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ABSTRACT

A study investigated how oral discourse affects the communicative process of teaching and learning and how that process influences and is influenced by the goals and expectations of college instructors and college students. Three college classes were observed for one semester. Data were collected in the form of field notes, cassette tapes of classes, interviews with instructors and volunteer students, and a compilation of student and instructor writing, handouts, and sample text assignments. Interviews revealed participants' perceptions of and expectations for the course and the teaching/learning process. Interview data were compared with transcripts and other collected data for consistency between espoused theories and observed behaviors. Analysis of the data revealed that, as in elementary and secondary classrooms, instructor talk usually dominated. Instructors usually originated and controlled the patterns of talk and the meanings exchanged. Two levels of meaning, related to content and process, were communicated directly or indirectly in all three courses. Students had to discover these instructor meanings and commit themselves to performing or producing what was expected in order to succeed in the course. Although some evidence of a constructive model of interaction and learning appeared in the interview and transcript data, all three courses' patterns of interaction and linguistic profiles favored a transmissive model. (Author/DF)

TEACHER MEANING AND STUDENT LEARNING: THE ROLE OF INTERACTION IN SELECTED COLLEGE CLASSROOMS

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ABSTRACT

An awareness of the dearth of college-level interaction research and of the importance of spoken interaction in the teaching/learning process inspired the current inquiry. Its purpose was to discover how oral discourse affected the communicative process of teaching/learning and how that process was influenced by and influenced the goals and expectations of both college instructors and students.

Three college classes were observed for one semester. Data were collected in the form of field notes, cassette-taped classes, interviews with instructors and volunteer students, and compilation of students and instructor writing, handouts, sample text assignments. From the transcripts of classroom talk, a linguistic coding system was devised, and that coding system, classroom talk was analyzed. Data were compiled in the form of linguistic profiles and patterns of interaction for each class. Interviews revealed participants' perceptions of and expectations for the course and the teaching/learning process. Interview data was compared with transcripts and other collected data for consistency between espoused theories and observed behaviors.

The findings revealed that, as in elementary and secondary classrooms, instructor talk usually dominated. Instructors usually originated and controlled the patterns of talk and the meanings exchanged. Two levels of meaning, related to content and process, were communicated directly and/or indirectly in the three courses. Students had to discover those instructor meanings, and commit themselves to performing or producing what was expected to succeed in the course. Although evidence of a constructivist model of interaction and learning appeared in the interview and transcript data, all three courses' patterns of interaction and linguistic profiles favored a transmissive model.

Encountering constructivist theories of interaction and learning and becoming aware of the dearth of classroom interaction research at a college level together, led me to the present study. I wanted to examine discourse in college classrooms to discover, if possible, what perceptions and expectations participants brought to them, how those perceptions and expectations were communicated and interpreted through oral discourse, and what linguistic behaviors characterized this discourse.

From reviewing research, and from personal experience, I knew that language forms the major mode of communication and learning in classrooms. Researchers like Flanders (1972), Bellack and others (1963), and Barnes (1972, 1975) have demonstrated that one mode of language, oral discourse, dominates classrooms and displays structured patterns. In this discourse, teachers predominantly take active, initiatory roles, dominating the talking time, while students usually take reactive roles, initiating little of the discourse.

In classrooms, as elsewhere, this oral discourse involves an exchange of meanings. As people interact, they expect a reciprocal flow of talk and/or action to which they attach meanings. As Goffman (1974), Mead (1962), Nash (1976), and Stebbins (1975) have theorized and demonstrated, people approach situations with certain predispositions, or perceptions, which influence what they expect will happen. Their expectations in turn influence how they perceive their environment and ultimately act, or don't act. Thus, they construct meaning for that interaction, confirming or adapting their perceptions of and expectations for the events and situations they experience, and they do this via what Kelly (1963) calls a network of personal constructs.

Participants bring their own construed meanings out of which come

perceptions of and expectations for the classroom events of the present and future. Primarily, though not exclusively, through verbal interaction, participants create, exchange, and negotiate meanings.

Unlike everyday talk, however, in which people make and exchange meanings in a reciprocal fashion, most classrooms display an imbalanced exchange of meanings. In classrooms, teacher meanings dominate oral discourse, and students must discover those meanings and must move toward understanding and fulfilling them in order to succeed (Barnes, 1972; Edwards and Furlong, 1978).

