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ABSTRACT

A study was conducted to determine (1) whether teachers see a need for or value interaction in the classroom, (2) what methods they use to encourage interaction, (3) how much interaction actually occurs in high school English classrooms, and (4) what factors or methods encourage or discourage interaction. The study involved five high school teachers observed in the same class on consecutive days. The classes were audiotaped, as were interviews before and after the observation period. The results indicated that teachers saw a need for and tried to encourage interaction and that a wide range of interaction occurred in these classes, with different emphases on class discussion, individual presentations, small group interaction, and lecturing. The findings suggested specific factors or methods that tend to encourage or discourage interaction. The use of individual student presentations and student-led small group discussions may have contributed to higher levels of interaction. Teachers' questioning patterns during class discussions encouraged or discouraged interaction, depending on the ratio of teacher talk to student response and the nature of the questions. Finally, the activities used to introduce a specific piece of literature were critical to the level of interaction in the classroom. (HTH)

Interaction in English Classes:

An Exploratory Study

by

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This exploratory study examined interaction in English classes in two high schools. Utilizing data from observations of classes, audio-taped classes, and audio-taped pre and post interviews with participating teachers, the researchers found that teachers expressed a desire for interaction, but a wide range of levels and kinds of interaction actually occurred. The researchers identify factors that may have contributed to and discouraged interaction.

In recent years, a number of researchers have concerned themselves with interaction in the English classroom. One direction of this research has been to identify and classify patterns of teacher and student talk, and then, in some cases, to relate these patterns to some conceptual framework. Brause and Mayher (1982), for example, studied verbal and non-verbal interaction in three elementary classes in order to describe the role of interaction in organizing instructional situations. Two other studies, Mitchell (1980) and Galda (1982), examined interaction patterns of elementary teacher-student discussion and teacher-led small group discussions of stories and ther related the observed patterns to reading theories. The problem with these and other similar studies is that because they focus on aspects of teacher-student talk which are often far removed from actual classroom situations they may ignore or fail to adequately account for key aspects of interaction. Hillocks (1981) argues that these aspects, such as materials used, directions of discourse, student-led small group discussions, and important problems or questions posed in the classroom, "seem likely to contribute substantially to the amount and quality of classroom discourse" (pp. 373-4).

A second group of researchers have attempted to account for the variables of classroom interaction. Bennett (1976) studied the effects of clusters of instructional variables

on the achievement of fourth year English primary students. He devised a questionnaire which focused on teaching techniques and classroom events. He then collected and analyzed the responses of 468 fourth year teachers; this data enabled him to categorize teachers so that he could examine the effects of clusters of instructional variables on pupil progress. Instead of relying on data gathered from teacher completed questionnaires, Hillocks (1981) utilized classroom observers and student questionnaires. He examined and characterized clusters of instructional techniques characteristic of the ways in which 29 college freshman composition instructors encouraged interaction among themselves, their students, and the course materials in order to help students reach course objectives. After identifying and categorizing instructors according to three observed modes of instruction--presentational, environmental, and non-directional--Hillocks then had 1,049 students in classes taught by these instructors complete a questionnaire designed to determine to what degree their affective responses to instruction differed according to mode of instruction. The results of the study indicate that the attitudes of students taught through the environmental mode concerning the interest and value of their composition course and their perception of the instructor's concern and planning were most positive and significantly more positive than students taught through the presentational, non-directional, or mixed modes.

One other study which in part focused on interaction is notable in view of the findings of Hillocks' study. Hillocks,

