Classroom Discourse

The Language of Teaching and Learning

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Chapter 4

Variations
in Lesson Structure

The three-part IRE sequence is the most common sequence in teacher-led speech events. In linguistic terms, it is the “unmarked” pattern. A more informative label comes from computer terminology: IRE is the “default” pattern—what happens unless deliberate action is taken to achieve some alternative.

For example, the word-processing software with which this book was written will print everything in double-spaced lines unless I change one number in a list of printing-format features. Each time I turn the computer off, the memory of that change is lost, and the program goes back to its double spaces. Double space is the default option—doing what comes naturally. So, in the classroom, by the nature of school as an institution, the default pattern of classroom discourse—doing what comes naturally, at least to teachers—is IRE.

But other, more marked, nondefault patterns of teacher-student interaction do occur; and even small changes can have considerable cognitive or social significance.

The purpose of this chapter is to raise awareness of alternatives and suggest ways of thinking about them. We shall explore variations that reflect differences in educational purposes for talk; number of partici-
pants (teacher and one student instead of a group); medium of interaction (electronic mail instead of oral); and cultural differences among students. Surprising as it may seem, there is little research on differences in talk that occur along with differences in student age or grade.

THE PURPOSES OF TALK
Classrooms are complex social systems for many reasons, not the least of which are the many different purposes of talk. Even if we limit attention to talk that is part of official classroom air time (ignoring unofficial chat during cracks or seams in the daily schedule), and limit it also to talk that is instructional (ignoring, even if teachers can't, the talk that is managerial and procedural), there are still multiple agendas within any single classroom—shifting from hour to hour and even minute to minute.

One important shift is from recitation to something closer to a "real discussion" in order to treat topics that do not fit the lesson structure. It is easy to imagine talk in which ideas are explored rather than answers to teachers' test questions provided and evaluated; in which teachers talk less than the usual two-thirds of the time and students talk correspondingly more; in which students themselves decide when to speak rather than waiting to be called on by the teacher; and in which students address each other directly. Easy to imagine, but not easy to do. Observers have a hard time finding such discussions, and teachers sometimes have a hard time creating them even when they want to.

Fortunately, a few examples have been reported—enough to see what discussions sound like, and to explore why they seem to be so rare. These analyses show changes in three discourse features: speaking rights, the teacher's role, and speech style.¹

Speaking Rights
In typical classrooms, the most important asymmetry in the rights and obligations of teacher and students is over control of the right to speak. To describe the difference in the bluntest terms, teachers have the right to speak at any time and to any person; they can fill any silence or interrupt any speaker; they can speak to a student anywhere in the room and in any volume or tone of voice. And no one has any right to object. But not all teachers assume such rights or live by such rules all the time.

The procedures for teacher nomination described by Mehan are typical of lessons. One important feature of discussions is the shift to more self-selection by students, from preallocation of turns by the teacher to more local management of turn taking at the moment of speaking. With
this shift, classroom talk becomes more like informal conversation—not the same as conversation, because there is still the large group of potential speakers and the educational necessity to stick to an agenda, but closer to it.\(^2\)

Here’s one example from Vivian Paley’s kindergarten classroom, introduced and reported by the teacher:

> [Lisa is telling us the story of “Tico and the Golden Wings” by Leo Lionni. The children and I do not agree about Tico; I applaud him as a nonconformist while they see him as a threat to the community. . . . ]

*Teacher:* I don’t think it’s fair that Tico has to give up his golden wings.

*Lisa:* It is fair. See, he was nicer when he didn’t have any wings. They didn’t like him when he had gold.

*Wally:* He thinks he’s better if he has golden wings.

*Eddie:* He is better.

*Jill:* But he’s not supposed to be better. The wishing bird was wrong to give him those wings.

*Deanna:* She has to give him his wish. He’s the one who shouldn’t have asked for golden wings.

*Wally:* He could put black wings on top of the golden wings and try to trick them.

*Deanna:* They’d sneak up and see the gold. He should just give every bird one golden feather and keep one for himself.

*Teacher:* Why can’t he decide for himself what kind of wings he wants?

*Wally:* He has to decide to have black wings.\(^3\)

Here’s another example, this time from a high school history class. The topic is Louis XIV’s treatment of Huguenot dissenters:

*T:* The treatment that Louis XIV gave to the Huguenots is anything but acceptable, and yet some people say that he was justified in his treatment of the Huguenots, in respect to the point that he was trying to take care of his country. Do you feel that Louis was justified in his treatment of the Huguenots?

*S1:* I think, you know, they had their rebellion and stuff like that. I don’t think he should have gone as far as totally kicking them out of the country and giving them, like, social disgrace, you know, like taking their jobs away from them. If they wouldn’t interfere with his way of ruling, and their religion, why should he interfere with them?

*S2:* He’s partially right in what he did, but I don’t feel he should’ve kicked them out, like she said. ’Cause who is he to say how they can . . .
you know? Even though it’s all Catholics, he gave ‘em, like, religious freedom.

S3: I feel that he had hardly any justification at all. He wound up at the end, as Lydia said, having to almost be persuaded by all the people around him that were saying, “Well, look at the Huguenots.” You know, “Why don’t you do something about the Huguenots? We don’t like the Huguenots.” . . . It was one of the last places that he had to conquer, so he figured he’d just go out and then kill them. I think it was totally unfair.

T: OK, I can see where you’re coming from, but I don’t know if I can totally agree with that. Is there anyone who disagrees with what these people are saying? Marty?

Marty: I don’t really disagree, but you know, we know the story, how everything worked out. . . . They wanted to get rid of the Huguenots. And just like that, you know, us here, we don’t like somebody, like, you know, Italians and Nazis—sorta the same thing, something like that, in their eyes. I don’t think he was justified himself.

S4: OK, in those days the church and state were like the same thing and everything, and so I think, well, like Louis—well, it isn’t like today, when you can be a member of a country, just a member of a country. In those days, the church and the country meant the same thing, and when he saw people breaking away from the church, then he thought that they were breaking away from him. And he wanted to stop it. That was about the only thing he could do.

T: So you feel that he was justified in what he was doing, as far as he was concerned—he could justify it to himself.*

In both examples, turn taking does not follow the usual lesson sequence. Instead of the teacher regaining the floor after every student turn, there are sequences of turns in which students follow each other without nomination. In the kindergarten, the sequence is

T-S-S-S-S-S-T-S-

In the history class, it is

T-S-S-T-S-S-T and continues S-T-S-S-T-S-S-T

The history class may not look like a big change, but it is a significant one. And for students who are used to lesson procedures, it will feel very different too.

