Introduction

Why critical literacy?
As we approach the end of the millennium it is becoming clear that in order to effectively operate in post fordist cultures citizens must have reflexive and critical orientations as they constantly renew and expand their range of identities and positions across institutional, community and personal contexts. We would argue that successful participation across such a range of social contexts entails the expansion of linguistic repertoires and discursive resources. Further we would argue that conscious awareness of, and control over, these discursive technologies would enable social subjects to recognise the ways in which they can both position and be positioned, how identities are constructed and reconstructed and how an understanding of the relationship between language, knowledge and power is a necessary (though not sufficient) basis for social change.

Understanding the relationship between language, knowledge and power requires the recognition of language as social semiotic and literacy as social practice. It requires the understanding that language is a social process which both shapes, and is shaped by, the cultural and social context in which it occurs (Halliday, 1978) and that this relationship between language and context is dynamic, that it is constantly evolving. This understanding, theorised within systemic functional linguistics, (see Halliday, 1985; Martin, 1992) allows us to trace the social - and hence, ideological, - nature of language practices within the institutionalised context of school. It also allows us to account for the changing nature of these practices. In
particular it enables us to analyse the school's recontextualisation of disciplinary knowledge and so provide socially motivated linguistic descriptions. Recently, research in the field of educational linguistics has begun to map the subject specific literacy demands of the school curriculum. This research, which has been conducted largely within the Australian context, both at primary and secondary school levels, has led to a growing awareness that different curriculum areas make use of different types of texts. In other words texts (in the sense of any stretch of spoken or written language) are differently shaped depending on the field in which they are produced, the purpose for which they are being used, and the people who are engaged in their construction and deconstruction (e.g. Martin; Rothery; Macken-Horraric; Veel and Coffin, 1996).

This paper argues that teachers' growing awareness of the constructed and social/ideological nature of text will facilitate the development of critically literate subjects. As part of this argument, the paper first outlines a range of literacy models that have been influential in the twentieth century and which are shown to be inadequate models for producing critically literate subjects. Against this background the paper then considers a more recent model for school based literacy and in particular examines how the model works to transform educational practice through its application of linguistic theory to a school context. In order to illustrate the process of applying linguistic theory to a classroom context the author will draw on a major Australian research project - the Write it Right project - and show how new pedagogic practices can be developed in order to take account of socially based linguistic analysis of subject specific texts. Although the Write it Right project researched a range of curriculum areas, for the purposes of this paper, a detailed account of the investigations into the curriculum area of school history will be provided. Both the linguistic research phase (in which the literacy demands of school history are mapped) and the action research phase (in which professional development programs and classroom interventions are designed as a result of the linguistic analysis) will be described. It will be argued that the new literacy model has the power to transform literacy (and indeed learning) practices through its facilitation of students' critical orientation towards, as well as control over, curriculum knowledge. Hence it will be argued that the model has the potential to create critically literate subjects. Future directions at both a theoretical and applied level will also be considered.

Models of School Literacy - constructing a literate subject

From a sociological perspective the history of literacy teaching can be seen as "a matter of how various theories and practices shape what people do with the technology of writing - and of how, once institutionalised, these selections and constructions serve particular
class, cultural and gendered formations" (Luke, 1996). A brief history of literacy teaching in Australia illustrates this point. In the early part of the twentieth century, school practices conceptualised writing mainly as a mechanical skill and many people obtained only a fairly minimal level of literacy. Under this system pupils acquired the mechanical, encoding/decoding aspect of the writing technology but there was little encouragement to make use of, and experiment with, its meaning making dimension: "For most of the primary years, writing consisted of copying improving expressions, chosen both for their moral uplift and for the opportunity they afforded to perfect handwriting skills. Composition, to the extent that children practised it at all, involved writing formal letters or short improving pieces on moral themes" (Christie, 1990, p. 7). We can say, then, that during this period of literacy education the writing system served to construct a minimally literate, 'reproductive' pedagogic subject and at the same time served to fashion a particular moral consciousness.

In the 1960's, psychological and psycholinguistic models of cognitive and language development led to new uses for the writing system. In 'personal growth' models it became a resource for the development of 'integrity', 'creativity', 'spontaneity' and 'individuality' (e.g. Dixon, 1967). In these models language use was individual property and the technology was exploited for constructing an 'inner self'. In the 1980's and 1990's, many of the arguments of the 'personal growth' or 'expressive' movement have been maintained in process based models of writing (e.g. Graves, 1983; Murray, 1984). The approach has promoted the belief that "children could have control over what they wrote and use writing to discover their own inner meanings.......she (the process teacher) can remain loyal to views of personal expression, maintaining and promoting a view of the child as self motivating and self-discovering" (Czerniewska, 1992, p. 89).

