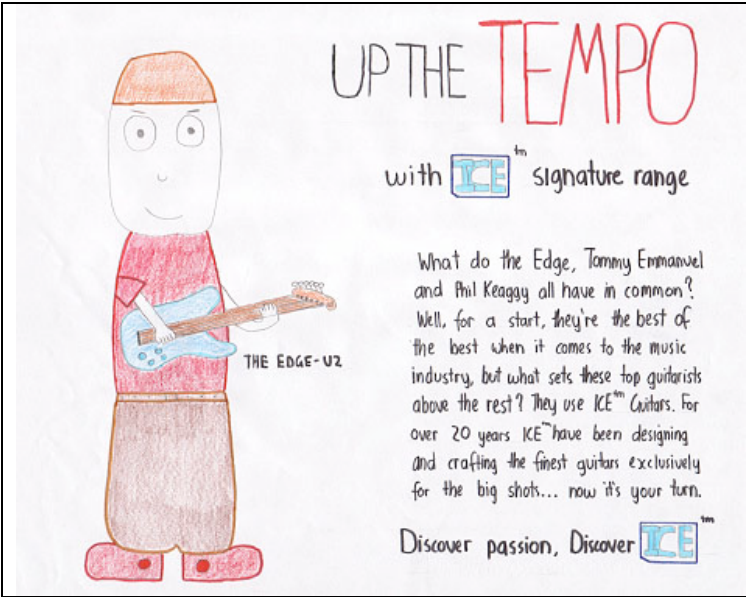
Once I had these reports, I began my fine grained analysis of the data using critical discourse analysis (CDA). My linguistic point of reference is Hallidayan (1978) systemic functional linguistics. My analysis specifically focused upon the linguistic transitivity processes and their participant realisations within the clause (who or what is involved, and what are they doing, saying, being etc), as well as the use of modal adverbs, so to determine how the participants accounted for their practices, which practices were afforded value or were criticised in this interactional context, and how this fits with broader macro discourses of youth culture, schooling and society as the spheres within which these participants live their lives. This ideational function of language is also interested in the meaning relationship between text and context (lexis). I analysed the lexical choices made in the data to indicate how the participants described themselves and others in certain contexts through language, particularly how attributes were ascribed and explained. These lexical choices provided insight into views about issues such as race and gender roles. The interpersonal function of language was also interrogated to identify the roles and relationships which played out within the text. Positions of power were evident through such analyses. This function was particularly important in the interactional interview context. Analysis of the specificities of the texts in this way, allowed me to explore how the participants' language was used to position themselves and others in this interaction, and to legitimise their dominant cultural maps (Hall, Critcher, Jefferson, Clark, & Roberts, 1978).

My analysis then, using Threadgold's (2003) and Butler's (1993) bodily performance and performativity, and Fairclough's (2001) three levels of analysis in CDA, was cognizant of particular micro elements of the data through detailed linguistic and embodied description. These were an interpretation of such descriptions in relation to the specific discursive events and performative contexts in which they were collected and an explanation of how such descriptions and interpretations are related to broader socio-historical discourses of youth, schooling and society (see Ryan, 2007a; 2007b; 2008 for examples of detailed CDA analysis and findings). I consciously moved in, out of and through these various levels of analysis as I made sense of the data and identified the most prevalent discourses emerging from them. This multi-linear approach to data analysis whereby I oscillated between the data and the contexts and texts which influence the participants and the research, was an attempt to maintain relevance, transparency, trustworthiness and consistency (Silverman, 2000) across these various facets of the research. The *NVivo 7* software enabled this multi-linear approach with its linking facility for different types and modes (photos, scanned texts, written documents, transcripts) of data. I include a snapshot of the data analysis below to illustrate how the complex organisation and linking of the data sources were drawn together for analysis.

Sample analysis: Multi-linear pastiche

The data from the Year Eleven participants suggest contradictory accounts about raced, gendered and classed bodies. These students are well aware of 'political correctness' in society and they seem to draw upon the knowledge learnt at school which focuses on social justice and equality to assure me as educator and researcher that they believe in such

ideals. For example when discussing Matt's text (produced in class and used as a prompt in interview 1) I pose a question to elicit a resistant reading of his text.



Text 1

MR: Do you think you could have represented other cultural groups?