The shift away from teacher nomination eliminates the need for students to raise their hands. In the high school discussion, at the end of the second utterance by T, he nominates one student (Marty) by name, presumably because Marty (and maybe others as well) raised hands in response to T’s question “Is there anyone who disagrees . . . ?” It is not easy for students or teacher to refrain from well-learned habits.
I remember a small seminar at Harvard that had been meeting for several months discussing Marxist writings on education. I played a relatively minor role, intellectually as well as managerially; and student self-selection was the norm. But once, when I did take a turn to speak, the next student momentarily lost his sense of this particular discussion context and, much to everyone else's amusement, started to raise his hand.

Related to the change to more self-selection of turns, but not following from it automatically, is a change in how speakers refer to each other and to the teacher. In most lessons, the teacher is the addressee for all student utterances, and references to other students' talk are rare. In the history excerpt, note S2's phrase "as Lydia said." Later, another student begins, "I think Marty is wrong." Students refer to each other, but in the third person, and T is still the direct addressee.

Still closer to conversation among equals and harder to find in schools is students addressing each other directly. Lemke calls this "cross-discussion" and looked for it in his study of high school science classrooms:

Cross-Discussion is dialog between students in which teacher is not a constant intermediary. Such dialogue is rare as part of the public discourse of the science classroom. . . . Public cross-discussion is signalled when one student addresses another publicly rather than addressing teacher. . . . When one hears a student say, "I think you forgot . . . ." in place of (to teacher) "I think she forgot . . . ." cross-discussion is taking place. Similarly if teacher is referred to in the third person.2

Such cross-discussion, with students addressing each other directly, occurred often in a class of fifteen-year-olds in a London comprehensive school, perhaps not only because the teacher encouraged it but also because he taught an integrated English and social-studies course to the same group of students for five years. The school is in Hackney Downs, then one of the poorest districts in London. The class included students from Africa and the Caribbean as well as white working-class families. English educator Alex McLeod recorded one discussion on the place of Afro-Caribbean culture in the school curriculum. The teacher, John Hardcastle, started with a question:

Really what I'm working around to is asking a big question, that is, is all this business about racism something that's only of interest to black people, or is it something that's got to be important for everybody?

At one point, discussion goes back and forth between David (whose family came from Trinidad) and Ricky (who is white). Note the use of
you and the addressee’s first name (in the turns marked with an arrow in the left margin):

David: It goes back to the days of slavery.

→ Ricky: David, how can white people accept the full of what their ancestors done?

David: They can recognize that it’s not them.

→ Ricky: Don’t you reckon that black people know that? Don’t you think that black people are using that as an excuse, sort of, to ask for more sympathy?

→ David: Don’t you think that some white people don’t even know about the history of black people? . . .

Not evident in these transcripts, and hard to determine even on videotape, is eye gaze, particularly of student speakers. In the typical lesson, students look at the teacher while speaking. She is the only official addressee. Philips describes the usual pattern:

While the teacher is speaking, the students look at the teacher much more often than elsewhere. And when a student is speaking, the student designates the teacher as the addressed recipient of the speech by looking at [her]. Peers, in turn, do not gaze at the speaker’s face nearly as often as the teacher does. They look more often at the teacher listening than they look at the student who is speaking. As often as not, while one student is speaking, the other students do not look at anyone, but gaze off in the distance or downward.

This pattern of gaze direction supports an impression conveyed by the system for regulating talk that students are not supposed to play a role in regulating the talk of their peers. A child’s claim to the floor is validated by the teacher, both verbally and visually, or not at all, in the official structure of talk.7

One primary teacher, who valued real discussion but admitted difficulty in getting it to happen, told me that she tried to avoid looking at the child who was speaking. Rude as this might seem, she felt it encouraged the speaker to make eye contact with peers, and made it more likely that another child would self-select to be the next speaker.

These changes cannot happen unless students can see one another. Discussion is almost impossible—for anyone, not just students—when seats are in rows. One experimental study compared the behavior of three fifth-grade classes brainstorming ideas for writing assignments. Each class was observed three times—while the students were seated in rows, clusters, and a circle. The circle arrangement produced the least
hand raising, the most on-task comments not in response to teacher nominations, and the fewest indications of student withdrawal from the class activity. The authors concluded with a simple recommendation: "Teachers who wish to facilitate pupil interaction during discussion sessions would be wise to consider arranging desks in circles."8

Moving chairs can seem a nuisance in classrooms, especially with young children who have to learn how to carry them in safe ways. But, in addition to the particular value of a circle for discussion, it may be generally helpful, especially for young children, to have different physical arrangements for events where different discourse norms prevail. Just as learning a second language is facilitated by the separation of languages by setting, learning to shift ways of speaking should be helped by such visual signals as well.9

The Teacher's Role

In a series of studies, J. T. Dillon—from whose research the history-class example is taken—has been trying to understand why discussion is so hard to achieve. His conclusion is that what "foils" discussion, surprising as it may seem, is teacher questions, and with them the fast pace of lesson interactions.10

Teacher Questions. In lessons, the teacher asks questions to which she almost invariably knows the answer (often called test questions) and evaluates student answers. In discussions, her role not only is reduced in quantity but has to be changed in function as well.

Consider again the three examples just cited. The kindergarten teacher makes one comment, asks one sincere (nontest) question, and does no evaluating. The history teacher asks two sincere questions, makes one comment, and expresses one disagreement. The London teacher starts off with "a big question," intervenes to probe further ("Sunday"—from Nigeria—"what would you say if you took a white middle-class teacher that was going to come and work in an area like this . . . and says 'Why should I bring in black materials, because all it's going to do is divide kids?' ") and makes space for someone to be heard ("Go on, David, then Kevin speak.")11

For the teacher, this change away from a series of questions is more than a change in surface verbal behavior. At the heart of the shift from lesson to discussion is a different conception of knowledge and teaching. At the end of chapter 3, I suggested that the lesson is an interactional format that fits knowledge that is factual and can be evaluated as right or wrong, and can be subdivided into short units for demonstration in short student answers. As Stodolsky and her colleagues point out, some school content is like that—arithmetic facts and geographical informa-
tion, for example. But kindergarten children’s conception of fairness, and high school students’ understanding of the treatment of dissenters or the question of who should learn about racism, are different kinds of knowledge that require a different kind of discourse structure.

