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Using the CHILDES system to analyse child adult conversations during literacy events in early years classrooms

Abstract

This paper describes a pilot project which uses the Child Language Data Exchange System (Macwhinney and Snow 1990) in conjunction with qualitative analysis to investigate the potential for language development provided by one to one conversations between adults (teachers and volunteer parent assistants) during reading activities. Ten conversations between adults and children aged five to six years were analysed in terms of vocabulary diversity, balance of participation and contingency of adult responses to child contributions. All conversations were dominated by adult initiations which largely limited children's attention to lexical and sub-lexical features of the printed text which formed the joint focus of attention. There were no significant differences between teacher led and parent led conversations. Implications for future practice are discussed.

Rationale

It is increasingly common in the UK for assistants to be present alongside teachers in classrooms, particularly in the early years of school. The vast majority of these helpers are women who have, or have had, children of their own at the school. Some of the helpers give an hour or two a day on a voluntary basis; some of them are hourly-paid part time or full time workers. Within the last couple of years an increasing number of them have received training from teacher education institutions towards a classroom assistant's certificate, but the majority remain untrained.

The range of tasks that these assistants undertake is so broad that have often been referred to as "Jills of all Trades". Assistants were originally recruited to help with the more menial aspects of classroom management, but as demands on teachers' time have grown since the introduction of a statutory National Curriculum in 1989, assistants' work has focused far more on helping teachers to achieve curricular goals. Assistants frequently work alongside children, helping them to carry out tasks which have been set by the teacher and engaging them in conversation. The latter role provides an opportunity, in theory, for children to engage in conversation with a range of adult talk partners, experience which many studies suggest to be facilitative of language development. (Gallaway and Richards, 1994) Exposure to a range of voices and conversational styles is also held to entail benefits in terms of communicative, social and cognitive development.

One of the tasks given most frequently to classroom assistants is hearing children read, and it is the potential of this role that the current pilot study investigates. The main focus however, is not on reading but on language development. The research questions addressed by this pilot project are as follows:

To what degree do adult responses to children's talk during one to one reading conversations foster language development by building upon the meanings expressed by the child?

Are there significant differences in this respect between the conversational styles of teachers and those of parent and other classroom assistants?

One of the more robust findings to emerge from first language acquisition research is that a positive part is played by one to one conversations in which a child and adult talk about a shared focus of attention. Adult responses which respond contingently to the meaning expressed by the child, either by extending and clarifying the topic of the child's contribution, or by recasting the child's utterance in a different form, are held to be particularly effective in motivating the child to maintain the conversation and hence to develop further communicative competence. (Wells, 1985)

Classroom conversations between adults and children which emerge from activities like the reading aloud and discussion of books, would seem at first glance to provide rich opportunities for contingent exchanges. In such conversations there is both a shared focus of attention and a common motivation to make and extend meanings. Certainly, there has been a lot of evidence that adult child sharing of picture books in the pre-school years contributes to vocabulary growth and general language development. (Snow and Goldfield, 1983)

However, sharing a book with an individual child at home is a very different process to hearing a child read in the classroom. In the latter case, the teacher typically attempts to listen to the child, monitor and teach graphophonic skills, check comprehension, and, if time allows, talk to the child about longer term literacy interests. At the same time, the teacher has to monitor and direct the behaviour of the other children in the class. In addition to this, teachers have traditionally been under pressure to hear each child in the class read several times a week - in some cases, teachers have been expected to hear every child read every day. One study of the practice of hearing children read in the UK discovered that the average amount of uninterrupted time that the individual child received in such circumstances was a mere 30 seconds (Southgate, Arnold and Johnson, 1981).

The findings of researchers into pre-school language development have emphasised the need for adult talk partners to respond contingently to child initiations, but under such institutionalised time constraints, the child rarely initiates conversation, but merely responds to questions and other prompts from the teacher.