MC: Well, I mean I'm not racist... (Matt)

Figure 6: Matt's text used as a prompt in interviews

Matt immediately responds on the defensive with strong modality as though such a question calls his moral character into question. Paul is quite able to detect stereotypical images of gender in *Xbox* games and other popular culture texts, and he suggests that marginalised groups may "have to have a bit more talent to be equal, than other groups do". He knows the language of critical analysis and he uses it in this interview situation to ensure that I have a good impression of him as a 'good' boy who believes in the 'right' things, for example, "I believe in equality for everyone, pretty much". The adverbial 'pretty much' is important here, as later it becomes apparent that these beliefs are very much a sliding scale. For example, alongside such unprejudicial claims in these accounts, there are contradictory instances where these participants dismiss racial, gender, class and sexuality issues as overblown and not worth the amount of attention they get in society. In the focus group interview, these participants seem to use the support of their peers to vocalise their views about race, gender and at other times, sexuality. Similarly, popular media reports such as the one represented in Figure 7, use narrative and linguistic tools such as sarcasm, irony and metaphor to 'rally together' support for 'common-sense' views.

“The rise and fall of One Nation and the emergence of so-called dog-whistle politics around asylum seekers and boatpeople have revealed, so the story goes, a nation stricken with racism in its very heart. All it takes is the provocations of a few shock jocks, and the national unconscious is unleashed, like a baying wolfhound” (Burchell, 2006).

In this article, Burchell uses emotive (often sarcastic) language and metaphor to describe one viewpoint that arose from the Cronulla riots. His 'so the story goes' as a modifier for 'have revealed' places him outside of such a viewpoint, yet his prose which magnifies the notion of a 'racist core' in Australia is much more sensational and effective for publicity in a newspaper article, than a dry report which discounts such a view.

Figure 7: Discourse analysis of prominent news article during data collection

Text 2

MR: So do you think you are shaped by race issues in broader society?

MC: Well there's this kid I know, and his whole thing ... like his whole world is shaped by being black ... and ...

MR: Well that's...

MC: Yeah but he plays on it...

PH: Yeah he plays on being black... I have this theory that black people can get money just by complaining about things, so they'll have a hundred percent tolerance as long as they can keep on getting money for complaining, for example um...I can't think of an eg right now. And like the women's lib thing, it's still going ... the ridiculous claims ... 'cause they know they can make financial gain easier, so ...

MR: How are they making financial gain?

PH: They sue companies...

MR: So you don't think those things are important?

MC: I do

PH: I think they're claiming that they want acceptance, but what they do want is special treatment...not all woman, I don't want to generalise, but I'm saying people who want to go out and complain about policemen instead of policewomen and men make more money...I don't think they're trying to get acceptance, they're just trying to get money.

MC: I think that fundamentally they'd like to be accepted, but they just can't see it happening and there's always gonna be other people searching for ... money probably

MR: Ellen, what do you think about this – a female perspective?

EP: Um, when we talk about this I feel like one of the guys. I don't feel like I get treated any differently. (*focus group*)

Matt introduces the attribute 'whole' up front to emphasise that this kid needs to *get over* the fact that he's black. When I interject, he justifies his view using the figurative material

process 'he *plays* on it'. This suggests that 'the kid' is metaphorically 'playing the race game' – a visible discourse in society where if you identify as Indigenous you can get anything you want, including handouts. Matt's low modality (probably) indicates his dilemma of wanting to be seen as a 'good' student who is politically correct and in synch with school values (Lesko, 2001), while at the same time colluding with his peers about unfair monetary claims by certain groups. He doesn't want to offend, yet he normalises gender terms without interrogation.

Elements of peer collusion are evident as Paul steps in to support and embellish Matt's argument (pitting youth against adult). 'Us' against 'them' is a familiar discourse in generational debates, and as the adult interviewer, I am positioned in this context as the 'them' or the 'other' who is questioning their beliefs and ideals. So even though Matt does not mention 'the kid's' name, Paul actively takes up the story as though it is a familiar and therefore tellable tale. He uses it as a way to explicate his 'theory' about black people. Paul minimises the importance of race issues and the disempowerment of Indigenous people by showing outrage that 'black people can get money' *just* by complaining. His use of the mood adjunct 'just' indicates his vocalised position on Indigenous issues. He reinforces this argument through his use of the comparative 'like' to draw parallels with other participant groups that are also posited as financial drains on society, such as 'women's lib groups'. His use of the attribute 'ridiculous' to describe the claims that such groups make, indicates his lack of sympathy, or at least unwillingness to financially support, disempowered groups in society.

