

CHILDREN, WORD PROCESSORS AND GENRE

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‘Any study of the way children learn to take on particular forms of language needs above all to examine... the meanings that they are making’ (Barrs, 1994, p. 256)

SYNOPSIS

In a study of groups of children using a word processor to create text of specific genres, children’s dialogue was used as evidence of linguistic and cognitive processes. By employing an analytical framework which draws both from linguistics and from a neo-Vygotskian model of cognitive psychology, the study reveals that:

- the kinds of talk used during the construction of text by groups were, to some extent, independent of the genre of text being created;
- the finished texts contain traces of multiple authorship, including the appropriation of the teacher’s voice;
- pupils used metalanguage to deal with features of the text;
- pupils showed some awareness of audience;
- there is evidence of the use of genre-appropriate features;
- pupils used various conversational strategies to share in the construction both of talk and of the text;
- groups pursued a conversational strategy of positive politeness through utterances of positive polarity;
- there is evidence of intersubjectivity and the construction of common knowledge amongst group members.

INTRODUCTION

This study describes how groups of children constructed text of a particular genre using a word processor. Using pupil talk as the primary source of evidence, the study applies techniques of linguistic analysis, drawn from sociolinguistics and from critical language studies, and a cognitive model based mainly on a neo-Vygotskian view of teaching and learning, in an attempt to shed light on the linguistic and cognitive processes involved in group construction of text.

Research questions

The study addressed the question:

How do children, working in a small group, create a word processed text of a given genre?

It did this by considering the following supplementary questions:

To what extent do children creating a word processed text of a given genre use metalanguage related to that genre?

What conversational strategies do the children use?

What is the contribution of neo-Vygotskian cognitive processes such as

scaffolding, and the construction of ‘common knowledge’ (Edwards and Mercer, 1987, p. 160) to the production of the finished text?

Is there evidence that intersubjectivity exists within groups?

RATIONALE

In being constrained to write in a given genre, pupils must make linguistic choices. But while, as individuals, those choices will be influenced by their view of the form and function of text of a given genre, that process of conceptualising, choosing linguistic elements and producing text must necessarily alter as a result of the presence of other authors in a group writing exercise. Writing is an exercise in creating meaning, but the presence of other writers changes the context of the activity, as well as altering both the process of making linguistic choices and the social context within which the activity takes place.

At the same time, ‘the way in which each writing task is set up will have consequences for children’s ability to control the appropriate genre in terms of what is said, how it is said and in what medium’ (Czerniewska, 1992, p. 145) – including the electronic medium provided by the word processor. That electronic medium, then, alters both the mode and the context of the text. Although the resultant text may be printed, it is created first as an electronic document in an easily manipulated form displayed on a monitor, and the characteristics imparted by the word processor, such as clarity of print, ease of manipulation, and a sense of flexibility and impermanence, contrast with the characteristics of text written or printed on paper. The social symbolism associated with the hardware and the perceptions both of the word processor as a ‘modern’ writing tool, and of the user as a master of the technology (to some degree at least) lead to the concept of that writer as producing technologically influenced text.

The effect of all of this is to invest the word processor with the power to transform the normal classroom writing genres. However, the word processor transforms writing practices outwith the classroom too, thereby altering real world writing genres. If we believe that pupils should be inducted into the extended range of writing genres used outwith the classroom, it is important not only that they are given the opportunity to use these genres, but that we develop an appreciation of how pupils might be helped towards an understanding of them. Rather than have pupils engage in the process of word processing in the hope that they might discover these genres for themselves, a more focused, more productive, and more effective approach might be to induct them into the use of these genres, and the associated cultural practices, by making the characteristics of each genre explicit. Allowing pupils to work in groups and use a word processor to create text within given genres does not preclude experiment, discovery and development of genre.

The use of a word processor, then, not only reflects real world expectations and practices related to the creation of text, but provides the essential focus for a language activity defined and bounded by the social context which the group interaction provides. Children seated in a group around a word processor must use spoken language to create a written text. In this kind of situation, there is a ‘close integration of oral and literate practices’ (Maybin, 1994, p. 133) That close integration provides a useful means of accessing some of the cognitive and literacy practices children use to construct a text. While techniques of textual analysis might be used to comment upon the finished written text, children’s talk about the construction of that text may contain traces of their cognitive processes.