This is typical of the shift in the conversational experience of the child as he or she moves from home to school. One major UK study, for example, showed how, relative to home conversations, children at nursery school engaged in briefer encounters with adults, made shorter responses to adult questions, talked about a narrower range of topics, rarely asked their own questions, and hardly ever initiated conversations (Tizard and Hughes, 1984). Often the child's communicative role is reduced to that of filling in the response slots in the Initiation - Response -Feedback pattern which appears to be a characteristic feature of classroom interaction (Sinclair and Coulthard 1975). More recent research in the UK has shown that this pattern is a common one from the earliest years of schooling (Hughes and Westgate 1997; Westgate and Hughes, 1997).

In the context of one to one reading, the teacher's stress on getting the child to identify words, letters and sounds is typical of this reduction of the child's role to that of making short and relatively simple responses to teacher initiations such as questions and intonational prompts. The emphasis is on getting the child to replicate the printed text, rather than to question it or to use it as the basis of conversation by relating its content to the child's own experiences.

It was research like that of Southgate et al and of Tizard and Hughes which prompted many teachers in the 1980s to start planning reading conferences - longer but less frequent sessions in which there would be time to perform the 'hearing readers' duties mentioned above, but also to establish more symmetrical conversational practices which would enable children to express opinions on, and voice concerns about, their reading (Waterland 1985). This practice had not become securely established, however, before the National Curriculum came into force, and its demands on teachers' time caused many to abandon attempts to introduce opportunities for talking at length to individual children about books.

However, another effect of the National Curriculum was, as mentioned above, to broaden the role of the classroom assistant, and it was at this time that these assistants started to take on more responsibility for hearing children read. The current research was inspired by informal observations made by some classroom teachers that certain classroom assistants appeared to be far better than professionals at getting reluctant talkers to talk, and reluctant readers to relax in the presence of the printed page.

One possibility that emerged in observing the work of the more successful classroom assistants is that they might respond more contingently to child utterances which a hurried teacher might class as off-task. Such utterances might include

- those inspired by the book, but not connected to the print; that is, text to life and / or life to text links (Cochran-Smith, 1984).
- those inspired by a text, of whatever type, other than the one being read.
- those which arise from the social event of the reading, but are not directly connected to any text.

The assistant is not under the same time constraints as the teacher, so when attending to an individual she is not simultaneously responsible for the welfare of the twenty or thirty odd other members of the class. In pedagogical terms, she is not accountable for ensuring that the child achieves a higher reading age or level of achievement in National Curriculum SATs by the end of the year.

Also, the relationship between child and assistant is likely to be less formal than that between child and teacher. The fact that assistants are far more likely than teachers to be members of the immediate local community around the school, and hence more familiar with the child's extra-mural social life, creates the possibility that they may be more likely than teachers to prompt such utterances from the child.

Methodology

Audio recordings were made in an infant school in Berkshire UK. The adult participants were five teachers and the five parent volunteer assistants who worked with them. Each member of the teacher - assistant partnership was recorded in a reading conversation with a target child from the teacher's class, the tape recordings of teacher child interactions being made on different day from those of parent child interactions. The children were in reception or mixed reception and year one classes and were all aged between five and six years. They all were classified by their teachers as being non-readers or in the very early stages of learning to read. The conversations varied in length from just over two minutes to just over twelve minutes.

The conversations were transcribed using the CHAT notation format of the CHILDES system. The CLAN lexical analysis programmes were then used to create vocabulary lists for each participant and to compute word type and word token totals, mean length of utterance and mean length of turn.

Utterances were also categorised according to speech act, so that total numbers of adult initiations, child initiations, and text to life and life to text links could be identified.

Informal interviews were held with each adult participant; teachers and assistants also completed brief questionnaires about their beliefs about how best to talk with children during reading activities.

Results

All of the conversations displayed extreme asymmetry of participation. In terms of quantity, adult utterances always exceeded child utterances in both number and length; adult turns were always longer than child turns (table 1).