Classroom discourse has been a focus of research since the 1940's when experimental research approaches were used to predict and control behavior and classroom performance. One such study, reviewed with many others by Cook (1969), compared the effects of lecture and discussion methods on student achievement. Anderson (1941), also investigating connections between classroom conditions and student achievement, devised a category system for measuring class climate. Ten years later, Withall devised a category system with which an observer could record classroom behavior and identify a classroom as teacher-or learner-centered (Thelen, 1951). The literature now abounds with studies which use such pre-categorized observation systems (Simon and Boyer, 1974; Babich, 1979; Rosenshine, 1971, 1976). Flanders (1970), reacting to the large number of controlled experimental studies, devised what became the most popular category system to determine teacher effectiveness. These studies fall under what Cazden (1985) identifies as the process-product tradition. Such studies, rigorous and valid as they are, focus predominantly on observed behaviors and final academic performances, paying little if any attention to participants' construed meanings, perceptions and expectations.

In the last two decades, interest in the latter has increased as

researchers have shifted their focus from studying characteristics of successful teaching to describing and examining the processes of teaching and learning, with classroom talk viewed as a vital part of those processes. Cazden (1985) contrasts the process-product research tradition, represented by Flanders, with the descriptive traditions, to which she gives the umbrella label "sociolinguistic" (p. 433).

This sociolinguistic tradition informs the present study. One purpose was to describe college level classroom discourse in light of s effects on the teaching/learning process. A second purpose was to explore how the perceptions and expectations of the participants were shaped by and shape the classroom discourse.

DESIGN

This descriptive study was compatible with Guba's (1978) definition of naturalistic inquiry, a methodology which enables researchers to examine complex processes like teaching and learning within their natural settings. Specifically, I used a variety of data-gathering techniques, including non-participant observation, field notes, audio-taping, semi-structured interviews, collection of student and instructor writing, and collection of handouts and other textual materials. The analysis of these data involved the use, in combination, of divergent-convergent thought processes for the purpose of identifying and describing patterns and categories related to the major question of how interaction affects and is affected by construed meanings, expectations, perceptions and behaviors in college classrooms.

The Courses

Three General Studies courses at Stockton State College (NJ) were selected: Freshman Seminar; Readings: A Seminar; and Chemistry of Foods. The courses were representative of the five multi- or inter-disciplinary fields in the General Studies curriculum. Each class met twice a week in 110-minute sessions for a period of fifteen weeks.

Freshman Seminar is designed to teach students the reasoning, writing, and research skills necessary for success in college, using topics freshmen will encounter in the liberal arts curriculum. Readings: A Seminar examines major literary and philosophical works. Chemistry of Foods is designed to develop students' understanding of the chemical composition of food, chemical changes food undergoes during processing and cooking, and use of chemicals for preservation.

The Participants

In Freshman Seminar (class size, 24 students), the instructor and six freshmen participated. In Readings: A Seminar (class size, 13) the instructor, three juniors, and one senior participated. In Chemistry of Foods (class size, 24), the instructor, three freshmen, one junior, and two seniors participated.

Data Collection

During the first week of class, each instructor introduced me and explained the purpose of my study. For the first two weeks, I sat in or near the back of each room, observing, taking notes, and taping oral discourse. During the third week, I requested student volunteers. For the rest of the semester, I attended the three courses as a nonparticipant observer and collected the following:

1) cassette tapes for 67 sessions of the three courses (two class sessions each week for the entire semester in Freshman Seminar and

Chemistry of Foods; once a week in Readings: A Seminar);

2) about 150 pages of handwritten field notes from each observed class, which included overall impressions of class dynamics, blackboard writing coordinated with classroom talk, students and teacher comments which might be inaudible on tape, teacher moves around the classroom, student seating patterns;

3) samples of students writing, including class notes, in-class writing, papers, tests;

4) copies of handouts and sample text reading assignments;

5) audio tapes of 40 student and 9 instructor interviews.

Data Analysis

From the pool of taped classes, I chose a representative sample for each course -- the first two weeks of the semester, two weeks in the middle of the semester, and the last two weeks of the semester -- which gave an adequate representation of classroom interaction. The sample classes were analyzed to determine the total amount of time instructors and students spent talking, as well as to determine functions and patterns of oral discourse. In this study, talk was viewed as a collection of verbal messages which reflects segments of related meaning, and occurs sometimes, though not always, in a structured order. Unlike some linguistic research which isolates talk from its context for analysis, this study attempted to grasp the meanings originated, shared, and negotiated in the dynamic context of classroom talk. Identification of linguistic signals and the patterns they formed seemed a useful way to analyze and understand the interaction process and its content.