It is accepted in these accounts that one can dismiss race and gender issues as money-spinners, a reductionist account (Young, 1990) that is shaped by institutions such as the family and the school (Blackman, 1998). Matt interjects to state that he cares about such issues (politically correct), yet his language indicates he is positioning women as a homogenous group (they) who want and need to be accepted but won't ever gain such acceptance. Paul seems to accept some women (the ones who don't complain), yet not those who are outspoken about 'ridiculous' claims – a sliding scale of acceptance. Ellen dutifully plays the game when asked to comment, by not offending anyone, not complaining, and identifying with the boys through her behavioural process 'feel like' (one of the guys). Ellen's response is consistent with findings from other research studies which suggest that a belief in individual agency means that the impact of gender is downplayed in her life (see Dwyer & Wyn, 2001; Roberts & Sachdev, 1996; Willis, 1998).

Because subjectivities are formed within discourses, they "remain subject to the complex discursive interplay, strategic repositioning and repetitive regulations" (Nayak & Kehily, 2006 p.467). These students can be seen as positioning self in relation to raced and gendered 'otherness' which they disavow. They implicitly suggest through these accounts that *they* would never be claiming money for *no reason*, nor would they complain about *historical* issues which are not relevant in post-feminist and enlightened contemporary society.

Discussion

The sample pastiche (above) shows that a scanned text created by one participant has been used to draw out the participant's views about textual ideologies and text partiality (key elements of critical literacy and English). This text is not particularly significant on its own, nor does it suggest evidence of racist or gendered views. Thus, on a first sweep of this data source, I considered it unlikely to be included, and the *NVivo* software would not automatically link this text to sections of the transcripts. However, upon analysis of this section of the interview transcript coded under 'positioning-social issues-race' in *NVivo*, the significance of the picture became apparent and I was able to link it to that section and other sections within that node for analysis. This representation of the data shows how this seemingly innocuous text has prompted a rich discussion about race and gender in broader society through this and other interviews. This process illustrates how *NVivo* is very useful to link multi-modal data, and how new elements can easily be added to nodes. Yet it also shows that the researcher must engage in rich interpretive analysis to make links across the major discourses or themes of the study.

The discourses drawn out of the news article (Figure 7) and the participants' interview transcripts would not be possible just by using qualitative data analysis software. The references to racism are obvious, and can be coded in that way in the software, however the nuances of language use made visible using CDA suggest particular ideologies and purposes are at play in these texts. So too, the use of CDA illuminates socio-historical discourses from the literature that inform the analysis, which would not be evident in a straight coding approach using *NVivo*. The software was useful to link this news article to relevant sections of transcript and scanned data, and it enabled multiple overlapping nodes (for example, race, gender, textual collusion) to be drawn into the analysis. However a rich, interpretive analysis is necessary to analyse these data in relation to the broader discourses of the study.

Conclusion

This article has provided a detailed description of how a qualitative data analysis software program was used to organise and link data in a post-structural study about the civic participation of youth, to enable rigorous analysis of multiple data sources. The binary notion which suggests *either* using software and saving time *or* coding the data manually to enable rich, interpretive analysis has been problematised here. The detailed examples used to make visible the coding process have shown that the benefits of quick retrieval, efficient linking of data and creating illustrative models, do not preclude contextualised and rigorous qualitative inquiry. Multiple texts could be efficiently linked to create a pastiche of (re)presentation of the contextual worlds of the participants through critical discourse analysis. Software programs such as *NVivo* do not do the intellectual work for the researcher, nor do they assume context free analysis; rather they facilitate creative management of multiple data sources and enable researchers to make visible their methodological processes for a more 'trustworthy' study. By making visible my coding

processes, I have provided other potential users of qualitative data software a rich, illustrative example of possible processes to enable rigorous analysis.