Both categories of adults assumed almost complete control over the content of the conversations. With the exception of one conversation, children's contributions were almost entirely confined to making responses to adult initiations. Child initiations were very rare indeed (table 2).

Where child initiations were made, they almost always took the form of utterances which linked text to life or life to text (table 2).

Adult initiations were largely focused on directing children's attention to lexical and sub-lexical features of text through direct questions and intonational prompts. Although all adults did make text to life or life to text links, these formed only a small proportion of their contributions in comparison with their text focusing moves and those providing corrective or positive feedback.

Adult responses to children's text to life and life to text initiations, and their feedback to children's responses to their own such initiations, did show a degree of contingency, but they also tended to be cursory in comparison with their text focusing initiations and feedback to children's text based responses. Children's contributions in this respect were always acknowledged and positively responded to, but they were never allowed to divert attention from the text for more than two or three turns of the conversation.

Focus on the replication of printed text resulted in there being very little natural language in the contributions made by the children. Many of their utterances consisted of single words, phonemes or phoneme clusters. Much of the vocabulary diversity in the children's contributions was accounted for by recitation from text. Subtracting text-replication utterances from the total number of utterances made by the children in eight out of ten of the conversations left very little evidence of social communication between adult and child.

Questionnaire responses from both parents and teachers indicated that they valued social communication with children, with an interesting book as a joint focus of attention. However, in informal conversation with the researcher, many participants expressed some anxiety

about the need to help children to master basic graphophonic skills and to make progress through their reading schemes.

There were no evident differences between the parents and the teachers in conversational style as assessed by the procedures described above.

Discussion

The findings outlined above are based on a small sample of children and adults, but both informal observation and research in similar contexts (Hughes and Westgate 1997; Westgate and Hughes, 1997) suggest that the pattern of interaction recorded here could be typical of many early years classrooms in the UK. Further research with a larger sample from a range of schools would be needed to confirm this. A more detailed analysis of data using the contingency analysis programmes of the CHILDES system and more extensive interviewing of both adult and child participants would also be informative. (In the current pilot study, the crucial question of what attitudes and expectations the children bring to the reading conversation was not addressed.)

Another important factor that needs to be investigated is the role of text content and quality in eliciting conversation. Many of the books that the children shared with the adults consisted of very simple narratives conveyed through repetitive sentence patterns. As all of the children were at the earliest stages of learning to read, their most common strategy was to memorise the text and recite it by rote; that is to say, cognitive involvement in the meaning of the text was not high. The adults' attempts to move the children on beyond the rote recitation stage by encouraging them to focus on individual words and letter patterns might have further distanced the children from the meaning of what they were reading, though all of the adults did attempt to get children to focus on illustrations to support these graphophonic strategies. It was noticeable that the richest conversation in terms of child involvement (assessed through the number of child initiations) was based on a non-fiction book that offered fresh information on one of the child's interests.

The findings recorded here illustrate the dilemma faced by early years teachers and their assistants who are responsible for developing both spoken language and literacy. Research into first language acquisition suggests that eliciting conversation from children is likely to be of benefit to this process, and that a conversation eliciting style is characterised by low constraint questions, contingency to children's contributions and a commitment to relative equality of participation. However, the task of teaching children to read, while being potentially a very fertile source of child initiated conversation, also requires the adult to exercise some control over the focus of the child's attention, the material that is read, and the duration of the reading event. It is the degree of this control which is crucial, and which varies with the fluctuating constraints under which early years educators work.

This point has broader implications. While teachers and their assistants are under extreme pressure to achieve strictly defined curricular goals, opportunities for providing the relaxed contexts necessary for contingency rich conversations to take place are not likely to flourish. In the UK and elsewhere, there is currently a strong political move towards dictated curricula with highly prescriptive objectives. The UK National Literacy Strategy, for example, has recently increased pressure on schools to focus on lexical and sublexical aspects of texts. One of the NLS's explicit aims is to reduce diversity of practice, and in pursuance of this moves are being made to ensure that classroom helpers use the same strategies as teachers when talking to children about books and reading. There is a danger here that opportunities for children to hear a variety of voices and of conversational styles will be reduced still further.