The findings of classroom interaction research conducted by Sinclair

and Coulthard (1975), Mehan (1979), and Green and Harker (1982), offered models of ways to categorize and analyze classroom talk. Using these as a basis, I examined the transcripts of classroom talk to develop a coding system: a language with which to organize and talk about the oral discourse.

The meaning segments in this study were identified as "linguistic signals." This term was used because, after considerable scrutiny, these seemed to be the meaning segments used to transmit messages to other participants in the discourse. A linguistic signal was smallest division of talk used in this analysis, and the linguistic unit, a series of patterns of linguistic signals, was the largest. Following are the categories, coding symbols, and explanations of each signal.

acknowledging (ack)	giving permission to respond voluntarily
checking (ck)	word or phrase which indicates the speaker wants listeners to ask questions if unsure of the content; or conveys message that listeners should be paying attention
clarifying (cl)	repeats or simplifies previous message to aid understanding
continuing (cnt)	conveys message to speaker that listener is understanding the message and that the speaker may continue his thought
controlling (ctr)	talk directs linguistic and non-linguistic behavior of others
conveying facts (F)	conveying factual information or messages, including "yes-no," "I don't know," and I didn't do it" responses; includes recall and recognition of information from reading assignments and lectures

elaborating (el)	expands topic under discussion by defining, adding details, adding examples, giving background, justification, implications
interpreting (I)	conveying messages on an interpretive level, such as drawing conclusions, making inferences, critiquing, applying facts to new situations
negative feedback (-fd)	conveys non- or negative acceptance/correction of previous response is expected or required and none occurs
nominating (nom)	calling on a participant to respond
positive feedback (+fd)	conveys positive acceptance of previous response
refocusing (ref)	message redirects the talk to a previous statement, question, or response
restating (res)	repeating all or part of what previous speaker just said in the same words or paraphrase
structuring (str)	talk conveys initiation or conclusion of a discussion or an aspect of that discussion, or a shift in topic
summarizing (sum)	recapping part or all of a message which has developed over time

In the classrooms observed, these linguistic signals formed patterns which varied with different instructors and various class activities. Within and across talk patterns, communication occurred via one-way statements (or questions which acted as statements) or two-way statements and questions in the form of dialogue. The former mode of interaction was labeled in this study as transmissive (TR); the latter as interactive (IN). Clusters of patterns of talk were labeled according to their function within the larger context of talk. Five functions were identified for use in this study:

Social (soc)	to express interest or concern as a fellow human being; to build rapport

Mana al (man)	to follow college policy; to maintain order in the classroom
Informational (inf)	to convey information unrelated or indirectly related to course content
Instructional (instr)	to fulfill course goals and instructors' expectations
Evaluative (eval)	to elicit or respond to behaviors for major purpose of critiquing or grading performance

Typically, a series of linguistic signals had one predominant function and, on this basis, was identified as a linguistic unit. In some courses, instructors regularly used verbal boundary markers to indicate the beginning or end of one linguistic unit; in others, the boundaries were less obvious. In those cases, linguistic units were identified by function only and later related to class activities. In some cases, the linguistic signals of entire class periods were identified as a single linguistic unit with one primary function. In all cases, these linguistic units combined sequentially to form a class session.

The next step after developing a coding system was to analyze the classroom interaction to discover what meanings were being communicated and who owned them. Questions which guided this step included: What linguistic signals predominate in each course? Which signals belong exclusively or predominantly to teachers? Which to students? Who initiates patterns of interaction most often?

A further step was to determine what expectations and perceptions about the course in particular and teaching/learning processes in general the participants brought with them to each course. Information was obtained from interviews with volunteer participants and course descriptions. Guiding questions for this step included: What does each instructor expect of his students in order for them to succeed in the class? How do those

expectations compare with the course format and interaction patterns? How do students' expectations for the course compare with those of the instructor? Is a match necessary for students to succeed in the course?

RESULTS

Findings for each course were divided into a general description of the course (including typical daily activities), a summary of instructors' expectations, a linguistic profile of classroom discourse and common patterns of interaction (which provided data concerning meanings and ownership of meaning), and an analysis of instructor and student expectations in light of the linguistic profile. Since these findings are too extensive, I will present brief summary comments for each course and conclude with general findings for all three courses.