References

- Blackman, S. J. (1998). The school: 'poxy cupid' An ethnographic and feminist account of a resistant female youth culture: The new wave girls. In T. Skelton & G. Valentine (Eds.), *Cool places: Geographies of youth cultures* (pp. 207-228). London: Routledge.
- Butler, J. (1993). *Bodies that matter: On the discursive limits of "Sex"*. New York: Routledge.
- Cope, B., & Kalantzis, M. (2000). Introduction: Multiliteracies: The beginnings of an idea. In B. Cope & M. Kalantzis (Eds.), *Multiliteracies: Literacy learning and the design of social futures* (pp. 3-8). Melbourne: Macmillan.
- Cousins, K., & McIntosh, W. (2005). More than typewriters, more than adding machines: Integrating information technology into political research. *Quality & Quantity*, 39, 581-614.
- Dreyfus, S. E., & Dreyfus, H. L. (1986). *Mind over machine: The power of human intuition and expertise in the era of the computer*. Oxford: Blackwell.
- Dwyer, P., & Wyn, J. (2001). *Youth, education and risk: Facing the future*. London: Routledge Falmer.
- Education Queensland. (2006). Productive pedagogies. Retrieved July 3, 2006, from http://education.qld.gov.au/public_media/reports/curriculum-framework/productive-pedagogies/html/int-intro.html
- Emmison, M., & Smith, P. (2000). *Researching the visual*. London: Sage.
- Fairclough, N. (2001). The discourse of new labour: Critical discourse analysis. In M. Wetherall, S. Taylor & S. J. Yates (Eds.), *Discourse as data: A guide for analysis* (pp. 229-266). Milton Keynes, UK: The Open University.
- Fairclough, N. (2003). *Analysing discourse: Textual analysis for social research*. London: Routledge.
- Fielding, N. G., & Lee, R. M. (2002). New patterns in the adoption and use of qualitative software. *Field Methods*, 14(2), 197-216.
- Fuller, G., & Lee, A. (1997). Textual collusions. *Discourse: Studies in the Cultural Politics of Education*, 18(3), 409-424.
- Giroux, H. (2000). *Stealing innocence*. New York: Palgrave.
- Glaser, B. (2003). *The grounded theory perspective ii: Descriptions of remodelling of grounded theory methodology*. Mill Valley, CA: Sociology Press.
- Göransson, K. E., Ehrenberg, A., Ehnfors, M., & Fonteyn, M. (2007). An effort to use qualitative data analysis software for analysing think aloud data. *International Journal of Medical Informatics*, 76S, S270-S273.
- Hall, S., Critcher, C., Jefferson, T., Clark, J., & Roberts, B. (1978). *Policing the crisis: Mugging, the state, and law and order*. London: Macmillan.
- Halliday, M. A. K. (1978). *Language as social semiotic: The social interpretation of language and meaning*. London: Edward Arnold.
- Holstein, J. A., & Gubrium, J. F. (1997). Active interviewing. In D. Silverman (Ed.), *Qualitative research: Theory, method and practice* (pp. 113-129). London: Sage.