Since ‘talking provokes a representation of one’s thoughts – a process which inevitably raises them to a more conscious plane of awareness so that they can become the objects of reflection and modification’ (Hoyles, Sutherland and Healey,

1990, as cited in Scrimshaw, 1993, p.45), the more conscious and the more accessible those thoughts become through inclusion in talk, the more amenable the associated cognitive processes and literate practices will be to documentation and analysis. However, 'to understand writing development, we need to know not only about the writer's behaviour and the cognitive abilities of learners but also about the social interactive processes by which children and teachers construct literacy' (Czerniewska, 1992, p. 128)

Where talk is used to reveal cognitive processes, one useful approach may be found in the dialogic model of talk, in which 'understandings are constructed between people, through dialogue, and are shaped by the social and cultural context of the interaction' (Maybin, 1994, p. 132), because 'to talk of language is to talk of the social situation within which meanings are generated' (Hall, 1994, p. 23). In the broader sense, 'Vygotsky suggests that language mediates between the cognitive development of the individual on the one hand and that individual's cultural and historical environment on the other' (Maybin, 1994, p. 131) This supports the social constructivist view of human learning 'as a communicative process, whereby knowledge is shared and understandings are constructed in culturally-formed settings' (Mercer, 1994, p. 92). In that view, 'children's conceptual development occurs first through social interaction and dialogue' (Maybin, 1994, p. 131) The word processor has a role to play here, as it provides a focal point for cognitive and social as well as literate interaction. Seated around the word processor, 'the joint interest of collaborators in creating a common product, or in reaching a consensus, requires that they make a point of attending to this development of mutual understanding' (Crook, 1994, p. 154).

While one might argue that the social environment, the technological environment, and the collective common experience of the participants provides the context for the whole activity, this context is not simply intermental, but includes the field, tenor and mode of the text (Czerniewska, 1992, p. 143). But context must take account, too, of modality (Fairclough, 1989, p. 126), including not only relational modality reflecting the authority of one participant in relation to another, but the effect of the children's collective understanding of the 'ideal reader' of their text and the subject position(s) that creates for children as writers in a given genre. So the effect of the word processor and of the group-based organisation of the activity is to influence the context and the genre itself, while making thought to some degree accessible; and the constraints imposed by the genre influence but do not bound the thinking process.

METHOD

The study took place in a comprehensive primary school, with a mixed-ability class of pupils aged 11-12 years.

To begin framing the activity for the children, a play was enacted in which a large animal had been cornered in an alley, causing a disturbance. The children's attention was drawn to a number of clues, without revealing the identity of the animal. Children were then placed in groups of four and asked to adopt one of the following roles:

- reporter for the local newspaper (Newspaper genre)
- person whose dog has been accused of causing the disturbance (Persuasive genre)
- person writing an account for an absent friend (Recount genre)
- police officer writing a formal report (Report genre)

Groups were of mixed gender, but children within each group were of similar writing ability. Each group was provided with a writing frame (i.e. a structured form, on paper), and participated in a researcher-led discussion of the kind of writing required on such a form. This discussion represented the group's induction into an appropriate genre. Each group was then asked to adopt their given role and write about the incident using a word processor. The word processor was set up so that the monitor displayed a copy of the appropriate frame.

The principal source of evidence was pupil and teacher talk, and initial teacher-pupil interaction was video-recorded, as were group sessions at the computer. Pupils' written text (in the form of computer printouts) was collected. A semi-structured interview was conducted with each group, upon completion of their word processing task, in an attempt to discover genre-related features which pupils sought to apply during creation of their text, their views of the act of text composition, and of the 'ideal reader'.

FINDINGS

Types of utterance

The video record and the transcripts confirm the interactional nature of pupil-pupil talk noted in other studies (Fisher, 1994, p. 161). In each group, talk was frequent, animated, emotionally charged, and, with few exceptions, involved all members of the group.

After transcription, pupil talk was categorised in an attempt to reveal its content. The following categories were used:

- M - metalanguage related to the genre.
- C - constructive talk contributing to the development of the text, such as suggestions for what to write next, and cumulative text talk
- W - talk related to the mechanics of wordprocessing or aspects of control or operation of the computer.
- S - talk related to the syntax of the text such as spelling, punctuation or grammatical structure of sentences.
- T - talk related to the taking of turns at the computer keyboard.
- R - reading.
- E - talk about research equipment.
- O - off-task talk.

These categories were derived from:

- (a) the need to be able to identify specific types of utterance (such as genre-related metalanguage)
- (b) an awareness of some of the kinds of utterances identified in previous studies (such as in Fisher, 1994, p. 170) which it was thought might shed light on some of the inter-group cognitive processes.

