Classroom Interaction: some Qualitative and Quantitative Differences in a Mixed-ethnicity Classroom

Gary Partington
Western Australian College of Advanced Education

Vincent McCudden
Western Australian College of Advanced Education

in helping young people develop in competence and confidence. Their work, however, is not of interest to the mass media. The media are interested in a story - the more sensational and simplistic the better - so the academic or employer who is willing to blame secondary schools for the perceived limited language skills of young people is guaranteed good coverage. Such indictments of secondary school English teaching ignore the evidence that there is much soundly based, good teaching taking place. No doubt there is, and has been, some English teaching that is less than satisfactory. This is an inevitable outcome of the chronic shortage of English teachers. Employing authorities have had minimal choice in the selection of English teachers for some years and many teachers who have been required to teach English recognise they are inadequately qualified for the task.

Continued attacks on the school system generally and English teachers in particular are hardly likely to attract English graduates into teaching. Indeed, such attacks are more likely to lead to good English teachers leaving teaching for employment elsewhere. A more constructive approach would be to support improvements in teaching conditions and salaries so that market forces would then assist those who employ teachers by giving them a wider choice of prospective teachers.

The development of language competence in secondary schools is the prime, but not sole, responsibility of the English teacher. It is time that other teachers, parents and the wider community accepted their share of the responsibility.

REFERENCES

Monahan, Sean (1986). *WACAE Response to WA Secondary Education Authority Paper, 'Subject English'*. Unpublished.

Piper, Kevin (1988). 'English Language in Australian Schools: Towards a Practical Framework', *Australian Education Review No.27*.

Schoenfeld, Robert (1986), *The Chemist's English, Second, Revised Edition*. Weinheim, Federal Republic of Germany: VCH.

Acknowledgements

CLASSROOM INTERACTION: SOME QUALITATIVE AND QUANTITATIVE DIFFERENCES IN A MIXED-ETHNICITY CLASSROOM

Gary Partington and Vincent McCudden, WACAE

Children's classroom success has been attributed to a variety of factors (Watts, 1975). Among these factors are the quality and number of interactions occurring between the teacher and the students (Brophy and Good, 1974). Students who attract a greater proportion of the teacher's time and experience more positive interactions are more likely to be successful than other students. Additionally it has been argued (McKessar and Thomas, 1978) that some students may have greater expertise in capturing a teacher's attention, that is, by initiating interactions, while King (1979) considered that students engaged in behaviours which were designed to maintain the teacher's performance expectations of them. Earlier literature suggested that the teacher was responsible for controlling the nature and quality of classroom interactions (Flanders, 1970) but the interactional skills identified by the above researchers suggest that a reciprocal procedural agreement exists between the teacher and some students (Zimmerman, 1987).

It might be hypothesised, therefore, that students who operate within such a reciprocal procedural agreement, as described above, will experience relatively more interactions and qualitatively different interactions with their teachers than will others in their classroom. It might also be hypothesised that some children's cultural backgrounds might not adequately prepare them for an interactional process that occurs in an educational context which is steeped in a Western educational tradition, and which is maintained by teachers who are successful products of that tradition. Some Aboriginal children, in particular, maybe less competent in using the interactional context to their advantage due to their possible emphasis on different processes of interaction. Even in an urban setting such difficulties might be demonstrated. Eagleson's (1982) study involving urban Aboriginal children has identified dialectic differences which may have their origins in particular socio-economic circumstances, thus drawing attention to possible differences between out-of-school and in-school language practices. Malin (1990) also has drawn attention to possible differences in the ways that Aboriginal children understand and respond to questions.

This present study examined classroom interactions and their relationship to the Aboriginal children in the class. The interactions between the teacher and students are of interest because they provide an indication of the classroom experiences of the child. A child who interacts frequently with the teacher will experience a different schooling from a child who interacts rarely. It was predicted that the quality and quantity of teacher-student interactions would vary among the students, and that Aboriginal students would be disadvantaged relative to other students, receiving fewer and different kinds of interactions.

METHOD

In the present study observations were made of three different kinds of lessons in a particular classroom. The chosen school was in a lower socio-economic suburb of a large city and there were three Aboriginal children present in the observed Year Five classroom. Classes were videotaped using two cameras. One camera was directed at the students and the other at the teacher. In addition, cassette recorders were located at strategic points in the room to gather student talk. The teacher wore a radio microphone to record all her contributions to the interactions.