Kahn, and Johannessen (1982, in press) examined the effects of defining strategies as a mode of inquiry on eleventh and twelfth grade student writing. All instruction was according to Hillocks' environmental mode. That is, teachers made use of materials, problems, student ideas, student-led small group activities, and class discussions to create an environment that would involve students in processes they would subsequently use in writing tasks. While all instruction was in the environmental mode, there were important differences between the control and experimental treatments. Instruction for the control group involved modified activities from a traditional textbook, while instruction for the experimental groups involved thinking-strategy activities (Johannessen, Kahn, and Walter, 1982). The researchers made extensive use of observers (two for most classes observed) to time activities, make time-on-task observations, and count student responses in teacher-led discussion and student-led small group discussions. The results of the study reveal that while both groups showed significant improvement from pre- to posttests, the experimental groups' gains were much higher (2.71 mean gain for control and 10.35 and 8.05 for experimental). The results of observations indicated low percentages of class time spent on teacher lecture for all groups (19% for control and 13% for experimental) and high percentages of time spent on small group discussions (24% for control and 40% for experimental). The results of these two studies suggest that major factors involved in effective interaction in the classroom (ie. interaction that achieves learning objectives)

are how the teacher designs and combines instructional materials and methods to engage students.

Purpose

Given the results of the last two investigations discussed and the limitations noted with regard to the first group, the researchers set out to determine: (1) do teachers see a need or value of interaction in the classroom; (2) what methods do they use to encourage interaction; (3) how much interaction actually takes place in English classrooms; and (4) are there particular factors or methods that seem to encourage or discourage interaction?

Hillocks (1981) found that all teachers in his study--college teachers--indicated a desire for interaction. However, the researchers concluded that to set up a traditional empirical study to answer the above questions without determining first whether this opinion is also held by high school teachers would be premature. Therefore, the researchers determined that an exploratory study involving careful observation and audo-taping of five instructors in two high schools teaching typical lessons of two to three days duration coupled with before and after audio-taped interviews with participating teachers would provide substantial data by which to answer the research questions. Even though the sample is small and the time short, this procedure allows for some control of variables, as well as substantial data for comparison between teachers and classes. The interviews alone would not reveal what teachers actually did

in their classrooms, nor would interviews alone reveal possible discrepancies between their perceptions of interaction and what actually took place. Thus, careful observation and taping of lessons would be required in order to determine the actual amounts and kinds of interaction which took place and enable the researchers to compare these findings with teachers' perceptions. These methods also allow for making comparisons between teachers and provide a way to measure objectively interaction in the classroom.

Procedures

This exploratory study involves five teachers, eleven class sessions, and two midwestern suburban high schools. Each of the five teachers was observed in the same class on two consecutive days. One teacher (D) asked to be observed on a third day because he did not finish one activity started on the second day. The classes to be observed were chosen so that two or three teachers were teaching the same level of students and, when possible, the same materials. The classes for Teachers A and B were both high school advanced placement senior English, and in a second high school classes for Teachers C, D, and E were all average level freshmen. During the observation days, Teacher A's class studied two poems ("To His Coy Mistress," Marvell and "The Love Song of J. Alfred Prufrock," Eliot), and Teacher B's class studied a short story ("The Dead," Joyce). Classes of Teachers C, D, and E were all studying a set of poems that were required by the school's

curriculum ("A Narrow Fellow in the Grass," Dickinson; "My Heart Leaps Up," Wordsworth; "maggie and milly and molly and may," Cummings; "King Juke," Fearing; "Sand Scribblings," Sandburg; "The Old Bridge," Conkling; and "Psalm 23"). The teachers ranged in years of experience: Teacher A had 30 years of teaching experience, Teachers B and D less than one year, Teacher C four years, and Teacher E six years.

Each teacher was interviewed on audio-tape before and after each class session. None of the teachers heard the interviews with the other teachers. In the interview before each class session, the researchers asked the teacher to explain his objectives for the day, methods and materials he planned to use to reach these objectives, his reasons for using these particular methods, and his plans for evaluating whether students had reached the objectives. After observing each class session, the researchers again conducted interviews asking the teacher whether he felt he had reached the objectives, how he made this decision, why any changes were made in the original plans, why some specific questions or activities were included, whether he was satisfied that the lesson was a good one, and what changes he would make if he were to teach the lesson again.