None of the categories are dependent upon any specific genre.

Some utterances contributed to more than one category simultaneously, so that in an utterance such as, "Coming from the right go grocer's". 'Coming from the right' is being read from the screen, while 'go grocer's' is a suggestion as to the content of the next portion of text. That utterance is, therefore, categorised as R, C.

Categorising the talk reveals the quantity of talk (Figure 1) and the relative proportions of types of talk, (Figure 2).

Figure 1: Utterances (Total): All Groups combined

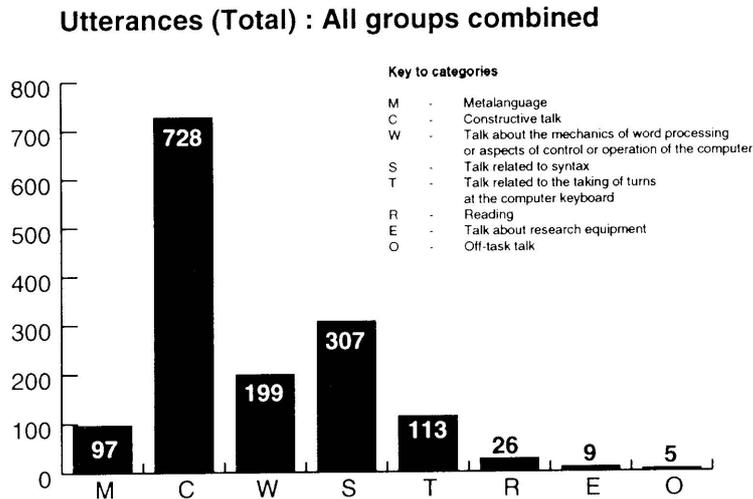
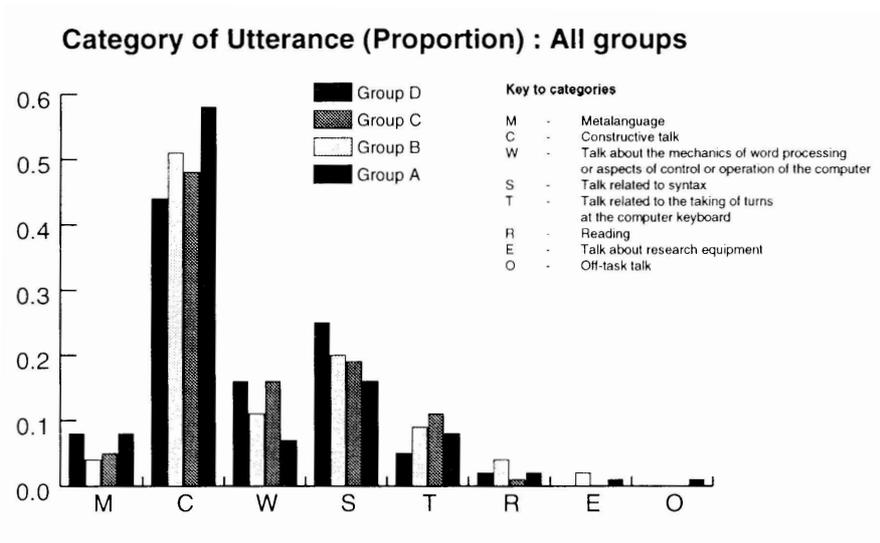


Figure 2 clearly shows the very strong similarity in the proportion of the kinds of utterances within each group, despite the different genres of text they were constructing.

This suggests that the kinds of talk used during the construction of text by a group may be, to some degree, independent of the genre of text which is being created.

Figure 2: Category of Utterance (Proportion): All Groups



Composite nature of the text

The composite nature of the finished text can be clearly seen by tracing the origin of each word or phrase in the pupils' finished written text, to identify word origins within pupil talk. Table 1 shows that there are structural features which are mentioned or explained by the teacher and words uttered by the teacher which can be seen in the finished texts.

The children's own 'world knowledge' or 'members' resources' (MR) contribute to the finished texts, as there are examples of genre-appropriate words and phrases which contain echoes of other texts of similar genre, e.g.

'police are led to believe that' (Group A: Newspaper)

'at the scene of the crime' (Group D: Report)

There are also examples of metalanguage in which children consider this important, e.g.

'I'd like to get a technical name by the way' (Group D: Report)

All of this evidence shows the heteroglossic nature of the text, and the many contributing voices which are part of the whole process of composition and which influence the final written product.