Unfortunately, a change of teacher intent is not sufficient. Teachers and students alike are well practiced in lesson behavior, and talking in another way doesn’t come easily. I suggested earlier some specific ways of encouraging a shift in turn taking. Dillon has some suggestions for alternatives to the usual teacher questions:

1. Declarative statements—as in the kindergarten T’s opening.
2. Reflective restatements—as in the history T’s last comment.
3. Invitations to elaborate—as in the London teacher’s question to Sunday.
4. And (hardest of all) silence.\(^\text{12}\)

*Pace.* Most research on classroom discourse is not done with a stop-watch. While great care may be taken to transcribe talk of one speaker that overlaps that of another, attention is not usually given to the absence of talk, to the placement and duration of silence.

One science educator, Mary Budd Rowe, has made this the major focus of her research for the past twenty years. In a recent summary of all this work—in classrooms from elementary school to college, from special-education teachers to museum guides—Rowe confirms her earlier findings that “when teachers ask questions of students, they typically wait 1 second or less for the students to start a reply; after the student stops speaking they begin their reaction or proffer the next question in less than 1 second.” And, by contrast, when teachers wait for three seconds or more, especially after a student response, “there are pronounced changes in student use of language and logic as well as in student and teacher attitudes and expectations.”\(^\text{13}\)

Rowe describes the “pronounced changes” of increased wait time:

1. Teachers’ responses exhibit greater flexibility, indicated by the occurrence of fewer discourse errors and greater continuity in the development of ideas.
2. Teachers ask fewer questions, and more of them are cognitively complex.
3. Teachers become more adept at using student responses—possibly because they, too, are benefiting from the opportunity afforded by the increased time to listen to what students say.
4. Expectations for the performances of certain students seem to improve, and some previously invisible people become visible.
5. Students are no longer restricted to responding to teacher questions
and get to practice all four of the moves. (Rowe adds "structuring" to the three-part sequence of soliciting, responding, and reacting.14)

So many significant changes from a seemingly small change in pace! Like the shift away from teacher questions, the shift to a slower interplay of pace may seem like a change only in superficial behavior. But here too there is an important relationship to implicit conceptions of knowledge. In Rowe's words:

A complex thought system requires a great deal of shared experience and conversation. It is in talking about what we have done and observed, and in arguing about what we make of our experiences, that ideas multiply, become refined, and finally produce new questions and further explorations.15

Increasing wait time is easier to describe than to do. Rowe reports the kind of in-service supervision and support it requires, particularly if it is to be sustained and incorporated into the teacher's routine enactment of her role. In Rowe's words, "There are role and norm transformations taking place," and the teachers need a chance to talk about their experience of this change.16

In addition to the educational benefits that result from Rowe's interventions, her work yields an important insight into the nature of classroom discourse: the features found in any classroom are part of a complex system, and a change in any one will inevitably entail changes in others.

**Speech Style**

Changes in speaking rights and in the functions of the teacher's own utterances are aspects of classroom discourse to which the teacher has to give focal attention. Another feature of discussions that differentiates them from lessons is more derivative: a shift in speech style. In the words of British educator Douglas Barnes, it will be more "exploratory" and less "final draft." In the words of linguist Elinor Ochs, it will be more "unplanned" than "planned," as ideas are thought out in the course of their expression.17

Here is an example from Kuhn's analysis of discussions in undergraduate college classes, this one in the history of science. The topic is scientific intuition, and the teacher has asked whether it's just ordinary thought speeded up, or something qualitatively different. A student thinks aloud (in this transcription, P represents a one-second pause):

It's probably different because it is the former that's uhh you know quick rationalization or explanation of observations and it's uhhmm P P that it's P
highly highly usual because P P P because you know you you haven’t gone through the whole process. [Pace quickens]

We see here some of the indicators of exploratory talk suggested by Barnes: hesitations, rephrasings, and false starts; expressions of tentativeness; and a fairly low level of explicitness. Barnes comments:

The distinction between exploratory talk and final draft is essentially a distinction between different ways in which speech can function in the rehearsing of knowledge. . . . Both uses of language have their place in education. 19

When Discussions Happen

So far, we might assume that a particular speech event, a particular occasion in which teacher and students gather for talk, is either one or the other—lesson or discussion. But purposes can change more quickly than that, not just from hour to hour but from minute to minute as well. And interactions that have some of the features of discussions may erupt briefly within other events.

In high school science classrooms, Lemke found that cross-discussion occurred briefly as well as rarely. In undergraduate college classes across several departments, Kuhn found that only short segments of the 50-minute periods could be characterized as true discussions, never the whole class. And temporary eruptions of discussions with younger children have been documented by Erickson and his colleagues. For example, Erickson and Catherine Pelissier discovered brief segments of discussion that are a “fine line between order and chaos” and that are—to both teacher and observers—the intellectual high point of the lesson. 20

These observations point to the importance of infrequent events, ways of talking that have special value at specific moments, ways that would be lost from notice in analyses that combine frequencies for the lesson as a whole.

THE NUMBER OF PARTICIPANTS

Teachers talk with students individually, one to one, as well as in groups. A typology of classrooms according to kinds of discourse would show considerable variability in the amount of teacher time spent with individuals or groups. Sharing time is one context for one-to-one talk (though it takes place in front of the rest of the class). Other contexts that occur in most classrooms include moments when students request help, either from the stationary teacher at her desk or the circulating teacher making
her rounds, and more formally scheduled conferences about academic work, especially writing.

**Asking for Help**

Many times in a school day, students need to ask the teacher for help. But whereas the teacher has the right to speak to any student at any time, students have much more limited conversational access to the teacher, especially when she is already otherwise engaged. How they manage to get the teacher's attention is usually overlooked as just a side sequence to the teacher's main focus of attention, or hidden from consideration altogether because it is outside the range that an observer can hear or record.