Each of the class sessions included in this study were audio-recorded. In addition, one trained observer sat in on each class session. The observers gathered the following kinds of data. One kind of observation involved charting student response by recording each time a student contributed in whole

class or small group discussion. Observers also recorded the amount of time spent in different activities during the class period (eg. whole class discussion, small group discussion, desk work, etc.). Another technique for recording time-on-task involved systematically scanning each class member for three- to four-second intervals during a five to ten minute period and recording on a seating chart a plus for attention, a minus for inattention, and a question mark when no decision was possible. Since the tape recorder did not always clearly record student responses from the back of the room, observers also tried to make a written transcript of responses to supplement the recording. Because all of these kinds of data could not be collected simultaneously, observers chose from among them the kind of analysis that they deemed most beneficial during a particular activity.

Several days after the class sessions, by listening to the tape recordings of the classes, the researchers made a Flanders Interaction Analysis (1965) of each class discussion. The Flanders Interaction Analysis was selected because it provides an objective way to chart the proportion of discussion time that is "teacher talk" (ie. lecture, questions, directions, praise, etc.) and the proportion that is "student talk" (ie. short answers or voluntary elaboration and longer explanations).

To simplify the Flanders Analysis for this study, the researchers combined the first three categories into one. Therefore, any responses falling in one of the first three of Flanders' categories (1. teacher comments or behavior accepting student attitudes and feelings, 2. teacher comments praising students, or 3. teacher statements building on student responses)

were recorded as 1's. Since these three categories identify very similar kinds of teacher responses, the researchers concluded that this change would not substantially alter the results. In addition, an eleventh category was added for "confusion" to account for times when students are not settled or all talking at once.

To make Flanders analyses of the discussions, the researchers listened to the tape and recorded a number approximately every three seconds to indicate the type of "talk" or response occurring at that time. When more than one type of "talk" or response occurred within the three-second time period, each of the responses was identified with a different number. The following are the categories used in the analysis. The first five categories all identify kinds of teacher responses.

1. Teacher making comments that praise, accept students' feelings and attitudes, or build on student responses.
4. Teacher asking questions.
5. Teacher lecturing, answering questions, explaining information.
6. Teacher giving directions and instructions.
7. Teacher criticizing a response or making disciplinary comments.

The next two categories identify two different kinds of student responses.

8. Student giving short, recitation type answer of only a few words that is usually teacher initiated (student is called on when he has not volunteered).

9. Student making longer, elaborated response that is student initiated (voluntary).

The last two categories are used for situations when there is no response or ones when there is too much confusion to allow accurate charting.

10. Silence (or change of student speaker).

11. Confusion, many talking at once.

If several different students consecutively give responses, a 10 is recorded between the 8's or 9's to indicate a change of speaker. Therefore, during periods of time with rapid responses and exchanges between many different students, there will be more numbers recorded in a specific time span than during equal time spans when only one person is speaking for an extended length of time.

Training using the modified Flanders analysis lasted approximately five hours. During that time the researchers practiced with several recorded class discussions. After discussing and arbitrating these results, they proceeded to chart another discussion approximately 30 minutes long. Rater reliability was determined by $\pi = \frac{P_o - P_e}{1 - P_e}$. The results for rater reliability were $\pi = .95$. Since this figure was high, the researchers each proceeded to chart individually half of the remaining taped discussions. Results from the practice discussions were averaged.

Results

Observations

The results of observational data reveal that there are considerable differences in the kinds and levels of interaction among the two teachers and classes in School 1 and the three in School 2. In analyzing the data, the researchers reasoned that since the levels of classes were so different (advanced placement seniors and average freshmen), the fairest analysis would be, for the most part, to compare interaction in ninth grade classes to that it other ninth grade classes and interaction in the senior class to that in the other senior class. Table 1 presents a summary of time spent in various activities. Totals for activities shown represent the percentages for each 50 minute class period. For all classes, the percentages for class discussion are high during at least one session, from a low of 28 to a high of 68. Teachers A and B utilized class discussion in excess of 50 percent of the time on both days. Teacher C utilized class discussion nearly as much, 48 and 44 percent of the time. Neither of the teachers in School 1 utilized individual oral presentations by students. However, all teachers in School 2 had students give individual presentations on at least one day. Teachers D and E had high percentages of class time devoted to these presentations on at least one day, 44 for Teacher D and 46 and 32 for Teacher E. This, in part, accounts for their relatively short amount of time spent on class discussion. Three of the teachers utilized small group discussions on at least one day. Teacher D used small groups