Table 1: Contribution of teacher-defined elements and members' resources to the text

Group A: Newspaper genre

Defining characteristic	Origin	Present in pupil text?
Has a headline		
- see it and it makes you read the story	MR	yes
- attracts your attention	MR	
- tell you what actually happened	MR	
- important part of the story	MR	
- uses different print		
- bigger	MR	yes
- bolder	MR	no
- printed right across the story	F	
Paragraphs	MR	yes
- there are different paragraphs in a story	T	yes
- each tell you a wee snippet of information	T	yes
- first paragraph tells you the essential facts	T	yes
- following paragraphs contain more detail	T	yes
Essential facts are contained in the story	T	yes
- who	MR	yes
- where	MR	yes
- when	MR	yes
Bring the story together at the end; round it off	T	yes
Use present tense	T	no

Key to Origin: **MR** – **Members' Resources**
T – **Teacher**
F – **Forced by frame**

Table 1: Contribution of teacher-defined elements and members' resources to the text

Group B: Persuasive genre

Defining characteristic	Origin	Present in pupil text?
Purpose - to persuade it was not your dog	T	yes
Opening statement - 'I think that it couldn't be my dog because' - 'the reason is firstly' - 'another reason is'	T T T	yes no yes
Expand by explaining a bit more	T	partially
Paragraphs	MR	no
'These arguments show'	T	no
Firm words	T	no
Present tense	T	no

Key to Origin: **MR** – **Members' Resources**
T – **Teacher**
F – **Forced by frame**

Table 1: Contribution of teacher-defined elements and members' resources to the text

Group C: Recount genre

Defining characteristic	Origin	Present in pupil text?
You are an observer	T	yes
Writing to re-tell a friend	T	no
At the beginning, set the scene - what happened - what you were doing - 'walking by' - 'past some shops' - when - date (specifically requested) - who was with you	T T T T T T T	yes yes yes partially partially yes yes
Paragraphs	MR	yes
Closing statement	T	unfinished
As it happened	T	yes
Past tense	MR	yes

Key to Origin: **MR** – **Members' Resources**
T – **Teacher**
F – **Forced by frame**

Table 1: Contribution of teacher-defined elements and members' resources to the text
Group D: Report genre

Defining characteristic	Origin	Present in pupil text?
Write as the policeman	T	yes
- short (sentences)	T	yes
- short words	T	yes
- 'at the scene of the incident there was'	T	yes
		(crime rather than incident)
'On Wednesday the 14th of June'	T	yes
'at the grocer's shop'	T	no
'there was an incident'	T	yes
'it definitely was not the shopkeeper's'	T	no
'this has been checked'	T	no
Past tense	MR	yes

Key to Origin: **MR** – Members' Resources
T – Teacher
F – Forced by frame

GENRE-RELATED TALK

Metalanguage

The transcriptions show that pupils do use metalanguage as they deal with:

- the need for a headline: We need to eh what's the headline? (Group A)
- the need to include a date: No you've got to give the date the date and where it was. (Group A)
- the audience: We have to write it as if we're telling them. (Group C)
- structural matters: Wait what about trying a new paragraph look then we can do all the sounds like. (Group C)
- style: That doesn't sound right but doesn't it no. (Group D)
- consideration of the logic of the written account: How do they know there's been an incident? (Group A)

While metalanguage represents a small proportion of all utterances (7%), it nevertheless deals with a variety of important features of the pupils' text.

Awareness of audience

Only one group (D) produced utterances explicitly showing an awareness of audience:

- 'But this this is to go to the big police boss remember' (Group D)
- 'This is to go to the like chief of police' (Group D)
- 'It doesn't sound right anyway because it's going to the chief of police' (Group D)

These utterances all emanate from one group member, and were largely ignored by other members of the group. One other group member does consider the audience, even if only in a negative fashion:

‘This isn’t going into the newspaper or anything just ask questions’ (Group D)

However, the interviews reveal that pupils in all four groups did have a view of their intended audience and, in response to the question

‘Who do you think would read your finished document?’

were able to state categories of reader. In contrast, groups A, B and C all stated that they did not think about the person who would read the finished document, when they were writing.

In group D, pupils considered that the document would be read by:

‘Chief inspector; teacher; their sergeant; people in the town’

and stated that, when writing, they thought about

‘the people who were going to publish it; the publisher; newspaper publishers.’