In process approaches to writing, language and literacy are theorised by reference to the internal states of the human subject. We would argue that theorising language and literacy in this way leads to school literacy practices that place an unreasonable degree of responsibility on the pedagogical subject for discovering their own 'natural' and 'creative' uses of language (often 'at their own pace'). By not focusing on how texts work in the wider society and by not making explicit the institutional power of some texts over others, in other words by not making accessible "the selective tradition of texts, procedures and moral identities" (Luke, 1996, p.318), we would also argue that these practices lead to the marginalisation of particular groups of students. As pointed out by Luke, citing the work of Bernstein (1990) and Bourdieu and Passeron (1990) it is "the invisibility of classroom rules and criteria governing worth and value of specific texts" that leads to disenfranchisement (Luke, 1996, p. 318). And as Martin points out in the context of school English "when
it comes to public examination procedures, only one reading position (and therefore one kind of written response - my words) is highly valued, namely that of mature, anglo, middle class subjects with modernist sensibilities" (Martin, 1996, p. 148).

Literacy practices shaped by child/learner centred ideologies thus serve to minimise the role that teachers can play in teaching literacy, particularly the role that subject specialists can play: language viewed as an intra-organistic rather than as a social phenomenon (Halliday, 1978) makes invisible its mediating role in the construction of knowledge across the range of curriculum areas. Thus, even if it is decided that children should be given explicit guidance in their use of the writing system, it is seen as the responsibility of the primary teacher or the secondary school English teacher. As a result, many subject teachers continue to remain untrained and unaware of the role that language plays in their specialist area, unable to talk about, critically reflect on and teach the privileged text types that are critical for their students' successful apprenticeship into the curriculum area. Not surprisingly, therefore, where there have been attempts to teach 'language across the curriculum' the subject teacher's lack of training has limited their success. In some cases the resultant practices are misleading. The recasting of scientific knowledge as personal narrative (for example, 'A day in the life of Emma the Egg') is one example of a practice which obscures rather than makes transparent the role of subject specific language.

Towards a New Model of Literacy - constructing a critically literate subject

From the account of literacy teaching in Australian schools outlined above we can say that for most of this century the full potential of the writing system has not been utilised. We can also say that the models of literacy informing practice have failed to make students critically aware of the way in which written language functions across a range of social and cultural contexts. In the last two decades (the 80's and 90's), however, views of learning and attitudes to the role of language and literacy in the learning process have begun to change. Increasingly, in the British as well as Australian contexts, there has been a call to replace the 'child centred' ideology with "one that emphasises the socio cultural and discursive bases of knowledge and learning" (Edwards and Mercer, 1987, p. 168). Influencing this call has been the rediscovery of Vygotskian notions of the development of thought, as well as the work of Bruner in the field of social psychology. Vygotsky, for example, advocated that "the true direction of the development of thinking is not from the individual to the social, but from the social to the individual" and that "thought development is determined by language, that is, by the linguistic tools of thought and by the socio cultural experience of the child".

Another major influence on the call for approaches to discursively based knowledge has been the increasing awareness that "an understanding of the social order is most conveniently and naturally achieved through a critical awareness of the power of language" (Candlin, 1989, p. ix). In 'Language and Power' (1989), Fairclough, the critical linguist, argues that "ideologies are closely linked to language, because using language is the commonest form of social behaviour, and the form of social behaviour where we rely most on 'common sense assumptions'" (Fairclough, 1989, p. 2). 'Common sense assumptions' are, according to Fairclough, ideological beliefs that have been 'naturalised'. Fairclough proposes that an important goal of education should be to reveal the naturalised ideologies inherent in language use: "it is no part of education to present to children any element of their humanly produced and humanly changeable social environment as if it were a part of the natural environment over which they have no control" (Fairclough, 1989, p. 239).

A third influence on the call for discursive approaches has been the recognition that low literacy levels tend to correlate with general educational failure. Within contemporary 'western style' educational systems written language is the main means of both accessing and displaying knowledge and students are increasingly expected to have control over a wide variety of written text types. It has therefore been of great concern to many academics, teachers and parents, that research findings (e.g. Martin and Rothery, 1981, 1984) indicate that students have little opportunity to practice the full range of school text types and that there is minimal guidance in, or explicit teaching of, these text types. Martin and Rothery's research (Martin and Rothery, 1984, Rothery 1990), for example, found that primary children were largely confined to practising story or recount text types and that "reading and writing genres that were important in learning Science and Social Science........were largely ignored" (Rothery, 1996).