Sociolinguist Marilyn Merritt calls the moments when students try to get the teacher's attention "service-like events," to suggest similarities with what happens when customers act to get a clerk's attention in banks or stores. She analyzed successful and unsuccessful requests for help in ten nursery and primary classrooms, and the skills of dual processing required of both teacher and students. Here, for example, is one rule for success:

The initiating child is most likely to be positively attended to if s/he makes a "nonverbal only" approach to where the teacher is "posted" . . . [perhaps because] a nonverbal initiation by the child allows the teacher to "start the talk." This prerogative means that the teacher can be "more in control" of the service-like event talk. It also means that the teacher can wait to start the service-like event talk until there is a spot in the teacher activity that can "most easily" be slotted out of.21

Because Merritt worked from videotapes that spanned five school years from prekindergarten through third grade, she had looked for differences in discourse as the children got older. For example, when the nursery-school teacher's attention was requested for a competing activity, she would often "draw the soliciting child into the teacher activity (T: 'That's very interesting, Johnny, but right now Scott has something he very much wants to tell us about.') But the third grade teacher was more apt to ask the soliciting child not to join in but to wait. . . . (T: 'Is this an emergency?')."22

**Writing Conferences**

Because of current interest in the teaching of writing, there is a growing number of studies of writing conferences between teachers and individual students. Research by basic writing teacher Terry Meier includes a rare account of changes in the structure and content of conferences
during a six-week summer program for adults in a two-year college. The conferences were two to six minutes long. The teacher, Charlie, commented first on organizational elements in the student’s paper and then switched to any grammatical problems.\textsuperscript{23}

In one analysis, Meier compared ten randomly selected conferences from the first and second halves of the six-week course. She found striking differences. During the first half, the interaction fit the IRE or IR sequences typical of group lessons. “Charlie exerted most of the conversational control over the introduction of topics . . . , students seldom made ‘initiation moves,’ either by redirecting the conversation or by interrupting Charlie.”

Here’s a segment of a typical early conference:

\textit{Charlie}: I think what, isn’t what, you’re getting at, ah, that you have to be confident enough to tell someone, you know, this, this isn’t any good?

\textit{Jeff}: Yeah.

\textit{Charlie}: You have to do it, is that what you mean?

\textit{Jeff}: Yeah.

\textit{Charlie}: OK, then just give a little example like that. You know, say, you have to have a strong sense of yourself to tell someone who’s older or more experienced or bigger or whatever it is that, no, you didn’t do this job right so you’re not intimidated.

\textit{Jeff}: Yeah.

\textit{Charlie}: You see what I mean?

\textit{Jeff}: Yeah.

\textit{(Friday, week one)\textsuperscript{24}}

Moreover, even though Charlie made well-intentioned checks on the students’ understanding of his comments on their work, they “invariably responded with ‘mm,’ ‘yeah,’ or ‘OK,’ even when they didn’t really understand what Charlie was talking about, something which seven of the ten students in the study ‘admitted’ [in conferences with Meier] to having done on at least several occasions.” Meier comments on these “yes” answers:

Saying no—particularly when yes is the expected or preferred response . . . is a speech act which involves more self-assertion than simply assenting or agreeing. . . . To have indicated lack of understanding in the conferences would have meant taking the risk of “looking dumb,” potentially losing face. . . . [It] also implicitly calls into question the adequacy of the questioner as well—i.e., was he not being clear? . . . In addition, the status relationship between Charlie and the students as well as the way in which the conferences were structured—their brevity, Charlie’s obvious instructional agen-
da—tended to favor simple, unelaborated assent to whatever Charlie said, whether understood or not.  

In the second half of the program, the conferences changed. Students started checking their understanding by restating Charlie’s point, or even by saying explicitly that they did not understand: “So what do you mean by run-on?” They also began to take the initiative in introducing issues of their own: “But where’s my main idea?”

A change that would usually be overlooked is a shift in the placement, and therefore the meaning, of “mm.” Whereas, in the early conferences, “mm’s” were responses to a teacher initiation, in the later conferences, they were more often uttered as part of extended exchanges, and functioned as back-channeling devices for keeping speaker and listener in conversational touch with each other. For example:

Charlie: ... So what do you, what have you described here?
Barbara: My feelings as I’m trying to write something and I get stuck for what I want to put on the paper, and what I do when I get stuck.
Charlie: OK. Is there a conflict in your mind between your, your self-image as a writer—
Barbara: Mm . . .
Charlie: —and the problems you have actually starting a story in writing?
Barbara: Yeah, because when I try to write something you see, like I don’t know what I’m, I don’t know how to write it, but I know that I have the stories in my head, and I, I should be able to put ‘em on paper.
Charlie: OK the reason I raise that—
Barbara: Mm . . .
Charlie: —is that I think there’s something underneath this.
Barbara: Right, there is.

(Wednesday, week six)  

Meier suggests that Barbara’s first “mm” means she is following Charlie’s train of thought, shown by her extended response to his question. Her second “mm” seems to indicate interest in what he’s saying, which she confirms by her subsequent interruption, “Right, there is.” Meier comments on the significance of these changes:

Despite its sometimes ritualistic use, especially in casual conversation, I would argue that students’ increased use of backchanneling behavior in the later conferences is highly significant for two reasons.

Frequent backchanneling is not a characteristic feature of classroom discourse, a communicative situation in which students typically speak only
when a response has been directly elicited by the teacher. . . . By the end of the course students had begun to interact with Charlie in a way that is more characteristic of genuine discussion or dialogue. . . .

Students' increased use of backchanneling behavior also suggests that students came to see themselves in more equal relationship to Charlie than they did at the beginning. . . . These are metacommunicative utterances—they comment on the discourse itself, and in so doing, they are implicitly evaluative. To backchannel another's utterances requires that one perceive oneself as entitled to make a metalinguistic "comment" on how well the conversation is proceeding.27

Meier's explanation of these changes extends beyond the conferences themselves to the students' entire experience in the six-week course. As they 'developed more control and mastery over the writing process, they also began to participate more actively in the conference. . . . Broadly speaking, then, the change in conference dynamics can be seen as a movement in the direction of teacher-student co-membership in the academic community.'28

The observations by Merritt and Meier suggest that changing the size of the student group, and individualizing teacher-student interaction, does not in itself change the structure of classroom discourse. This is also the conclusion of the study by British researchers Edwards and Furlong of an individualized, "resource-based" social studies curriculum based on "Man: A Course of Study" (MACOS) in a mixed-ability school for 11-13-year-olds: "Increased control by pupils over the pacing of their work was not accompanied by a marked relaxation in the teacher's control over what was to count as knowledge."29 Only when the purpose of talk shifted away from transmitting to the student "the teacher's meaning system" did the structure of the talk depart from the IRE sequence.