This group were using a ‘report’ or ‘Note-taking’ genre and had been instructed by the teacher to ‘take the part of the policeman’ and to ‘write a report as the policeman’ ‘back at the police station’. Talking about publication, then, implies the belief that a policeman’s report is not a private but a public document. In response to the supplementary question,

‘Would this kind of report not normally be kept private?’

the group seemed to reaffirm their view of the report as a public document, saying:

‘sometimes; only after a week or two it would be kept private; it would be in the paper next day.’

Despite groups A, B and C denying that they thought about the audience, there are clear indications in the texts produced by all groups that the texts were shaped by a consideration of audience. This may be because pupils, who live in a text-rich world, have considerable members’ resources relating to the text styles often used for particular audiences and particular purposes by particular kinds of authors. Irrespective of their previous experience (or lack of it) of their respective genres or of group writing, pupils within each group seemed able to adopt a common model of the writing appropriate to that genre, and a corresponding view of the ‘ideal reader’. While some of this may have come from the teacher, much must have been the result of members’ resources and of intersubjectivity within the group (of which, more later).

Evidence of genre-appropriate writing includes:

The tense used (specifically mentioned by the teacher)

- Group A: Newspaper genre:
Use of third person, with appropriate reporting of the shop owner’s speech, and appropriate use of second person in appeal for help.
- Group B: Persuasive genre:
Use of first person
- Group C: Recount genre:
Use of first person.

Group D: Report genre:
Appropriate use of both third and first person

Other genre-appropriate features:

Group A: Newspaper genre:
Use of headline; phrases such as 'police are led to believe',
'a great disturbance', 'very distressed over all the commotion',
'witnessed'

Group B: Persuasive genre:
Use of 'because', logical argument, dispassionate

Group C: Recount genre:
Time-ordered sequential presentation of events; use of headline

Group D: Report genre:
Short sentences, factual

Evidence of inappropriate elements includes:

Group C: Recount genre:
Use of third person.

Group D: Report genre:
Use of second person.

Effect of the frames and the initial teaching session

The frames provided for each group represent an attempt to provide a genre-appropriate structure for group writing, as well as a focus for teaching about each specific genre. In the initial discussion with the children the teacher helped define each genre by making explicit statements about each, and the children also revealed some of their existing knowledge (or members' resources) about that genre. By examining the children's utterances and their written output, it is possible to see some of the genre-related defining characteristics and some of the teacher's words appearing in the pupils' writing.

There is clear evidence that pupils incorporated many of the characteristic features of the relevant genre, as defined by the teacher, as well as appropriating the teacher's voice within their text. This lends support to Fisher's observation that 'outcomes may relate very directly to the prior work done in the class and to the instructions at the beginning of the activity.' (Fisher, 1994, p. 171)

Considering pupils' MR gives a clear indication that pupils' greatest pre-existing knowledge relates to the newspaper genre. This may be because of its familiarity as a real-world genre, or may indicate that this kind of writing has either been encountered before or is closest to the kinds of writing expected from pupils within the 'school' order of discourse. Group interviews revealed that members of the 'Newspaper' group were well practised in the use of this genre. The recount genre might have been expected to be close to the 'letter writing' genre often used in schools, but group B either were not familiar with this, failed to recognise the similarity, or simply failed to indicate their existing knowledge.

Constructing talk

As in other studies, such as Fisher, (1994) the transcripts contain examples of cumulative text talk which 'involves children speaking in turns to create the text

to be entered, each speaker accepting without reservation the previous offering' (Scrimshaw, 1992, cited in Fisher, 1994, p. 166). e.g.

Speaker	Utterance	Category	Polarity
3	Because of the fur that was left	C	-di
4	On the wall	C	+ex
3	On the shop wall	C	+ex

(Group B)

Category C (- constructive talk) was designed to include cumulative text talk of this sort, as well as utterances which help the group to devise and come to a common understanding and acceptance of the next portion of text, but in which the next speaker disagreed with, or ignored, the previous speaker's contribution. e.g.

Speaker	Utterance	Category	Polarity
3	Mystery	C	-di
2	Mystery of the	C	+ex
3	Oh I don't like that	C	-di
1	Mystery of the	C	-ig
2	Mystery beast hunt	C	-ig
1	Mystery of the grocer's shop	C	-ig

(Group C)

Acceptance or rejection is dealt with separately, by considering polarity of response. By this means it is hoped to shed further light on the mechanism by which the group produces the text.