It is under these influences that new literacy pedagogies have begun to be developed. These new pedagogies are designed to provide students with both a control over, and a critical orientation towards, texts that are central in the construction of curriculum knowledge. As mentioned earlier, these pedagogies have often been developed in the context of research projects within the field of systemic linguistics, the Language and Social Power project and the Write it Right project being two examples. Both these projects were based at the Disadvantaged Schools Program in the Metropolitan East Region of Sydney, Australia. Whereas the Language and Social Power project focused on key text types in the primary school, the Write it Right project researched the literacy demands of a range of junior secondary subjects. It is the Write it Right project- and in particular a report on its investigation into school history - that will be the focus of
the next section of the paper.

An Investigation into School History (The Write it Right Project)

The investigation into school history undertaken as part of the Write it Right Project aimed to answer four main research questions and to then use these answers to design and deliver professional development programs as well as implement classroom interventions. The research questions were as follows:

- What kinds of texts and language resources do students need control over in order to be successful in junior school history?
- What is the relationship between these texts and language resources and the wider social and cultural context?
- What kind of pedagogy can integrate the teaching and learning of historical knowledge with the teaching and learning of textual knowledge?
- How can students develop a critical orientation towards text and knowledge?

The linguistic phase

The linguistic phase of the investigation into school history was concerned with describing the literacy practices of apprentice historians and was focused on research questions 1 and 2. The methods used were as follows.

Methods

Data collection

More than a thousand texts encountered by students in their reading practices and required of students in their writing practices were collected from three private schools and two state schools in Sydney and from across thirteen Disadvantaged Schools 1 in the Metropolitan East Region of Sydney.

National outcome statements, the New South Wales history syllabus, school programs, units of work and assessment tasks were collected from the relevant authorities as well as the schools mentioned above.

Semi structured interviews were conducted with academics in Education and History departments, history teachers, members of the History Syllabus Committee and the National Association of History teachers.

Method of Analysis
Analysis of Written Texts

Texts were analysed using the analysis techniques available from within systemic linguistics. Systemic linguistics provides a powerful model of how language works in a social and cultural context. It brings together the linguistic and the social in a coherent and systematic manner as illustrated in Figure 1. In Figure 1 we can see how social purpose is related to textual organisation (genre) and social context, in terms of subject matter (the Field), social relations between writer and reader (the Tenor) and medium (the Mode), is related to choices made at the level of vocabulary and grammar (the lexicogrammar).

Texts were analysed from the point of view of their overall organisation or structure (generic structure), their particular combination of Field, Tenor and Mode variables (Register) and their overall grammatical patterning (Lexicogrammar). A brief explanation of each of these analytical tools is provided below.

Generic Structure

Genres can be defined as a staged, goal oriented social processes. They are "referred to as social processes because members of a culture interact with each other to achieve them; as goal oriented because they have evolved to get things done; and as staged because it usually takes more than one step for participants to achieve their goals" (Martin, Christie and Rothery, 1994). An example of a genre in school history is the historical recount where the goal or 'social purpose' is to 'retell events in the past' and the main steps or stages it moves through to achieve its purpose can be described as 'Background' and 'Record of Events'. A 'Deduction' stage is optional.

Register and Choices in the Lexicogrammar

Register is defined by Halliday as "the configuraton of semantic resources that the member of the culture associates with a situation type. It is the meaning potential that is accessible in a given social context" (Halliday, 1978, p. 111). According to Halliday there are three register variables - three aspects in any social situation that have linguistic consequences. These are Field, Tenor and Mode.

Field can be glossed as 'what the language is being used to talk about' (Egginis, 1994, p. 52). At a grammatical level it has consequences for the kinds of Participants in the text, the Processes that they are involved in and the Circumstances that surround them. For example Participants may be human or non human, they may be specific or generic and they may be 'everyday' or 'specialised'. Processes too can be
realised differently, for example as material or relational. Finally Field will affect choices in Circumstances, such as whether processes and participants are located in time and space.

Tenor can be glossed as the role relationships between the interactants. Tenor is related to the grammar in terms of Mood, Modality and Appraisal choices. Modality and Appraisal resources are resources for grading and colouring a text by, for example, realising greater or lesser degrees of commitment to a proposition and by inscribing or evoking particular judgements and valuations.

Mode can be glossed as the role language is playing in the interaction. In written text mode has consequences for the grammar in terms of message organisation and the degree of lexical density and use of nominalisation. Nominalisation is a process whereby events (normally expressed as verbs) and logical relations (normally expressed as logical connectors) are packaged as nouns, for example 'I came home because......' becomes 'the reason for my return......'.