THE MEDIUM OF INTERACTION

Until recently, all research on classroom discourse has described communication in the medium of face-to-face interaction. Now we have classes taught via electronic mail. One semester, Mehan taught a college class (on "classroom interaction") via two media: to one group of students in a regular classroom setting, and to another group who participated only via an electronic message system.30

Some features of the discourse of the class taught by computers are predictable. For instance, there was a difference in the temporal relationship between initiations and responses—a lag time of hours or even days on the computer, rather than seconds or less in the classroom.

More interesting, Mehan and his colleagues also found significant differences in the discourse itself. Topically, in contrast to the regular
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classroom, discussions via electronic mail pursued “multiple threads" rather than only one at a time. In other words, the criterion of relevance shifted to the class discussion as a whole, not just the immediately preceding talk. Structurally, the three-part IRE sequence was also changed. Students gave longer and more thoughtful answers to questions; teacher evaluations were almost totally absent; and students received more comments from their peers.

This comparison is important not only because it offers a glimpse of what may become a more common medium of instruction, but also because it highlights contrasting features of the more familiar classroom.

CULTURAL DIFFERENCES AMONG STUDENTS

More than ten years ago, an exhibit of Native American children’s art was shown around the United States. Among the beautiful drawings and paintings, a few pieces of writing were also displayed. One, by an Apache child in Arizona, speaks for many children:

Have you ever hurt about baskets?
I have, seeing my grandmother weaving
for a long time.

Have you ever hurt about work?
I have, because my father works too hard
and he tells how he works.

Have you ever hurt about cattle?
I have, because my grandfather has been working
on the cattle for a long time.

Have you ever hurt about school?
I have, because I learned a lot of words
from school,
And they are not my words.

One of the most important influences on all talk (some say the most important influence) is the participants themselves—their expectations about interactions and their perceptions of each other. We shall consider here the variation in classroom discourse that does, or should, co-occur with differences in students’ home culture.

All human behavior is culturally based. Ways of talking that seem so natural to one group are experienced as culturally strange to another. Just as all speech has an accent, even though we are not made aware of our own until we travel somewhere where there is a different norm, so patterns of teacher-student interactions in typical classroom lessons are cultural phenomena, not “natural” in any sense either.

In some of its aspects, the demands of classroom discourse are new
to all children. In the classroom, the group is larger than even the largest family gathered at meals, and so getting a turn to talk is much harder. When one does get a turn, acceptable topics for talk are more restricted and more predetermined by someone else. And many of the criteria by which teachers evaluate the acceptability of pupil talk are new as well.

But beyond these commonalities, some children may be at a special disadvantage. For some children, there will be greater cultural discontinuity, greater sociolinguistic interference, between home and school. Erickson states the problem in its most general terms:

Without some considerable capacity of the teacher and learner to take adaptive action together in the mutual construction of learning environments, the species would not have survived and developed. . . . In institutions of schooling [that adaptive action] seems to occur only between some pupils and the teacher. . . . [This is] the major policy issue for schooling in modern societies.31

In the symbolism of the new logo for the International Student Office at Harvard University:

YIELD
Cultures
Crossing

During the past twenty years, considerable attention has been focused on cultural differences in patterns of interaction and their possible influence on students’ engagement with their teacher and with academic tasks. The first influential description of such differences was anthropologist Susan Philips’s study of the interaction patterns of Native American children on a reservation in Oregon.32

From a comparison of interaction patterns, which she called “participant structures,” in non-Indian classrooms and in the Indian community, she was able to explain the Indian students’ silence and nonparticipation in classroom lessons:

Indian children fail to participate verbally in classroom interaction because the social conditions for participation to which they have become accustomed in the Indian community are lacking. In reviewing the comparison of Indian and non-Indian students’ verbal participation under different social conditions, two features of the Warm Springs children’s behavior stand out. First of all, they show relatively less willingness to perform or participate verbally when they must speak alone in front of other students. Second, they are relatively less eager to speak when the point at which speech occurs is dictated by the teacher.33
Philips called these patterns of expected and appropriate language use the "invisible culture." Anthropological linguist Dell Hymes wrote about work such as hers as examples of "ethnographic monitoring":

Schools have long been aware of cultural differences, and in recent years have attempted to address them, rather than punish them. Too often the differences of which the school is aware, of which even the community is aware, are only the most visible, "high" culture symbols and the most stereotyped conventions. What may be slighted is the "invisible" culture (to use Philips's title), the culture of everyday etiquette and interaction, and its expression of rights and duties, values and aspirations, through norms of communication. Classrooms may respect religious beliefs and national custom, yet profane an implicit ceremonial order having to do with relations between persons. One can honor cultural pride on the walls of a room yet inhibit learning within them.34

Philips's work has stimulated descriptions of cultural influences on interaction, and of problems in classroom discourse that may be due to sociolinguistic interference, in other schools and communities. But neither Philips nor many of the other observers were in a position to influence classroom change. Philips's research was done with the approval, even the encouragement, of the Warm Springs Inter-Tribal Council. But neither she nor they had influence in the schools at that time. And for various reasons, most of the other ethnographies have also been reports only of the status quo.35

There are two well-documented exceptions to this limitation, two situations in which ethnographers have not only described problems but also stayed for a decade or more to collaborate with teachers in designs for change. One is anthropologist Shirley Brice Heath's work in the southeastern United States (Appalachia); the other is the work of an interdisciplinary team at the Kamehameha Early Education Program (KEEP) in Hawaii.

Heath's Work in Appalachia

For nine years, Heath was an ethnographer in rural black and white Appalachian communities, working at the request of parents who wanted to understand why their children were having problems in school, and simultaneously a professor in a local college giving in-service courses for teachers. When black teachers in newly desegregated "Trackton" schools complained that black children did not participate in lessons, she helped them understand what she had learned from her previous field work.

For example, the children were not used to known-answer questions
about the labels and attributes of objects and events. As one third-grade boy complained, "Ain't nobody can talk about things being about themselves." She encouraged teachers to observe the questions they asked in their own homes and at school, and then helped them design and try out new patterns of interaction in their own classrooms.36

Some of the changes followed this sequence:

1. Start with familiar content and familiar kinds of talk about that content.
2. Go on to new kinds of talk, still about familiar content, and provide peer models, available for repeated hearings on audiocassettes.
3. Provide opportunities for the Trackton children to practice the new kinds of talk, first out of the public arena and also on tape, and then in actual lessons.
4. Finally, talk with the children about talk itself.