- Johnston, L. (2006). Software and method: Reflections on teaching and using QSR NVivo in doctoral research. *International Journal of Social Research Methodology*, 9(5), 379-391.
- Kelle, U. (2004). Computer-assisted qualitative data analysis. In C. Seale, G. Gobo, J. F. Gubrium & D. Silverman (Eds.), *Qualitative research practice* (pp. 473-489). London: Sage Publications.
- Kellner, D. M. (2002). Technological revolution, multiple literacies, and the restructuring of education. In I. Snyder (Ed.), *Silicon literacies: Communication, innovation and education in the electronic age* (pp. 154-170). London: Routledge.
- Kenway, J., & Bullen, E. (2001). *Consuming children: Education-entertainment-advertising*. Buckingham: Open University Press.
- Klein, N. (2000). *No logo*. London: Flamingo.
- Kress, G., & van Leeuwen, T. (1995). *Reading images: A grammar of visual design*. New York: Routledge.
- Kress, G., & van Leeuwen, T. (2001). *Multimodal discourse: The modes and media of contemporary communication*. New York: Oxford University Press.
- Landow, G. P. (2006). *Hypertext 3.0: Critical theory and new media in an era of globalization*. Baltimore: John Hopkins University Press.
- Lankshear, C., & Knobel, M. (1997). Literacies, texts and difference in the electronic age. In C. Lankshear (Ed.), *Changing literacies* (pp. 133-159). Buckingham: Open University Press.
- Lather, P. (1991). *Feminist research in education*. Geelong: Deakin University Press.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. New York: Cambridge University Press.
- Lee, R. M., & Fielding, N. G. (1991). Computing for qualitative research: Options, problems and potential. In R. M. Lee & N. G. Fielding (Eds.), *Using computers in qualitative research* (pp. 1-13). London: Sage.
- Lesko, N. (2001). *Act your age! A cultural construction of adolescence*. New York: Routledge Falmer.
- Luke, C. (2000). Cyber-schooling and technological change. In B. Cope & M. Kalantzis (Eds.), *Multiliteracies: Literacy learning and the design of social futures* (pp. 69-91). Melbourne: Macmillan.
- Miller, G., & Fox, K. J. (2004). Building bridges: The possibility of analytic dialogue between ethnography, conversation analysis and Foucault. In D. Silverman (Ed.), *Qualitative research: Theory, method and practice* (2nd ed., pp. 35-55). London: Sage Publications.
- Nayak, A., & Kehily, M. J. (2006). Gender undone: Subversion, regulation and embodiment in the work of Judith Butler. *British Journal of Sociology of Education*, 27(4), 459-472.
- Pais, J. M. (2003). The multiple faces of the future in the labyrinth of life. *Journal of Youth Studies*, 6(2), 115-126.
- Prain, V. (1997). Textualising yourself in research: Some current challenges. *Curriculum Studies*, 29(1), 71-75.
- Roberts, H., & Sachdev, D. (Eds.). (1996). *Young people's social attitudes*. Ilford: Bernados.
- Ryan, M. (2007a). *Critical pedagogy and youth: Accounts of enactment in multiliterate culture*. Unpublished doctoral thesis, Griffith University, Brisbane.
<http://www4.gu.edu.au:8080/adt-root/public/adt-QGU20081219.124516/>

- Ryan, M. (2007b). Critical pedagogy and youth: Negotiating complex discourse worlds. *Pedagogy, Culture and Society* 15 (2), pp. 245-262.
- Ryan, M. (2008). Youth and the critical agenda: Degrees of proximity and distance. *Australian Educational Researcher* 35(2), 71-88.
<http://www.aare.edu.au/aer/online/0802e.pdf>
- Seidel, J. V., & Kelle, U. (1995). Different functions of coding in the analysis of textual data. In U. Kelle (Ed.), *Computer-aided qualitative data analysis: Theory, methods and practice* (pp. 52-61). London: Sage.
- Silverman, D. (2000). *Doing qualitative research: A practical handbook*. London: Sage Publications.
- Snyder, I. (2002). Communication, imagination, critique. In I. Snyder (Ed.), *Silicon literacies: Communication, innovation and education in the electronic age* (pp. 173-183). London: Routledge.
- Thomas, L. F., & Harri-Augstein, S. (1985). *Self organised learning: Foundations of a conversational science for psychology*. London: Routledge and Kegan Paul.
- Thompson, R. (2002). Reporting the results of computer-assisted analysis of qualitative research data. *Forum: Qualitative Social Research*, 3(2). <http://www.qualitative-research.net/index.php/fqs/article/viewArticle/864/1878>
- Threadgold, T. (2003). Cultural studies, critical theory and critical discourse analysis: Histories, remembering and futures. *Linguistik Online*, 14(2). http://www.linguistik-online.de/14_03/threadgold.html
- Tomlinson, C., & Lynch-Brown, C. (1996). *Essentials of children's literature* (2nd ed.). Boston: Allyn & Bacon.
- White, R., & Wyn, J. (2004). *Youth and society: Exploring the social dynamics of youth experience*. South Melbourne: Oxford University Press.
- Willis, S. (1998). Teens at work, negotiating the jobless future. In J. Austin & N. M. Willard (Eds.), *Generations of youth: Youth subcultures and history in 20th Century America* (pp. 347-357). New York: New York University Press.
- Young, I. (1990). *Justice and the politics of difference*. Princeton: Princeton University Press.

Dr Mary Ryan is a senior lecturer in literacy in the School of Cultural and Language Studies in Education at the Queensland University of Technology in Brisbane. Her main interests lie in the areas of multiliteracies, youth culture and civic participation, critical pedagogy, multimodal design repertoires, post-structural inquiry and critical discourse analysis.

Email: me.ryan@qut.edu.au