The transcripts contain examples of pupils sharing in the construction of talk by:

- (a) sharing the construction of verb phrases

Speaker: 1 See if you can just....;
 " 4 Enlarge it

(Group A)

- (b) sharing the construction of subordinate and matrix clauses

Speaker: 4 It would have to be a comma there and then write then
 because
 " 2 They found they found footprints

(Group A)

- (c) sharing the search for appropriate words

Speaker: 1 No. Hair
 " 3 Ball of hair
 " 1 Mmm-hmm
 " 3 Ball of hair
 " 1 Ball of fluff
 " 4 Ball of fluff which never matched the cat

(Group D)

- (d) In addition, the audio record contains instances when pupils share in the prosodic shape of utterances e.g., in attempting to determine the correct spelling of 'disturbance' the word is begun by one pupil and completed by another, so that it sounds as if one word is being pronounced

Speaker: 2 Dustur
 “ 1 Bance
 (Group A)

(e) There are instances of extended ‘duetting’ as several speakers function as a single voice (Coates, 1994, p. 181)

Speaker: 4 ‘Cos the alleyway
 “ 3 Beside the grocer’s shop
 “ 2 Was
 (Group A)

Table 2 shows that groups made use of royal plurals ‘we’, ‘us’ and ‘our’, while Table 3 shows that there were instances not only of simultaneous speech (when pupils talked at the same time) but of speech in unison (when pupils either uttered the same words at the same time, or simultaneously uttered words containing the same key ideas or phrases) e.g.

Speaker: 2 [When a policeman
 “ 3 [When a policeman
 (Group C)

Table 2: Use of royal plurals

		Royal plurals (% of total utterances)		
		‘we’	‘us’	‘our’
Group	A	10.6	0.6	0
	B	7.5	1	1
	C	10.2	0.2	1.4
	D	9.4	1.7	0

Table 3: Simultaneous speech and speech in unison

		speech (% of total utterances)	unison (% of total utterances)
Group	A	10.4	3.6
	B	7	3.2
	C	11.6	4.1
	D	6.2	2.8

Taken together, these are indicators of the construction of ‘joint-knowledge’ (Edwards and Mercer, 1987, p. 111). Speech in unison contributes to the construction of a ‘shared floor’ (Coates, 1994, p. 188), as does some of the simultaneous speech:

Speaker: 4 ...There was a very unusual
 “ 3 [Conversation
 “ 4 [Incident
 (Group A)

Polarity of response

Following Coates, (Coates, 1994, p. 185) the polarity of each utterance (positive

or negative) in relation to the previous utterance was coded using the following categories:

Positive polarity: in relation to previous utterance, current utterance:

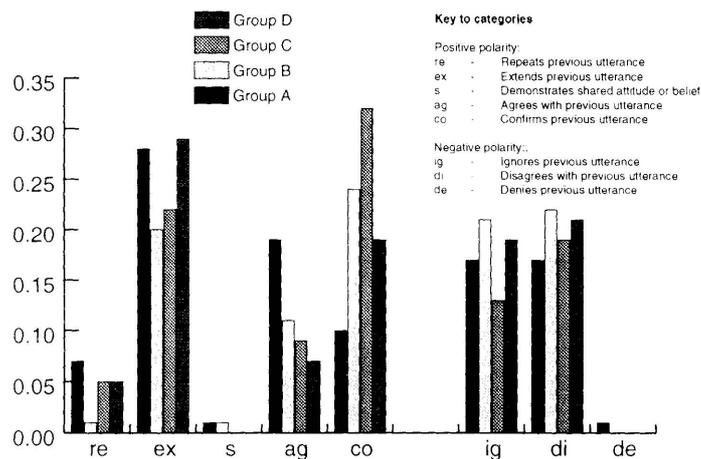
- re - repeats previous utterance
- ex - extends previous utterance
- s - demonstrates shared attitude or belief
- ag - agrees with previous utterance
- co - confirms previous utterance

Negative polarity: in relation to previous utterance, current utterance:

- ig - ignores previous utterance
- di - disagrees with previous utterance
- de - denies previous utterance

Figure 3 reveals that, overall, groups make most use of positive polarity utterances which extend or confirm the previous speaker's utterance, although there are also relatively high levels of instances of negative polarity where speakers ignore or disagree with the previous speaker's utterance.

Figure 3: Polarity of response as a proportion of total utterances: All Groups



In Table 4 the polarity of each speaker's utterances is recorded against the identity of the previous speaker, and an overall balance of polarity, positive or negative, is displayed for each speaker.