Freshman Seminar

Talk, and talk patterns in Freshman Seminar were clearly under the control of the instructor. As the linguistic profile summary sheet for this course shows (see Table 1), the instructor did the majority of the talking in both transmissive and interactive modes (with the exception of oral presentations). The predominant linguistic signals which originated or reiterated this instructor's meanings included conveying facts, interpreting, elaborating, restating, and summarizing. Positive and negative feedback signals informed students of how well they were understanding his meanings and meeting his expectations. Instructor signals of structuring and controlling, as well as those of conveying facts and interpreting, suggested his role as one in which

Table 1

Linguistic Profile: Freshman Seminar

	Content-Related Linguistic Activities						
	Assignment	Oral Quiz NY Times	Oral Quiz Texts	Oral Quiz Lecture	Lecture	Oral Pres.	Open Disc.
Total talk							
Instructor	98%	85%	86%	65%	99%	87%	75%
Students	2%	15%	14%	35%	1%	13%	25%
Primary Functions of Talk	instr info	instr eval	instr eval	eval	instr	eval inst	instr social
Tramissive Mode	88%	61%	60%	18%	97%	57%	25%
Interactive Mode	12%	39%	40%	82%	3%	43%	75%
Instructor	90%	89%	65%	60%	97%	34%	67%
Students	10%	11%	35%	40%	3%	66%	33%
Predominant Linguistic Signals*							
Instructor	F sum str I RCl	elab res str ±fd RCl	sum F elab QF str ±fd Qelab	QF res ±fd F/contr elab Qelab	F str sum Qck	I res ctr str ±fd elab Qelab RI	QI RF F elab I res str sum
Students	-	RF	RF RCl	Relab RF	n/r	RI Relab	RI I QF

*Linguistic signals which averaged thirty seconds or more of talk in a class session are listed in descending order

he used interaction to control the parameters of meaning in the class.

The instructor's expectations for his students complemented his linguistic behaviors. He expected students to develop information-processing skills. To do this, he used methods identified by Cazden (1983) as scaffolding and modeling. Scaffolding involved providing "a temporary framework for construction in process" (p. 6). Cazden refers to adults who use scaffolds of verbal support in the form of probing questions, or language games, or book reading to help young children learn language. From this process children gradually learn to take a more active and controlling part in the dialogue. The technique is equally useful in the context of this study where adult instructors are helping students learn to use content-specific language to develop thinking and communication skills.

The Freshman Seminar instructor used a type of scaffolding called "vertical constructions." He asked questions of students in step-like fashion, eliciting more information with each question. One example of this linguistic behavior occurred in an oral quiz about a lecture on the economy given the previous day.

Discourse	Comments
Now I've got the toughest question of all... Mr. Q. Now if the economy can go up or down, what things can the government do to influence the economy to keep it from going up too fast or down too far?	instructor's question based on recall of information from lecture
They can either pump money in or take it out.	student responds correctly but sparsely
When do you pump money in and when do you take it out?	instructor probes for further detail
You pump money i. when ... (inaudible)	student responds correctly

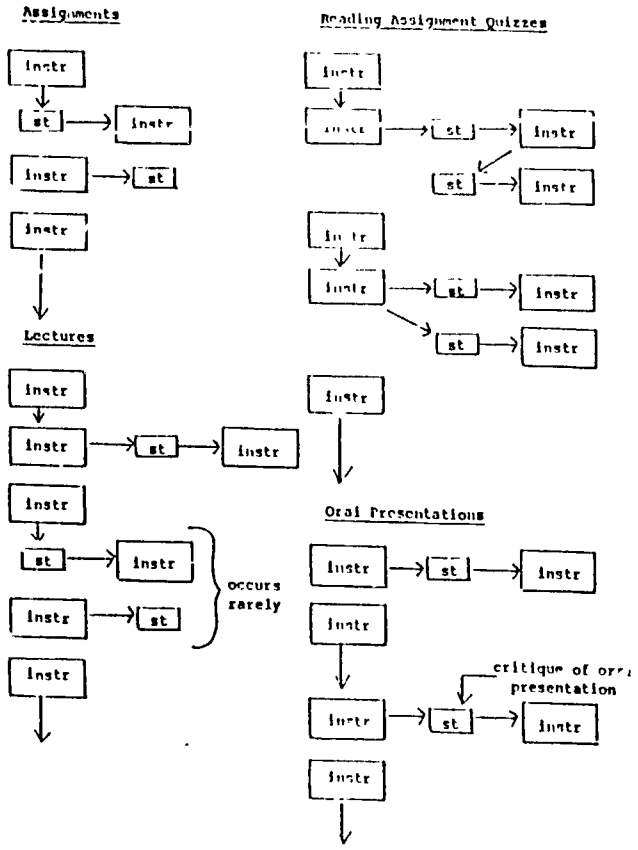
So you pump it in when which of these circles are out?	instructor asks for clearer response, referring to diagram on the board
When it's going down.	student responds correctly
That a boy! ... what's the next--	positive feedback and request to continue response

The instructor used this questioning frequently early in the semester, as students learned what kinds of responses he expected, and also when the material was difficult.