Data were transcribed and interactions scored on a modified Brophy-Good Dyadic Interaction Schedule (Good and Brophy, 1973). The modifications allowed for recording other types of interactions apart from questions. In particular, information giving, directing, affirming, praising and criticising as initiatory behaviour on the teacher's part, rather than only in reply to a student's response, were incorporated in the data gathering. Student initiations, and the nature of the initiations, were also recorded. Initiations were categorised as question, comment, callout, relevant, and irrelevant.

Interactions were totalled and correlations were calculated using the Statview statistical package on Macintosh.

RESULTS

The teacher's dyadic discourse differed according to the lesson. As shown in Table 1, the teacher used questioning as the principal form of interaction with students, with direction-giving as the next most important category of talk. This pattern was sustained across the three lessons, but the types of questions asked varied according to the lesson (Table 2). In the first lesson, small-group mathematics, although the teacher used predominantly product questions, in which children were asked for specific factual answers (e.g. "What is the length of this side of the rectangle?"), choice questions were frequent, in which the students were given two or more choices ("Is this the perimeter?"). Self-referenced questions (questions which asked the students for their views, such as "What one are you up to?") were also frequent. In the second lesson, activity mathematics, product questions predominated. The third lesson, a literature reading and discussion led by the teacher, was distinguished by the predominance of self-referenced questions.

Table 1

Classroom Interaction Data

Teacher Talk

Lesson	Inf	%	Ques	%	Dir	%	Aff	%	Pra	%	Crit	%	Tot	%
1	8	4.5	96	53.9	46	25.8	1	0.6	15	8.4	12	6.7	178	100
2	3	3.0	40	40.4	32	32.3	8	8.1	12	12.1	4	4.0	99	100
3	0	0	96	90.6	4	3.8	0	0	2	1.9	4	3.8	106	100
	11	2.9	232	60.6	82	21.4	9	2.4	29	7.6	20	5.2	383	100

Table 2

Question Type

Lesson	Process	%	Product	%	Choice	%	Self-ref	%	Total	%
1	1	1.0	62	64.6	18	18.8	15	15.6	96	100
2	0	0	34	85.0	2	5.0	4	10.0	40	100
3	1	1.0	9	9.4	5	5.2	81	84.4	96	100
	2	0.9	105	45.3	25	10.8	100	43.1	232	100

The teacher's selection of students to respond to questions also varied across the lessons (Table 3). In the first lesson the majority of students were preselected by the teacher; that is, specific children were identified prior to the question being asked, as in the following example: "John, what is the perimeter?" There was also a high proportion of non-volunteers (children who were chosen by the teacher after the question was asked) called upon to respond to questions. In both these cases, the children did not volunteer to answer the question by raising their hands.

In the second lesson non-volunteers predominated, but in lesson 3 there was a marked increase in the selection of volunteers; that is, children who put their hands up following a question from the teacher.

Table 3

Student Selection

Lesson	Presel	%	Non-vol	%	Vol	%	Call-out	%	Total	%
1	39	38.2	34	33.3	13	12.7	16	15.7	102	100
2	8	19.0	21	50.0	13	31.0	0	0	42	100
3	11	11.5	7	7.3	78	81.3	0	0	96	100

The teacher's feedback to student responses (Table 4) was mainly affirmation ("Yes") rather than praise ("That's a good answer"). Criticism, however, was also minimal. In the literature lesson there was a tendency, in contrast to the mathematics lessons, to sustain the interaction with specific students by asking follow-up questions.

Table 4

Teacher Feedback

Lesson	Praise	%	Critic	%	Ignor	%	Affirm	%	Negat	%	Other	%	Sustain	%	Tot	%
1	14	13.2	2	1.9	8	7.6	50	47.2	4	3.8	10	9.4	18	17.0	106	100
2	14	31.8	1	2.3	8	18.2	10	22.7	1	2.3	6	13.6	4	9.1	44	100
3	18	12.9	3	2.2	1	0.7	71	51.1	12	8.6	5	3.6	29	20.9	139	100
	46	15.9	6	2.1	17	5.9	131	45.3	17	5.8	21	7.3	51	17.6	289	100

Student initiations (Table 5) were evident in all lessons but the greatest number were in the first. Correlations between student and teacher initiations indicated that there were significant relationships. Pupil initiations correlated significantly and positively with teacher's information giving ($r=0.725$, p 0.01), teacher questioning ($r=0.492$, p 0.05), teacher directing ($r=0.427$, p 0.05) and teacher's total initiations ($r=0.584$, p 0.05).

The data also indicated that those students who initiated interactions were more likely to be chosen by the teacher when volunteering answers ($r=0.614$, p 0.05)). There was no significant relationship between student initiations and preselected or non-volunteering students.