TABLE 1

Percentage of Class Time in Various Activities

	Teacher/ Class	Class Session	Whole Class Discussion	Presentations by Individual Students	Small Group Work	Reading to Class by Student (*) or Teacher (**)	Individual Seat Work-- Study Guides, Quizzes, etc.	Other-- Handout, Collect Assignments
SCHOOL 1	A	1	.62	.00	.00	.24**	.00	.14
	A	2	.52	.00	.00	.18**	.20	.10
	B	1	.68	.00	.00	.02**	.26	.04
	B	2	.56	.00	.38	.02**	.00	.04
SCHOOL 2	C	1	.48	.12	.00	.00	.14	.26
	C	2	.44	.16	.00	.00	.32	.08
	D	1	.16	.44	.12	.02**	.04	.22
	D	2	.29	.00	.24	.01**	.22	.24
	D	3	.44	.00	.30	.06*	.00	.20
	E	1	.28	.46	.00	.02*	.12	.12
	E	2	.18	.32	.36	.04*	.00	.10

all three days and Teacher B and E each used small groups one day. The percentages of time spent on small group work range from a low of 12 to a high of 38. All but one teacher utilized some type of oral reading on at least one day by either the teacher or individual students. All teachers had students do some type of individual seat work, such as answering study guide questions or taking quizzes, on at least one day. Class E spent the least amount of time on seat work, 12 percent, while Class C spent the most, 14 and 32 percent. At first glance the percentages in the "Other" category might seem to reveal some differences. However, the figures merely indicate that on the days these classes were observed teachers happened to be handing back compositions, handing out exams and assignments, or organizing students into small groups.

A glance at Table 2, which displays a summary by percent of the modified Flanders categories and the numbers and percents of students responding during discussions, reveals some striking differences in levels and kinds of interaction. Of particular interest are categories 5 (lecture) and 9 (student-initiated response) and number of students responding. Even though Class A spent slightly less time than Class B engaged in class discussion, Teacher A spent more time lecturing than Teacher B, 27 and 43 percent compared to 22 and 21 percent. Teacher A also had considerably fewer student-initiated responses than Teacher B, 21 and 12 percent compared to 47 and 34 percent. In addition, the difference between the percentages of students responding during class discussions in the two classes reveal that they were comparatively lower

TABLE 2

Interaction Analysis of Class Discussion

(Percentage of Responses in Each Category)

	Teacher/ Class	Class Session	Minutes of Discussion	Total Responses Counted	Percent in Each Category									No. of Students Responding	Total No. of Students	Per-Cent Resp.
					1	4	5	6	7	8	9	10	11			
SCHOOL 1	A	1	31	463	.14	.19	.27	.01	.02	.05	.21	.10	.01	10	18	.56
	A	2	26	384	.10	.17	.43	.01	.01	.04	.12	.11	.01	8	25	.32
	B	1	34	623	.09	.09	.22	.02	.00	.03	.47	.09	.00	12	14	.86
	B	2	28	334	.11	.10	.21	.17	.00	.01	.34	.05	.00	11	15	.73
SCHOOL 2	C	1	24	524	.11	.19	.42	.03	.01	.12	.02	.07	.02	8	28	.29
	C	2	22	379	.13	.16	.49	.03	.01	.13	.02	.03	.01	14	28	.50
	D	1	8	151	.22	.25	.03	.07	.07	.16	.13	.03	.04	12	28	.43
	D	2	14.5	271	.16	.14	.24	.06	.03	.11	.14	.10	.01	13	28	.46
	D	3	22	312	.26	.20	.02	.06	.01	.09	.24	.12	.00	27	27	1.00
	E	1	14	308	.17	.24	.04	.21	.05	.06	.13	.08	.03	17	29	.59
	E	2	9	108	.16	.16	.01	.10	.01	.19	.26	.06	.06	16	28	.57

in A classes, 56 and 32 in contrast to 86 and 73 in B classes.