The instructor also provided outlines for students to follow as they read texts, organized oral presentations, and wrote papers. These outlines might be considered a sort of written scaffolding technique. Unlike Cazden's theory, however, in which adults eventually remove scaffolding as children become more competent with the language, this instructor had to keep much of his in place, since he kept introducing texts, concepts, and therefore skills, which were increasingly more challenging.

The most frequently used technique was modeling (Cazden, p. 11). For example, the instructor provided a model for summarizing The New York Times articles and for extracting and communicating key ideas from text readings. He developed the modeling technique through his frequent use of such linguistic signals as restating, elaborating, and summarizing.

The common patterns of talk in each of this courses's linguistic units further demonstrated the dominance of instructor talk and his use of scaffolding and modeling (see Figure 1). As these patterns also suggest, verbal interaction served to maintain meanings which had originated with or been approved by the instructor. Students played predominantly "reactive" roles in the interaction process; their linguistic signals were mostly responses to signals



*Indicates possible continuation of this pattern of verbal exchange

Figure 1. Patterns of talk--Freshman Seminar

initiated by the instructor, who took a "proactive" role. Because all student talk (except in open discussion) was evaluated, students had to take on that "reactive" role and be ready to respond when called on. That type of participation was part of the instructor's meanings which students had to understand and perform in order to succeed in the course.

Chemistry of Foods

In this course, the predominant linguistic signals communicated by the instructor not only originated meanings (conveying facts, elaborating) but also elicited meaning from students or reacted to students' elicitations incorporating those meanings with his own. His linguistic signals suggested a combination of transmitting and controlling meaning (through questions of conveying facts and interpreting) and sharing meaning (through restating student responses and giving positive feedback). Because this instructor rarely rejected a student response, students in this course felt freer to contribute information, as evidenced in the student-initiated signals of conveying facts, interpreting, and asking clarifying questions which emerged predominant in the interaction (see Table 2).

In light of the instructor's expectations, however, the predominant linguistic signals did not seem totally appropriate. The instructor expected students to develop skills of scientific inquiry and to apply them to food-related topics. The linguistic profile and patterns of talk revealed, however, that the instructor used scaffolding and modeling to transmit and discuss meanings focused on explanations of chemical concepts or students' experiences with food, not on the thought processes involved in scientific inquiry. He felt students could develop the ability to think scientifically through discussion of scientific concepts, which he handled competently and with humor, using everyday metaphors which students could easily understand.

Table 2

Linguistic Profile: Chemistry of Foods
Content-Related Linguistic Units

	Formal Lectures	Lecture/Discussion
Total talk		
Instructor	96%	92%
Students	4%	8%
Primary Function of Talk	instructional	instructional
Transmissive Mode	77%	58%
Interactive Mode	23%	42%
Instructor	77%	81%
Students	23%	19%
Predominant Linguistic Signals*		
Instructor	conveying facts elaborating Qconveying facts Rconveying facts Qinterpreting restating structuring Rclarifying + feedback	conveying facts Qinterpreting elaborating structuring Rinterpreting restating Qconveying facts + feedback refocusing Rclarifying Relaborating summarizing Rconveying facts controlling
Students	Rconveying facts Rinterpreting conveying facts Qclarifying	Rinterpreting Rconveying facts interpreting Qclarifying

*Linguistic signals which totalled thirty seconds or more of talk in a class session are listed in descending order

The instructor also used a form of scaffolding as he presented "blackboard demonstrations" of various experiments. However, he did not remove any of the questions and allow students to take control of the process through their responses. Moreover, if students did not respond or responded incorrectly to a question, he frequently simplified it, sometimes two or three times, until he elicited a correct response, allowing him to discover students' levels of understanding and build on them since he rarely used negative feedback or evaluation during interaction, students did not "grow" beyond their present level during this form of questioning. Neither were students encouraged to sustain a train of thought, as evidenced by the lack of instructor's use of linguistic signals of questioning for elaborating and clarifying purposes. The linguistic profile for this course, consequently, revealed discrepancies between observed linguistic behavior and instructor expectations.