Because Heath's collaboration with the Trackton teachers is unusual, I quote her description at some length:

For some portions of the curriculum, teachers adapted some teaching materials and techniques in accordance with what they had learned about questions in Trackton. For example, in early units on social studies, which taught about "our community," teachers began to use photographs of sections of different local communities, public buildings of the town, and scenes from the nearby countryside. Teachers then asked not for the identification of specific objects or attributes of the objects in these photographs, but questions [more familiar to the Trackton children] such as:

What's happening here?
Have you even been here?
Tell me what you did when you were there.
What's this like? (pointing to a scene, or item in a scene)

Responses of children were far different than those given in usual social studies lessons. Trackton children talked, actively and aggressively became involved in the lesson, and offered useful information about their past experiences. For specific lessons, responses of children were taped; after class, teachers then added to the tapes specific questions and statements identifying objects, attributes, etc. Answers to these questions were provided by children adept at responding to these types of questions. Class members then used these tapes in learning centers. Trackton students were particularly drawn to these, presumably because they could hear themselves in responses similar in type to those used in their own community. In addition, they benefited from hearing the kinds of questions and answers teachers used when talking about things. On the tapes, they heard appropriate classroom discourse strategies. Learning these strategies from tapes
was less threatening than acquiring them in actual classroom activities where the facility of other students with recall questions enabled them to dominate teacher-student interactions. Gradually, teachers asked specific Trackton students to work with them in preparing recall questions and answers to add to the tapes. Trackton students then began to hear themselves in successful classroom responses to questions such as “What is that?” “What kind of community helper works there?”

In addition to using the tapes, teachers openly discussed different types of questions with students, and the class talked about the kinds of answers called for by certain questions. For example, who, when, and what questions could often be answered orally by single words; other kinds of questions were often answered with many words which made up sentences and paragraphs when put into writing.37

**KEEP in Hawaii**

The full story of KEEP’s continuing efforts to improve the education of children of Polynesian descent, Hawaii’s indigenous minority, is long and complex. Relevant here are the changes in teacher-student interaction during small-group instruction in reading.38

One of the many changes was a shift to “direct instruction of comprehension” through the discussion of stories. This shift was a deliberate decision, made when behavior-modification techniques combined with a heavily phonics-based reading program produced attentive, industrious children but little growth in reading. The new teacher-student discussion focused first on children’s experience with the ideas the teacher knew the text would be about, followed by silent reading of the text to find answers to specific questions, and finally discussion of relationships between experience and text.

Evidently, this change in lesson content brought with it a serendipitous change in discourse form. When comprehension was stressed in small-group discussions of the stories to be read, these discussions gradually took on an overlapping-turn structure similar to the overlapping speech that is common in ordinary Polynesian conversations, and especially in the stylized speech event called “talk-story.”39 Here, a story is co-narrated by more than one person, and the speech of the narrators is also overlapped by audience responses. The KEEP children were familiar with this pattern in their lives outside of school, and evidently gradually introduced it into the story discussions at school when the change in lesson content, and a teacher who was willing to relax her turn-taking control, made it possible. The teacher addressed many of her questions to the group rather than to named individuals, and the children volunteered answers, often chiming in and overlapping one another’s answers.
Later, these lively reading-group interactions were analyzed by KEEP researchers as a bicultural hybrid of indigenous conversational style and teacher-guided content—what Hawaiian anthropologist Stephen Boggs calls "talking story with a book"—and they became an essential feature of the KEEP program. The most detailed analysis of the reading groups is by Au:

We will argue that there must be a balance between the speaking and turn-taking rights of the teacher and children, if a participation structure or a lesson is to be related to higher levels of productive student behavior. We will refer to this idea as the balance of rights hypothesis and suggest that it can serve as a conceptual basis for making specific predictions about the effects of social organizational and sociolinguistic variables on academic achievement. . . .

If the teacher exercises her authority by dictating the topic of discussion but allows the children to have some say about the roles they will assume as speakers and when they will speak, the cognitive and instructional focus of the lesson is more readily maintained. 40

In a more experimental analysis of KEEP instruction, Au compared the reading lesson of two teachers, one who had had little experience with Polynesian children and the other who was an experienced teacher in the experimental KEEP program. On several proximal indices—amount of academically engaged time, number of reading-related and correct responses, and number of idea units and logical inferences—the same group of children performed better with the experienced teacher, who held the children to academic topics but gave them more freedom to choose when to speak, even if it meant overlapping another child's talk. 41

The KEEP program works well for Polynesian children. But perhaps it would work as well for any children. How specific to Polynesian culture are these modifications? Which features of the KEEP reading lessons are simply features of good teaching for all children, and which are more culturally specific? In my opinion—and, I think, that of the KEEP researchers—some of the KEEP practices can be universally recommended, especially the teacher’s role as mediator between the children and the texts, and the teacher’s moment-to-moment responsiveness to her children’s understanding rather than following a sequence of questions prescribed in a teacher’s manual. 42

"Relevance" is an important characteristic of good education, but sometimes we look for it in the wrong place. Relevance is often advocated as a necessary characteristic of curriculum materials. Instead, it should be considered a characteristic not of the materials but of the relationship between the materials—any materials—and the learners. It is a fundamental teaching responsibility to find ways to help students achieve that
relationship. Our response to children who "hurt about school," as the Apache child put it so well, must be to find ways to make connections between their words, and their meanings, and ours.

But what about the cultural specificity of ways of speaking? In the KEEP program, the "balance of rights" or "shared control" involves the relaxation of turn-taking rules to allow children to speak out without being called on, and to chime in even when another child is speaking, as long as the content of their talk is relevant to the teacher-chosen topic. If the hypothesis of cultural compatibility is correct, other modifications of traditional lesson structure should be needed in order to achieve comparable shared control, student engagement, and academic growth for other groups of children.