A similar pattern emerges when comparing Teacher/Class C with Teachers/Classes D and E. In fact, the differences are even more pronounced. Class C spent more time than either Classes D or E in class discussions, yet Teacher C spent more time lecturing than Teacher D, 42 and 49 percent compared to 3, 24, and 2 percent. The differences between Teacher C and E are even more dramatic in that Teacher E lectured only 4 and one percent. Student-initiated responses were very low for Class C, a mere 2 percent during each session. The figures are especially low when compared to the levels of student-initiated responses in Classes D and E, 13, 14, and 24 percent for D and 13 and 26 percent for E. During class discussions the percentages of students responding in Class C range from 29 to 50, while for D and E the percentages are higher, 43, 46, and 100 for D and 59 and 57 for E, in much shorter time periods.

It is clear that Teachers/Classes A and C have similar patterns of relatively high percentages of teacher lecture, low percentages of student-initiated responses, and fewer students responding during discussions. Conversely, Teachers/Classes B, D, and E share a pattern of lower percentages of teacher lecture, higher percentages of student-initiated responses, and more students responding during discussions.

Table 3 is a summary of interaction patterns by type of activity and by student responses and teacher responses during discussions. The figures reveal similar patterns for Teachers A and C and for Teachers B, D, and E. Striking differences

TABLE 3

Summary of Total Percentage by Activity of Student and Teacher Responses

	Teacher/ Class	Class Session	STUDENT RESPONSES Discussion (8 & 9 Responses)	Small Group Work	Presentations by Individual Students	TOTAL	TEACHER RESPONSES Discussion (1,4,5,6,7 Responses)	ACTIVITIES WITHOUT RESPONSES (Seat work, quizzes, etc.)
SCHOOL 1	A	1	.16	.00	.00	.16	.63	.21
	A	2	.08	.00	.00	.08	.55	.36
	B	1	.34	.00	.00	.34	.31	.36
	B	2	.20	.38	.00	.58	.35	.07
SCHOOL 2	C	1	.07	.00	.12	.19	.36	.44
	C	2	.07	.00	.16	.23	.36	.42
	D	1	.05	.12	.44	.61	.12	.27
	D	2	.07	.24	.00	.31	.19	.49
	D	3	.21	.30	.00	.51	.24	.25
	E	1	.07	.00	.46	.53	.20	.27
	E	2	.12	.36	.32	.80	.08	.12

are evident when comparing the patterns of Teacher A with B and Teacher C with D and E. There were comparatively low percentages of student responses of both types in Class A, 16 and 8 compared to 34 and 58 for Class B. Conversely, teacher responses of all types were comparatively high in Class A when compared to Class B, 63 and 55 for A and only 31 and 35 percent for B. In addition, Class A spent slightly more time in non-response activities than Class B, 21 and 36 percent compared to 36 and 7 percent.

Similar response patterns are evident when comparing Teacher C with Teachers D and E. Class C exhibited low percentages of student responses, 19 and 23, while Classes D and E were comparatively higher, 61, 31, and 51 for D and 53 and 80 for E. Conversely, Teacher C's teacher talk percentages were high in discussions, 36 and 36, compared to the relatively low 12, 19, and 24 percents for Teacher D and 20 and 8 percents for Teacher E.

Table 3 also highlights the fact that neither Teacher A nor C utilized small group work, and even though Teacher C had students give presentations, compared to Teachers D and E, his percentages are very low, 12 and 16 compared to 44 for D and 46 and 32 for E. An analysis of student responses in small groups reveals high levels of interaction. To obtain data on student responses in small groups, observers noted responses for each small group for five minutes. Levels of student responses for small group discussions range from 12.5 responses per five minutes for one group in Class D to 53 responses per five minutes for one group in Class B, with

100 percent of the students responding during small group discussion for all classes that used small groups.