Common patterns of talk supported the predominance of instructor talk with his use of scaffolding and modeling, and also demonstrated the instructor's control of interaction and meanings communicated. Although oral discourse was devoted mainly to scientific concepts, the instructor did provide feedback in written form regarding students' ability to think and express thoughts scientifically. About once a week, students conducted take-home experiments and wrote up results. The instructor commented in writing on students' use of scientific process and on their writing style. The experiments became more "scientific" as the course progressed. This written interaction provided as much, if not more, of the instructor's meaning for meeting course expectations.

Oral interaction was much like that of Freshman Seminar in that students had little chance to "practice" the skills for which they were held account-

able. The instructor's expectations were sketchy; students had an idea of what he expected from the course outline, from his overview of the course the first day of class, and from his linguistic signals. They had more specific information about what he meant from his written feedback. Unlike Freshman Seminar, however, his grading system was neither clearly explained nor consistently provided. Some students therefore did not take his written comments seriously, nor did they listen for meanings in the oral interaction. His humorous teaching style and seemingly open-ended discussions became the focal point for some students, and some of these had trouble succeeding in the course.

Readings: A Seminar

In this course, total talk was more evenly distributed among participants than in either of the two other courses, possibly because the instructor's expectations included personal growth of individuals, or because he verbalized clearly to students that their grade would be based solely on class participation.

Students' linguistic signals were less reactive in this course, than in the other two. Some student signals, not significant enough in quantity to be included in the linguistic profile, were found only among instructors' signals in the other courses (i.e. feedback, refocusing, restating, elaborating). Student talk also included more questioning signals than were found in the other courses (see Table 3).

Despite the more proactive role of students, and a dominant interactive mode for overall classroom talk, the instructor still maintained control of signals such as refocusing, restating, structuring, and feedback, and therefore maintained control of meanings. In the course, "meaning" was the process of communicating, questioning, clarifying ideas and views as well as

Table 3

Linguistic Profile: Readings: A Seminar
Content-Related Linguistic Units

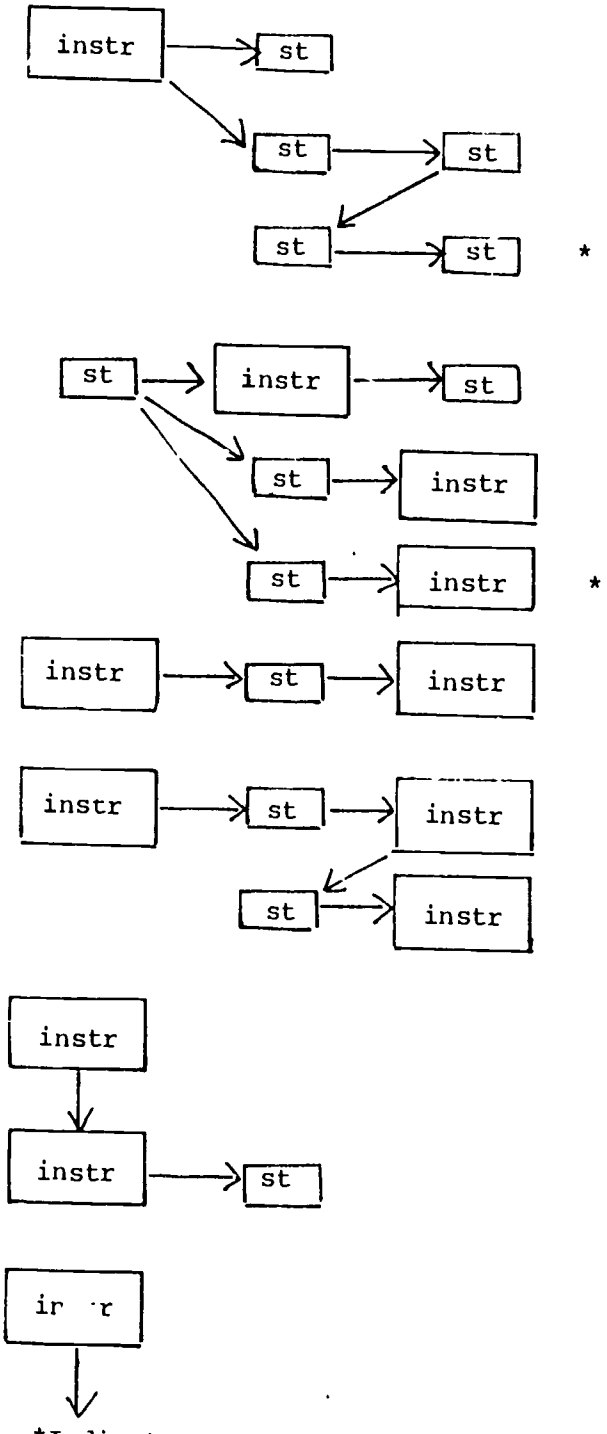
	Dialogue
Total talk	
Instructor	43%
Students	57%
Primary Function of Talk	instructional
Transmissive mode	3%
Interactive mode	97%
Instructor	43%
Students	57%
Predominant Linguistic Signals*	
Instructor	refocusing Qinterpreting conveying facts/controlling Rinterpreting restating structuring interpreting ± feedback elaborating Qclarifying Rclarifying
Students	Rinterpreting Rclarifying Qinterpreting interpreting Qclarifying Relaborating conveying facts Rconveying facts elaborating