Overall, considering all speakers, the majority of utterances were of positive polarity, and it seems likely that pupils were pursuing a strategy of positive politeness through positive polarity. Other indicators of positive politeness included the use of 'thank you' (by one girl in particular), and strategies such those suggested in Coates (Coates, 1994, p. 187):

(a) claiming common ground, through exaggerated approval:

Speaker: 3 Hey that's quite good ...
(Group A)

- (b) conveying that speaker (S) and hearer (H) (i.e. previous speaker) are co-operators, by including both S and H in the activity:

Speaker: 3 Spell us that will you
(Group B)

- (c) fulfilling H's wants, by giving sympathy, understanding and co-operation to H (in this case a group member who was having difficulty in participating on the same level as the others because of behavioural/emotional difficulties):

Speaker: 3 Then put your name
" 1 And this big letter here
" 3 Let her do her name
(Group C)

These positive politeness strategies suggest that group members treat each other with a degree of familiarity, exhibiting solidarity rather than being distanced socially. This is supported by the use of royal plurals, noted earlier.

Table 4: Polarity of response: Summary by Pupil: All Groups

		Polarity of response: summary by pupil: All groups					
Speaker	Group	Pupil number	Previous speaker				Ratio + to -
			1	2	3	4	
Speaker	Group A	1		+	+	+	1.72
		2	+		+	+	1.88
		3	+	+		+	2.66
		4	+	+	+		1.65
	Group B	1		+	-	+	1.57
		2	+		+	+	1.83
		3	-	+		+	1.00
		4	+	-	+		1.06
	Group C	1		+	+	0	3.27
		2	+		+	+	1.85
		3	+	+		0	2.05
		4	0	-	+		1.00
Group D	1		-	+	-	0.77	
	2	+		+	0	1.78	
	3	+	+		+	1.71	
	4	+	+	+		1.61	

Key:
+ denotes positive polarity
- denotes negative polarity
0 denotes neutral polarity
(50% positive, 50% negative)

DISCUSSION

Relations of power frame the activity

The transcripts and the video record show pupils engaged in a productive exercise, composing text through talk. Pupils use various strategies to help themselves towards a completed text, and these strategies contribute to a shared understanding of the text as it is being created.

In Fairclough's view, discourse involves social conditions of production which relate to: the social situation or the immediate social environment; social institutions; and society as a whole. For the pupils who participated in this study, society has an expectation that they will be educated to be literate and able to write using appropriate genres. Society's wishes are realised through the social institution of the school. Within the school, an educational order of discourse influences the pupils' immediate social environment, and there is, in this school at least, an expectation, sustained by a relation of power exerted by teachers over pupils, that pupils will be able to compose text as part of a group activity. Pupils have, therefore, adapted to this mode of production which involves social interaction between pupils. In the activity analysed here, text is created through discourse alone, and pupils reveal some of their mental and intermental strategies through their discourse.

Context and intersubjectivity

Context is a key influence on the production of text but although 'at the simplest level, context can be defined as the surrounding speech, or text' (Edwards and Mercer, 1989, p. 121) the concept of context is more fundamental than that, since 'what matters is what the participants in the communication understand and see as relevant' (Edwards and Mercer, 1987, p. 66). Context is influenced by societal and institutional factors, as well as the pupils' immediate social environment, the surrounding speech and the emerging text. All of these influences constrain and shape the text and, in doing so, affect pupils' cognitive processes and their consciousness. This, in turn, exerts an influence as pupils continue to form the developing text. However, since pupils co-operate to form the text, it seems likely that, in order to do this effectively, they must achieve some degree of intersubjectivity, and develop a view of the text which is to some degree commonly-held.

In this study, the shared construction of talk, use of royal plurals, speech in unison, the high levels of 'constructive' talk, the heteroglossic nature of the finished text and, to a lesser extent, the use of a positive politeness strategy, are all indicators of intersubjectivity.

Argument, disagreement and negotiation

The high levels of disagreement shown in Fig 3 are noteworthy. Why, when pupils seem to be successfully engaged in commonly-constructed text, is there such disagreement? One answer might be that disagreement of this kind is an important element in the struggle towards a commonly-held view of the text. Disagreement may represent cognitive conflict, necessary to bring about cognitive restructuring of a pupil's view of the way the text should develop. Disagreement over the words to be used represents disagreement over the meaning of the text, and reflects the different understandings of the text which individual pupils hold. But argument of this kind may be thought of as a process of negotiation in which the language used affects pupils thoughts and understandings. The ensuing cognitive restructuring, in turn, affects understanding of the text and any commonly-held view of the text, and affects the language which pupils use as they attempt to construct the text.