Analysis of Syllabus and Outcome Statements
Syllabus and outcome statements were also analysed in order to make explicit the language demands of key stages in the junior curriculum. Interview data was used to facilitate this process. Text analysis findings were mapped onto syllabus and outcome statements.

Key Findings

Genre
Analysis of the generic staging of key history texts revealed that apprentice historians have four main social purposes - 'chronicling', 'reporting', 'explaining' and 'arguing'. In other words there are four main genre 'families' in junior secondary school history. These four 'families' can be further subdivided as displayed in Figure 2. Each genre has distinct stages that it moves through in order to achieve its purposes.

Register
Analysis of the register of texts revealed that there are significant shifts in the field, tenor and mode variables as students are apprenticed into increasingly generalised, impersonal and abstract reconstructions of the past.

Lexicogrammar
A range of grammatical resources for construing temporality and causality were found to be central to the construction of historical knowledge as were resources for giving value to the past and construing this process of valuation as 'objective'. It was also found that as texts increase in abstractness grammatical patterns change - for example nominalisation and dense nominal groups become a more common feature.

Relationship of Genre, register and syllabus
It was found that the recording and reporting genres mapped onto syllabus outcome statements for students in years 7 and 8 (approximately ages twelve to thirteen) whereas the explaining and arguing genres mapped onto outcome statements for students in years 9 and 10 (approximately ages fourteen to fifteen). Overall it was found that texts which constructed the past in more generalised, impersonal and abstract ways mapped onto higher level syllabus and outcome statements and were more highly valued by teachers and examiners.

Phase 2 Action Research
The second phase of the project was concerned with developing pedagogic practices that would enable teachers to make explicit the linguistic construction of historical knowledge and enable students to gain control over, and develop a critical orientation to, the literacy practices of school history. This was achieved in the context of professional development programs and classroom interventions as described below.

Professional Development Programs
The professional development program had three main aims. These were to provide teachers with a language for talking about language (a metalanguage), to develop a pedagogy to enable students to access the curriculum (with a critical orientation) and to develop materials for classroom intervention. Each of these aims is elaborated on.

1. Developing Linguistic Knowledge
A main aim of the sessions was to induct teachers into new ways of looking at their subject by developing an understanding of the role played by language in constructing specialist knowledge. This entailed developing a basic understanding of a systemic functional model of language as well as building a set of linguistic terms for talking about key history genres and key lexicogrammatical resources.

2. Developing new Pedagogic Practices
Another important aim of the program was to develop new pedagogic practices for the explicit teaching of history genres, focusing on
generic staging and key language features and relating these back to
the cultural and social context. These new practices drew on the
Teaching/Learning model (see Figure 3) which had been first developed
for teaching literacy in primary school (see Callaghan and Rothery,
1988) and then further modified and adapted over the course of the
Write it Right project for use in a secondary school context. This
model, as illustrated in Figure 3, moves through three major phases -
the Deconstruction Phase (in which the target genre is modelled,
analysed and critically reflected on), the Joint Construction Phase (in
which the target genre is jointly negotiated and publicly written up)
and the Independent Construction Phase (in which groups of students or
individuals construct the target genre). Simultaneously, at all points
of the wheel, the context is set, field knowledge is built and
assessments of students' progress made.

Essentially the Teaching/Learning model is a pedagogy which draws on
insights gained from child language studies (Halliday, 1975; Painter,
1985) as well as from Vygotsky's theories on language and thought
(Vygotsky, 1978). For example the Deconstruction and Joint Construction
phases both emphasise the importance of the teachers' use of modelling
and scaffolding techniques in order to enable children to take on, and
participate in, new forms of discourse.

3. Joint Development of Materials
The third main aim of the program was for the researcher to jointly
develop with the subject teachers a set of materials for use in the
classroom intervention.

Participants
Eleven History teachers and four English as a Second Language (ESL)
teachers from 13 Disadvantaged Schools and three Intensive English
Centres (IEC's) in the Metropolitan East Region of Sydney participated
in the Professional Development Program and Classroom Intervention.

Form and Delivery of the Program
The duration of the program was three days (a total of fifteen hours).
The educational linguist who carried out the linguistic analysis and
description was responsible for the form and delivery of the program.
Input consisted of lectures, discussion and problem solving tasks.