*Linguistic signals which totalled thirty seconds or more of talk in a class session are listed in descending order

those views and ideas themselves. The instructor sometimes conveyed meaning regarding how students were to participate, through his lectures directly (conveying facts/controlling signals), but he also communicated daily through linguistic signals such as restating, refocusing, structuring, feedback, and even through questions signalling elaborating and clarifying. Students listened to those signals for clues to how they should be reading and expressing their ideas in class. These signals provided a type of scaffolding to help students learn how to think, read, and react to others' views.

Participants' sharing of usually stereotyped forms of linguistic signals (questions for instructors, responses for students) suggested less "predetermined meaning" present in this course; participants worked together creating and sharing meanings. In addition, student-initiated questions and student-sustained exchanges of talk were directed not only to the instructor but also to other students. The common patterns of talk also support this more even distribution of talk (see Figure 2).

The Readings instructor expected students to listen to others' views as well as to their own, and to justify for themselves their own beliefs. He selected texts with universal themes to stimulate discussion. What students said was less important than how they said it and how they responded to what others in class said (i.e. with knowledge of the text and thoughtfulness). The meanings which emerged from the dialogue were not preplanned, although the instructor may have anticipated certain meanings when he chose opening discussion questions. Some students were confused or upset in the beginning by the vagueness of the instructor's expectations, mainly because the course's purpose and format differed greatly from their other courses. They had to learn to trust that whatever they said would be accepted, and that they were vital contributors to the dialogue. They also had to lea...



*Indicates possible continuation of this pattern of verbal exchange

Figure 2. Patterns of talk--Readings: A Seminar

how to participate. In both aspects of these instructor expectations, students had to discover, through the instructor's linguistic signals in class or by speaking with him outside of class, what he expected them to know and do in order to succeed in the course.

DISCUSSION

In all three courses, instructors determined the amount and quality of interaction. Students participated in the interaction, but instructors signalled the type and amount of participation permitted. This finding is quite typical, since instructor control of interaction appears in the findings of many classroom interaction studies. Unlike elementary and secondary classrooms, though, in these classrooms very little talk concerned managerial or disciplinary matters. Two of the three instructors spent the majority of time communicating and controlling meanings related directly to their expectations about academic content. The third required students to participate extensively, thereby reducing his own talk When he did contribute, however, he frequently exerted control of the talk.

The recurring patterns of interaction for each course illustrate the type and amount of instructor and student participation; these patterns were fairly predictable. The patterns of interaction seemed, in large part, influenced by 1) the behavioral specificity of the instructor's expectations for students' performance in the course, 2) instructor's choice of topics, texts, and/or assignments (number and difficulty) plus desire to cover all work, 3) instructor's perceptions of how students should learn, and 4) students' perceptions of how instructors should teach. The Freshman Seminar instructor, for example, believed freshmen needed much guidance and structure; the Readings

instructor, on the other hand, felt upperclassmen should already know how to read and listen critically. Both designed course formats which reflected those perceptions and expectations. Freshman Seminar students for the most part, expected the instructor to teach as he did, so they did not interfere with the patterns of interaction. Readings students, on the other hand, did not all understand or accept the instructor's expectations and frequently interfered with the planned patterns of interaction. They would stray from the topic, or respond without supporting evidence, or not respond at all.

Most students appeared aware of instructors' expectations early in the semester. Those interviewed were able to articulate at least some of the major expectations in their first interview. Not surprisingly, Freshman Seminar students' versions reflected their instructor's expectations most clearly, since most students chose the course because of the instructor's reputation for teaching students to meet those expectations. Students in the other courses were less confident about knowing what their instructors expected.