Perhaps there is a case for reminding educators that literacy is grounded in oral language, and that oral language requires social interaction in the early years of life for its development. Relaxed, contingency rich dialogue in the presence of a book to be enjoyed rather than replicated in speech is likely to develop a more positive and confident attitude towards literacy interactions than highly directive and interrogational interactions. The CHILDES system might prove to be a useful tool in this respect, by providing working teachers and teachers in training with a tool with which to monitor adult child conversations and to analyse their relative contributions.

References

- Cochran-Smith, M. (1984) *The Making of a Reader*, Ablex, NJ, USA
- Gallaway, C. & Richards, B. (1994) *Input and Interaction in Language Acquisition*, Cambridge University Press, Cambridge, UK
- Hughes, M. & Westgate, D. (1997) Assistants as Talk-Partners in Early -years Classrooms: some issues of support and development, *Educational Review* Vol 49 No 1 pp 5-12
- Macwhinney, B. & Snow, C. (1990) The Child Language Data Exchange System: an Update, *Journal of Child Language* 12 pp457-472
- Sinclair, J. & Coulthard, M. (1975) *Towards an Analysis of Discourse*, Oxford University Press, Oxford, UK
- Snow, B. & Goldfield, B. (1983) Turn the page please: situation -specific language acquisition, *Journal of Child Language* 10 pp551-569
- Southgate, V. Arnold, H. & Johnson, S. (1981) *Extending Beginning Reading*, Heinemann, London, UK
- Tizard, B. and Hughes, (1984) *Young Children Learning*, Fontana, London, UK
- Waterland, L. (1895) *Read With Me*, Thimble Press, Stroud, UK
- Wells, G. (1985) *Language development in the pre-school years*, Cambridge University Press, Cambridge, UK
- Westgate, D. & Hughes, M. (1997) Identifying 'Quality' in Classroom Talk, *Language and Education* Vol 11 No 2 125-130

	Duration (m:s)	wd tokens	wd types	utterances	mlu	mlt
child 1	10:35	371	131	107	3.439	3.957
parent 1		661	182	153	4.346	7.074
child 1	08:40	229	125	90	2.600	3.079
teacher 1		618	227	128	4.594	7.636
child 2	02:17	105	32	23	3.478	4.211
parent 2		80	43	33	3.182	5.250
child 2	0.921	391	105	91	4.363	5.293
teacher 2		543	181	134	4.067	7.171
child 3	04:30	60	34	33	2.030	2.094
parent 3		561	188	107	5.252	17.030
child 3	07:00	83	34	49	1.755	1.870
teacher 3		562	166	132	4.356	12.234
child 4	04:10	170	55	53	3.226	4.071
parent 4		290	106	73	3.973	6.744
child 4	12:18	448	127	136	3.331	3.905
teacher 4		1329	302	249	5.373	11.436
child 5	02:55	125	52	34	3.706	4.500
parent 5		282	119	52	5.423	9.724
child 5	06:05	175	92	64	2.734	3.017
teacher 5		456	150	115	3.965	7.862

	A-initiations	Ch-initiations	A - T <> L	Ch - T <> L
Ch - Parent 1	43	31	10	17
Ch - Tchr 1	47	14	13	14
Ch - Parent 2	15	0	2	0
Ch - Tchr 2	55	8	2	4
Ch - Parent 3	30	0	2	0
Ch - Tchr 3	63	0	7	0
Ch - Parent 4	26	1	5	1
Ch - Tchr 4	69	5	9	5
Ch - Parent 5	25	4	12	3
Ch - Tchr 5	57	4	5	2

mlu: mean length of utterance (in words)

mlt: mean length of turn (in words)

T <> L : text to life or life to text links