To give this hypothesis of cultural compatibility a severe test, in 1983 the KEEP researchers took their program to a Native American community, where by now some schools are under tribal control. They went to the Rough Rock Demonstration School on the Navajo reservation in Arizona. A program successfully designed for one cultural group was deliberately transplanted to a very different cultural setting as a test of the cultural-specificity hypothesis.43

According to plan, Lynn Vogt, an experienced KEEP teacher, started out teaching the language-arts portion of each school day to a third-grade class of Navajo children. Gradually, the regular Rough Rock teacher, herself a Navajo, took over—still teaching in KEEP style. KEEP anthropologist Cathie Jordan observed the results, both directly in the classroom and on videotapes.

One feature of the KEEP reading-lesson structure seemed as appropriate at Rough Rock as in Honolulu: allowing the children to volunteer responses, rather than speaking only when called on by the teacher, seemed natural both to the children and to the Navajo teacher. But the length of child turns, and their relationship to the talk of their peers, was very different. There were no quick responses or overlapping speech. Instead, each Navajo child spoke for a longer time, volunteering questions as well as comments, while others waited patiently for their turn. "The ideas often seemed [to the KEEP outsiders] disjointed from one another, but in themselves, more complex and fully developed." As a result, the teacher asked fewer questions, and had to think very differently about relationships between the children's ideas and those in the text.

Admittedly, the contrast between Polynesian and Navajo cultures may be extreme. But this small piece of research confirms the importance of cultural differences in ways of speaking. It also suggests how sensitive teachers and observers can shorten the amount of ethnographic work necessary for adapting to such differences. In the Rough Rock situation,
the most important resource for this adaptation was the indigenous teaching staff. Supplementary resources were other ethnographic descriptions of Native-American classrooms and of Navajo culture more generally, and observations of the children themselves out of school as well as in.

ADDITIONAL COMMENTS

Before we leave the topic of discourse variations, I want to add three comments.

First, another study of cultural differences is important for its alternative interpretation of why they cause problems. Ian Malcolm, an educational researcher in Western Australia, developed a comprehensive category scheme for analyzing classroom lessons and then studied classrooms of Aboriginal (black Australian) students. He found a set of speech acts that characterized the Aboriginal children's lesson behavior:

- Empty bidding—followed by silence.
- Declined replying—after a direct elicitation.
- Deferred replying—after a longer-than-normal pause.
- Shadowed replying—in the shadow of the next speaker.
- Unsolicited replying—without having been nominated.44

Malcolm analyzed the effect of these Aboriginal speech acts on the course of the lessons as distortions of the canonical form described in the last chapter, distortions caused "by incompletely shared acceptance or awareness of the norms of interaction by the participants."45

One explanation of this "incompletely shared acceptance or awareness" could be the reason suggested by Philips, Hymes, Heath, and the KEEP researchers—discontinuity between home and school—and there is some support for that interpretation from ethnographic descriptions of speech events in Aboriginal communities.46

But Malcolm offers "an additional perspective which does more justice to the active monitoring of the situation by Aboriginal pupils:"

Aboriginal pupils are not simply incompetents in a white man's classroom; they are exercising their right as participants in a speech situation to help to "constitute" that situation. . . . The basics of communication to the Aboriginal pupil may well be summed up as: Who is this person who wants me to talk to him? Who is listening in? Do I want to say anything? Are my rights to noninvolvement being recognized? Have I the right to say something when I want to? If the teacher, and the school system, have treated these questions as of no account, then the Aboriginal child, by the management of his discourse role, will urge them toward acknowledging their significance.47
Malcolm's second interpretation may seem at first glance simply a rephrasing of the construct of interference, but his inference of more active student response offers a resolution of one puzzling aspect of cultural-discontinuity theory. We know that children can learn situationally appropriate ways of speaking and shift effectively among them at an early age. For example, a Native American toddler acquaintance of mine regularly took his pacifier out of his mouth and dropped it into his diaper bag as the car approached his day-care center and didn't retrieve it until safely back in the car hours later. That's style shifting where it hurts! Why, then, does such learning often fail to happen in the classroom? Or, in other words, what makes ethnic differences become ethnic borders?24

Second, a case study of science teaching reminds us that interventions can disrupt home-school continuity as well as create it. As part of a description of science education in the United States, British researcher Rob Walker describes a charismatic black teacher in a small town in the southern U.S. Bible Belt:

Perhaps most striking is the way she stresses the students' oral expression. When they read, she listens, not just for the correct answer, but for the fluency and facility with which students use scientific terminology. This combination of teaching from the text and stressing oral expression . . . [is] particularly developed in religious communities. . . . The curriculum analyst may seek the replacement of existing styles of science teaching by a "discovery" approach . . . [but] the effect of success in this enterprise may be to cause a disjunction between school and community.49

The final comment comes from a journal entry by English/language-arts supervisor and Harvard graduate student, Paul Naso. After reading the research reports discussed in this chapter, in which mainstream teachers worked with minority students, he remembered his own first teaching experience "on the other side of the mismatch":

When I began teaching in a sixth grade classroom of a suburban elementary school, I was unaccustomed to the ways of middle-class, college degree-oriented family life that most of my students knew so well. Because I went to college in the working class community I was raised in and had even lived in my parents' home while I attended college, I had rather fixed notions of how children, parents, and teachers interact. I considered differences between my childhood and my students' upbringing to be irrelevant. Most of the families of this particular suburban town came from other places all over the country. I thought that I could transplant myself as a teacher in their community as easily as they transplanted themselves as residents. That was not necessarily so. We were different and that seemed to matter. . . .
Who talked "school talk" better? I was astounded at how nonchalantly children handled what I considered exciting "new" material. At that time I was thrilled at what I was finding in my first search into children's literature. However, it seemed that whatever I came upon, children already owned it, read it, or had had it read to them. I was also struck at how matter-of-factly they referred to characters and situations that appeared in the stories they knew. One of my struggles as an undergraduate was with my inability to find common themes and to make connections between texts. It seemed not to be in my nature to cite. Yet, here were children saying that this character "reminds" them of that one or this situation in this book is "like the one" in that book, and those references were often to stories they had been introduced to at home, not in their earlier grades. Linking occurrences in literature is school work, and they were very good at it.

I suppose that now, thirteen years later I would be less impressed with that class of students. I would recognize that the description I just gave probably fits a much smaller percentage of children than my memory allows me to believe. But that was my first encounter with children whose families emphasized different things in their conversation than my family did. . . . I was struck by how conveniently school fit into the lives of these particular children; I was reminded of how incongruent school and home were for me as a child. . . .