Materials Developed
Researchers and teachers worked together to develop materials in the
form of units of work which were organised around the mandatory
questions of the New South Wales History syllabus. Each unit was
designed to teach control of a particular key history genre and at the
same time explore one of the mandatory questions through both oral and
written text. Tasks were designed to emphasise the social nature of
text and to help students to see how a text positions the reader to
interpret the past in a particular way.
Classroom Intervention
The classroom intervention involved researcher and classroom history teacher jointly implementing new pedagogic practices based on the findings of the linguistic research. The duration of the intervention varied from four weeks to ten weeks although the presence of the researcher was limited to five to ten lessons. During the intervention phases materials were modified and changed.

Participants

Three IEC classes, five year 7 classes and three year ten classes were drawn from the same thirteen DSP schools and IEC centres as the teachers participating in the professional development program.

Pre and Post tests
At the beginning and end of the classroom intervention students were given the task of writing the target genre (for example a historical recount). Their texts were analysed in terms of generic staging, register and lexicogrammatical features and the pre and post versions compared. Almost without exception post test texts were more effectively structured and grammatically patterned. Most importantly students now had a language for talking about language and were able to consciously reflect on their texts.

Evaluation of Classroom Intervention
An independent evaluation study was carried out by a team of educational linguists at Wollongong University. This evaluation was largely qualitative in approach and documented the perceptions of the participants in terms of the changes the program had made to their views on language and its role in the teaching/learning of subject specific knowledge. The majority of participants felt that their views had changed and that as a consequence their classroom practices had benefited.

Discussion

The research project described here was designed to provide insight into the way in which functional linguistics can be applied to the school context in order to change literacy practices within a curriculum area. It showed how the first 'linguistic' phase of the project answered the research questions 'what kinds of texts and language resources do students need control over in order to be successful in junior school history'? and 'what is the relationship between these texts and language resources and the wider social and cultural context'? It then showed how the Action research phase of the
project responded to the question of pedagogy and the task of integrating the teaching and learning of historical knowledge with the teaching and learning of textual knowledge. Finally the paper reported on the classroom intervention which was designed to help students develop a critical orientation towards text and knowledge (the fourth research question).

The process of the linguistic analysis reported on and the incorporation of the results of this linguistic analysis into the development of professional development programs and classroom intervention makes an important contribution to the field of linguistics, particularly critical linguistics. As Martin points out "where critical linguistics has fallen short of evolving into a form of social action lies in its observer as opposed to an intruder role. Even in educational contexts critical linguists have tended to stand back and let teachers and consultants do the work of changing educational transmission......being somewhat reluctant to shunt themselves between theory and practice". (Martin, 1992, pg. 587)

In the Write it Right project linguist and teachers jointly developed classroom materials drawing on the results of an extensive linguistic analysis of a curriculum area (see Coffin, in press, for a full report on the literacy demands of school history). Linguistics, in other words, became a form of social action in which a model for teaching critical literacy and learning was developed. This model, we would argue, has far greater potential for producing critically literate subjects than alternative models of literacy pedagogy such as those reviewed earlier in the paper. There are three main reasons for this.

The first reason is the model's linguistic underpinning; one of its key principles is that in order to teach the literacy demands of a subject effectively and critically the subject teacher must have access to a rigorous and systematic description of the key genres and language resources of a curriculum area and understand the social and ideological dimensions of this language use.

The second reason that makes the literacy model powerful is the way in which it integrates learning knowledge with learning to control text and language. This enables students to develop a critical orientation to knowledge as well as the literacy practices that are privileged in a particular curriculum area. For many subject teachers language is separate from knowledge. Genres are seen as arbitrary sets of conventions, a set of formal structures into which meanings are poured rather than as meaning making resources in themselves. But, as Martin explains, "What happened for example in Joan of Arc's life is one kind of meaning; the way we present it - as part of a story or part of an essay - is another." (Martin, Christie and Rothery, 1994)
Finally the literacy model presented here has the potential for producing critically literate subjects because it make the invisible visible. It teaches about language and knowledge explicitly (it develops a language for talking about language) and in this way it can make visible "the classroom rules and criteria governing worth and value of specific texts, procedures and moral identities" (Luke, 1996, pg. 318). It is only then that students are in a position of choice - either to take up - or resist and subvert - the institutionally privileged genres and registers.

References


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1 The Disadvantaged Schools Program was established across Australia in 1974 in order to specifically and exclusively address the educational disadvantages experience by students from low socio-economic backgrounds.

1 Processes, Participants and Circumstances are examples of the functional terms used to describe grammar within a functional model of language.

1 Intensive English Centres (IEC's) are special centres that were established to help children from language backgrounds other than English enter the mainstream Australian Education system.