Scaffolding development

The high levels of 'constructive' utterances (Figs 1 and 2) may represent a pupil-pupil scaffolding process, in which one pupil has a more developed view of the next, as yet unwritten and unspoken, portion of text. By suggesting the form of the next portion of text to others, the contributor may be attempting to provide scaffolding which will allow those others to see the way in which the meaning of the text might develop. Having done this, the scaffolder might expect their suggestion to be incorporated into the text, or to receive some indication of agreement that others understand and accept the proposed development of the meaning of the text.

In that way, the difference between the existing commonly-held understanding of the text as it presently exists, and the scaffolder's vision of how it might be, represents the hearer's zone of proximal development (ZPD), whose lower boundary is the currently commonly-held understanding of the text and whose upper boundary is the meaning as understood by the speaker.

The process of argument may be a sign of the struggle to understand the proposed extension to the meaning of the text, and sustained sequences of disagreement may result in final agreement with the suggestion, as the ZPD is crossed, or final disagreement, representing failure of the scaffolding.

The value of writing in genre

Framing a writing activity so that writing must take place in a given genre imposes a constrain upon the writing context. In this case, not only were pupils constrained by having to write in a particular genre, but they were also constrained by having to do this in the context of 'school writing' which is in itself a genre or, in Fairclough's terms, an order of discourse. However, it was not the intention to constrain pupils within a fixed and bounded set of genres, but to allow for development both of pupils' understanding of these genre and of the genre themselves.

Pupils' use of metalanguage provides some evidence that this approach to writing might 'provide opportunities for children to recognize and discuss the cultural practices that affect how and what we write' (Czerniewska, 1992, p. 150) The evidence in this study shows that pupils are able to bring an impressive array of techniques to bear to help them construct text within the context of a given genre and that, far from being restrictive, the constraints imposed by these genre result in methods of constructing text which may foster intramental development through intermental processes, although the extent to which this process is fostered by purely genre-specific constraints has yet to be determined.

In retrospect

These pupils' views of their audience and of their role as writers within a given genre seem somewhat under-developed, judging by the pupil texts and the interviews. This is particularly true within those genres less often found within primary schools. Better framing, during the initial teacher-led sessions, might help here.

PROFESSIONAL AND POLICY IMPLICATIONS

This study raises a number of issues which are important in relation to teaching, assessment and policy.

Recognising what contributes

It is important that teachers and policy makers recognise those influences which contribute to the successful conduct and achievement of a group writing task such as this. It is important, too, to recognise the contribution made by the constraints imposed by having to write in a specific genre.

Setting tasks

In setting tasks, teachers should recognise:

- the possible effects of any teaching sessions which may take place before the writing exercise;
- the likely transfer of elements of their teaching into pupils' work;
- the pupil-pupil conversational and intermental processes which may be fostered within pupil-only groups;
- the possible value of genre-based writing tasks;
- the apparent unfamiliarity of pupils with some genres.

Observing pupils

Those observing pupil groups engaged in an exercise similar to that in this study should be aware of the fundamental importance of pupil talk, and should be aware of the kinds of verbal indicators which may be used to inform observation:

- relative frequency of types of utterance;
- significance of simultaneous speech, speech in unison, and the occurrence of royal plurals;
- polarity of response;
- concept and accomplishment of a 'shared floor';
- the heteroglossic nature of the finished text;
- the importance of adopting an observational method which will capture dialogue and associated actions sufficiently well;
- the time involved in analysing the evidence, particularly if this is to be part of an assessment exercise.

Assessing pupils in groups

Assessing individual pupils' contributions in a group writing exercise of this type is likely to be difficult, and teachers should be aware that the resulting text is likely to be heteroglossic and include not only pupil contributions but an echo of the teacher's own voice (which may be encouraging!). Individual pupils' contributions may be disentangled, with care. However, the contribution made by individual pupils to the meaning of the text is likely to be more difficult to establish in an easily assessable way. If the proportion of contributing words in a completed text is related to proportion of utterances, it is possible that some pupils may be inhibited by the group writing situation, or may exert a non-verbal influence on group functioning, making the number of utterances alone an insufficient indicator of quality of writing or of the efficacy of that pupil's contribution either to the group writing process or to the meaning or the content of the finished text.

All of this raises questions both of policy and of practice in relation to literacy events such as that described in this study.

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