Claims that children are unprepared for school excuse teaching (or schooling) that is unresponsive. . . . The teacher needs to find connections, in this case not in texts, but in contexts, to integrate what may easily stand as isolated school and home experiences. The unexpected or unfamiliar might alarm the teacher; or it might guide the teacher to see links where previously there appeared to be none. The teacher may, as Paulo Freire says, "enter into communion" or "remain nostalgic towards his own origins."**

THE SIGNIFICANCE OF VARIATION

Underlying all the variation we have considered in this chapter, one condition essential to education must remain the same: to communicate, to understand and be understood. Or, to put it another way, in order to keep this condition constant despite differences in purposes, size of group, medium of instruction, and participants, variation in discourse structure is necessary.

After reading reports of another set of studies—this time on mother-child communication—social psychologist Roger Brown found an answer to the often-asked question about what parents should do to facilitate their child's language development:

Believe that your child can understand more than he or she can say, and seek, above all, to communicate. To understand and be understood. To
keep your minds fixed on the same target. In doing that, you will, without thinking about it, make 100 or maybe 1,000 alterations in your speech and action. Do not try to practice them as such. There is no set of rules of how to talk to a child that can even approach what you unconsciously know. If you concentrate on communicating, everything else will follow.31

Brown believes, as I do, that this fine-tuned articulation between what the child needs and what the environment provides happens unself-consciously and nearly universally in the case of parents. Not so with teachers. We have to plan more deliberately for the many purposes for talk in our classrooms, and create the best environments—physical and interpersonal—for them.

As Naso puts it, the essential condition is still "entering into communion." Where cultural differences make that communion harder to achieve, at least at the beginning, we have to be ready to give up "nostalgia toward our own origins," including ways of speaking that have seemed so "normal" in our own past.

NOTES

1This set of features comes from Kuhn's 1984 analysis of discussions in college classrooms.

2The still-classic study of turn taking in conversation is Sacks, Schegloff, and Jefferson 1974. See also Irvine’s 1979 discussion of dimensions of formality in communicative events.

3Paley 1981, 25–26. One reviewer of this manuscript wondered why Paley’s transcriptions read so much more smoothly than others in the book. When asked how she made her transcriptions, Paley explained:

   In editing a child’s speech, my aim is to preserve meaning, cadence, and inflection, and to avoid distractions for the reader. It is, I believe, the way we hear one another in the classroom.

   For example, Deepak, speaking of his toy snake, says, "His name is Snaky, um, and everybody calls him by his ... um ... not Snake, um, Tommy, um ... and I had another ... that other ... um ... it was a little bear ... it was called Tommy ... and the snake is ... uh ... Tommy the snake ... I mean Tommy the snake is Tommy the bear’s friend."

   Edited, the sentences might read: "His name is Snaky and everyone calls him Tommy. And I had another ... a little bear ... it was called Tommy. And Tommy the snake is Tommy the bear’s friend." (personal communication, March, 1987).

I’m sure Paley is right that sensitive teachers (like normal conversationalists) hear children in this way. But making a transcript as an analyst is different from hearing speech as a participant and requires decisions contingent on purpose and focus (Ochs 1979b). Paley’s editing is right for her books about her
children. But for other purposes, the disfluencies themselves are informative, as I suggested in chapter 2, as both indications of cognitive load on the speaker and possible explanations of differential listener response. That's why I have not done editing similar to Paley's throughout the book.

4Dillon 1983, 18–19.
6This class has been discussed by McLeod 1986, 42–43, from which this excerpt is taken; and by Hardcastle 1985.
7Philips 1983, 76. Goodwin 1981 is a comprehensive discussion.
8Rosenfeld, Lambert, and Black 1985, 106.
9In research on kindergarten children's learning of school scripts, Fivush 1984 finds that "the component activities of the school day seem to be marked at least partly by spatial cues."
11McLeod 1986, 42.
12Dillon 1983.
13Rowe 1986, 43. This article summarizes all her work. See also Tobin 1986 for a study of wait time in other curriculum areas.
14In shortened form from Rowe 1986, 45–46.
15Ibid., p. 43.
16Ibid., p. 46.
17Barnes 1976; Ochs 1979a.
18Kuhn 1984, 134.
21Merritt and Humphrey 1979, 299; also Merritt 1982a, 1982b.
22Merritt 1982b, 143; second teacher utterance from Merritt, 1982a, 229.
24Ibid., pp. 164–165.
27Ibid., pp. 175–176.
28Ibid., pp. 182, 172. The term co-membership is from Erickson 1975a. Michaels, whose research on sharing time was reported in chapter 2, has analyzed writing conferences in two sixth grades and compared them with sharing-time interactions (1985b). Staton, Shuy, Kreeft, and Reed 1983 describe dialogue journals, a hybrid of writing conferences and informal conversation in written form that originated in Leslie Reed's sixth-grade class in California and has since been adopted by teachers from primary grades to graduate school.
29Edwards and Furlong 1978, 121.
30Quinn, Mehan, Levin, and Black 1983, and Black, Levin, Mehan, and Quinn 1983.
31Erickson 1982a, 173.
32Her first, and still most influential report, was Philips 1972. Philips 1983 is a book-length version.
33Summarized from Philips 1972.
34Hymes 1981b, 59.
Erickson 1984 reviews many of the classroom school ethnographies. Cazden 1983b explores why so much ethnographic research describes only the status quo. Foster 1987 is an analysis of a successful black teacher by an insider to that culture.


Heath 1982b, 124–125.

For comprehensive accounts, see insiders Tharp, Jordan, Speidel, Au, Klein, Calkins, Sloat, and Gallimore 1984 and outsiders Calfee, Cazden, Duran, Griffin, Martus, and Willis 1981. On the reading program, see Au 1980 and Au and Mason 1981. For discussions of culture and the role of ethnographic research in improving education, see Jordan 1985 and Jordan, Tharp, and Vogt 1985 (ms.).

The original research on talk-story was by Watson 1972, and is reported in Watson-Gegeo and Boggs 1977 and Boggs 1985.

Au 1980, 149, 160.

This research was Au’s doctoral thesis, reported in Au and Mason 1981.

Cochran-Smith 1983, 1986 gives the most detailed description of this “mediator” role in her analysis of reading and discussing stories with nursery-school children.


Malcolm 1979, 311, 313.


Harris 1980, abridged from Harris 1977.


Walker 1978, 6.