There were three Aboriginal students in the classroom, and the teacher initiated interactions with one of these on 19 occasions. That student initiated only one interaction with the teacher. Of the other two Aboriginal students, one received 11 teacher initiations for the three lessons, placing her at the bottom of the rank

overall. This student made no initiations of her own. The third Aboriginal student attended for only one of the three lessons and in that lesson recorded only one initiation, praise, from the teacher.

Table 5

Student Talk: Initiations

Lesson	Question	%	Comment	%	Call out	%	Relevant	%	Irrelevant	%	Total	%
1	9	18.4	11	22.4	13	26.5	15	30.6	1	2.0	49	100
2	4	40.0	3	30.0	0	0	3	30.0	0	0	10	100
3	13	43.3	5	16.7	6	20.0	6	20.0	0	0	30	100
Total	26	29.2	19	21.3	19	21.3	24	27.0	1	1.1	89	100

DISCUSSION

The correlations between student and teacher initiations appear to confirm that a reciprocal procedural agreement exists. Those students who demonstrate greater skill in asking questions and making comments are in turn chosen more often by the teacher. They are provided with information more often, chosen to respond to questions more frequently and given more direction.

Of the students who demonstrated the interactional skills described above one was outstanding in all three lessons. This student made 17 of the 40 student initiations recorded. She also was called upon most frequently by the teacher to respond to questions, and as well she demonstrated considerable skill in prolonging any interactions involving herself and the teacher.

The interactional skills of the minority of students in this class tend to confirm that some students possess significant advantages over others in that they are better able to function more effectively in the classroom. The existence of a significant postive relationship between student initiations and teacher selection of volunteers to respond to questions, but the absence of such a relationship with preselected and non-volunteer students, suggests that some students are able to attract the teacher's attention more successfully. These latter students seemed more skilfully attuned to the teacher's movements, gaze and demeanour, and were able to gain the teacher's interactional attention more frequently.

While there was a continuum of interaction between teacher and students, the location of two of the three Aboriginal students at the bottom of the rank suggests that they lacked the above skills. Perhaps unable to judge the most propitious occasion for raising hands or initiating discussion with the teacher, they remained relatively passive throughout the lessons. For one of these

students, only two of the eleven interactions in three lessons were the result of the student volunteering an answer.

CONCLUSION

The results of this study appear to confirm the existence of a reciprocal procedural agreement between the teacher and certain students in the classroom. This agreement may be a product of shared socio-cultural experiences and is one that may advantage certain students and disadvantage others. It may also help to explain the limited participation by many Aboriginal students in classroom interaction. An implication of this is that teachers need to be aware of the possible existence of such an agreement, and adopt strategies which minimise the disadvantages experienced by those who are not party to the agreement. A variety of interactional approaches should be employed to ensure that all students may benefit from positive interactions with the teacher.

REFERENCES

Brophy, J.E. and Good, T.L. (1974) *Teacher student relationships: Causes and consequences.* New York: Holt, Rinehart and Winston.

De Stafano, J.S. and Pepinsky, H.B. (1979). *The learning discourse rules by culturally different children in first grade literacy instruction.* Columbus: Ohio State University Research Foundation.

Eagleson, R.D. (1982). Aboriginal children in the urban setting. In R.D. Eagleson, et al. (eds). *English and the Aboriginal Child.* Canberra: Curriculum Development Centre.

Flanders, N.A. (1970). *Analysing Teaching Behaviour.* Reading: Addison-Wesley.

Good, T.L. and Brophy, J. (1973). *Looking in Classrooms.* New York: Harper and Row.

King L.H. (1979). *An attributional analysis of student achievement-related behaviour and the expectancy effect.* Unpublished doctoral dissertation, University of Alberta, Edmonton.

Malcolm, I.G. (1982). Verbal interaction in the classroom. In R.D. Eagleson, et al. (eds). *English and the Aboriginal Child.* Canberra: Curriculum Development Centre.

Malin, M. (1990). Why is life so hard for Aboriginal students in urban classrooms? *The Aboriginal Child at School, 18,* 1.

McKessar, C.J. and Thomas, D.R. (1978). Verbal and nonverbal help-seeking among urban Maori and Pakeha children. *New Zealand Journal of Education Studies, 13,* 1, May.

Watts B. (1981). Determinants of school success. *The Aboriginal Child at School, 9,* (2), 3-30.

Zimmerman, S. (1987). The return to messages: perspectives on discourse analysis and conversational coherence. Paper presented at joint Central/ Southern States Speech Convention, St. Louis.