To be successful, it appeared, students first had to become aware of instructor's expectations, and most importantly those expectations which would involve graded performance. They learned these through course overviews and outlines, and through on-going classroom interaction, with the help of instructor modeling and scaffolding. Secondly, students had to commit themselves to those expectations, because they held similar ones, because they wanted a good grade, or because they liked the instructor. Thirdly, during the semester most of the interviewed students experienced a stage of discouragement with the course, for various reasons. Most recovered and succeeded in meeting the instructor's expectations. Whatever the source of discouragement, students always spoke positively, if not glowingly, about

their instructors. Some of that praise may have been influenced by the presence of a tape recorder at interviews; however, the students and I developed a certain rapport and trust, so quite possibly their statements were sincere. Generally speaking, liking the instructor for his humor, teaching ability, and/or intelligence appeared to be a major factor in whether or not students committed themselves to trying to meet his expectations.

Discovering instructor expectations was not always an easy task for students. The instructors announced their expectations via direct communications such as first-day course overviews, course outlines and syllabi, and occasional or frequent reminders during the semester. Through everyday interaction, instructors also indirectly communicated a variety of messages to students about their expectations. On one level, interaction involved content-related messages: summarize The New York Times articles, outline an economic theory, analyze chemical composition of starch, discuss Faust. On another level, however, students received messages about how they were to process that content: how to read, listen to, talk about that content. The Freshman Seminar instructor summarized information, lectured in an organized manner, added details to sparse student resporses. The Chemistry of Foods instructor gave demonstrations and talked "scientifically" about food. The Readings instructor offered his opinions and challenged students to elaborate, clarify, defend theirs. Students who recognized this level of meaning, and were capable of beginning to emulate these behaviors, could succeed in the course.

Although instructors provided a language-rich environment for students and acted as models, using the skills and processes incorporated in their course expectations, they did question those expectations and their teaching methods. Would students, like young children learning language, grasp the

underlying meaning, the principles of process, just by experiencing the content-laden language environment? Was something more needed? The Readings instructor expressed his concern in his last interview. He speculated,

> I think it probably helps to have good understanding of the basic skills you want people to develop, and, really, this term, and even in our conversation here, has opened for me the possibility that I need to think more specifically about the question of critical thinking skills and what it means to be able to read because... it's not something that happens automatically...

Perhaps college students should have those skills mastered and ready to use in their various classes, and perhaps not. Despite these occasional self-critical queries, instructors in these three courses rarely adjusted their teaching style or restructured or rethought their role in the interaction. Students, on the other hand, had to process the talk to grasp the two levels of meaning and had to adjust their behaviors to meet instructors' expectations and succeed in the courses.

This study was informed by a constructivist theory of interaction and learning, and its findings were gathered through naturalistic inquiry methods. These findings answered the major questions about who controlled classroom discourse, how meanings were communicated, and who originated, shared, and owned those meanings. Through describing patterns of talk, I was also able to see how participants' roles in the interaction varied within and among courses. In addition, I was able to describe participants' perceptions and expectations and suggest how they might influence, and be influenced by, oral discourse.

My findings raised two major issues related to the teaching/learning process. First, in college classrooms, as in any classroom, instructors need to be aware of communicating meanings to students on two levels: 1) course content and what to do with it; and 2) how to do whatever it is instructors

expect. They also need to be aware of evaluating student performance based on these same levels. They may also be communicating, verbally or non-verbally, mixed messages concerning these expectations, as was evident in the Chemistry of Foods course discussed earlier. And finally, students' perceptions and expectations influence the teaching/learning process and should be considered in planning and implementing lessons.

The methods used to collect and analyze data for this study were effective in certain ways and limited in others. The findings most clearly revealed general perceptions and expectations which influenced both patterns of oral discourse and meanings communicated and understood during the discourse. Classroom discourse, as this study documents, does affect the teaching/learning process by conveying messages about the origination and ownership of meanings in classrooms. The meanings most clearly described in this study were those that students had to understand and move into in order to succeed in their courses. In some instances, I could see how students moved toward those meanings.

But to analze in detail the process by which instructors and students create, exchange, and negotiate meanings related to specific academic content and performance, and to see how students move into teacher meanings related to content and performance, more extensive research, employing additional data collection and analysis methods, is needed. Participant observation, interviews in which participants react to video taped segments of classroom talk, analysis of academic content similar to that conducted by Green and Harker (1982), subsequent measurement of students' academic performance, and follow-up observations and interviews would provide a more complete picture of the role of interaction in college level teaching and learning.

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