In summary, among the classes in this study, there is a wide range of interaction and student response. Examining the ratio of percentage of class time in student "talk" to percentage in teacher "talk" reveals that in the class with the lowest student response the ratio was 16 to 63 and in the class with the highest student response the ratio was 80 to 8. These ratios point to a dramatic difference in the amounts of interaction. Although there are differences in amount of student response and interaction, as with the Hillocks (1981) study, the results of this study indicate that years of teaching experience is not a factor in determining higher levels of interaction.

Interviews

The interviews revealed that all of the teachers wanted student involvement and interaction in the class discussions and perceived their classes as environmental in mode. For instance, Teacher C stated, "I always use a class discussion." Teacher A commented that his questioning was intended to elicit student responses that would "spark other comments, other thinking." Teacher D said that he designed his lessons so that the students "can get a grasp of [the poems] without me having to tell them what is meant. My telling them one poem won't help them one tidbit in reading another poem and trying to figure out the meaning." All of the teachers

indicated in some way that they believed the more the students responded to the materials or questions and the less the teacher had to explain the more the students would learn. They saw interaction and involvement on the part of the students as very important and characteristic of good learning situations.

In addition, all of the teachers were generally satisfied with their classes' performances. For the most part, they felt their classes had achieved the objectives they had set. They described their lessons with phrases such as "pretty good," "okay," and "basically good but a few weaknesses." Teacher D felt that the group work on the second day had not been as successful as he would have liked because he had not made the directions as clear as he should have; therefore, he wanted to review the directions on the third day and give the students a little more time in their groups. Teachers B, D, and E, the teachers with relatively higher levels of student response, each commented that they felt the literature required by the curriculum was too difficult for the students. They said that normally they would want higher levels of interaction, but under the circumstances of teaching materials that were not thematically related or sequenced so as to help students inductively make more and more complex kinds of analyses, getting higher levels of interaction would be very difficult. It is important to note that all of the teachers felt that their classes' performances were fairly typical or average for them--not their best lessons but certainly not their worst.

The teachers' responses to questions about what kinds of things they did to encourage interaction and student response differed. Teacher A explained that he chose a poem ("To His Coy Mistress") that he thought students would "be a part of, be more concerned about, more interested in [because] after all, in essence, they pretty much have the same philosophy: let's go out and have fun while we can." Teacher C said that at one point he had students jot down what they thought the "narrow fellow in the grass" was so that he could "switch the burden to them to get them actively involved, to get them writing, to get them more involved than just sitting." One other technique both Teacher A and C mentioned that they use to encourage involvement was to call on a student if no one volunteered an answer. Yet, both Teachers A and C, the ones with the relatively lower levels of interaction, said that they would have liked more response from the students but were not sure how to go about getting it. As Teacher C stated about "maggie and milly and molly and may," "I would like somehow to get them more actively involved in the poem than they actually were. But I didn't know exactly how to go about it without bringing a sandbox in there and digging for crabs." In addition, Teacher A said that he was surprised that the students did not "pick up on" the fact that "To His Coy Mistress" "has the same philosophy that many of them do."

In contrast, Teachers B, D, and E, the teachers with relatively higher levels of student interaction and response, all said that one important technique they used to encourage

interaction was small group work in which groups of three to five students discussed questions that would later be a focus of whole class discussion. Teacher D commented that he used small group discussions because "the questions were difficult . . . if three or four [students] talked they might be able to help each other and get all the students involved in making [inferences] ." Teacher B said that he used small groups because "in a class discussion you have one, two, three, four people who are, if not the only people speaking, going to be controlling, and it is more difficult in a class discussion to know that everyone has got the idea."

Teacher A did not comment on why he did not use small groups, but Teacher C stated, "I've got a lot of material to cover and at this point can't afford to waste time getting into groups and to have some groups be productive and some not. It is better that we all stay together as a group to discuss." In light of this comment, it is interesting that in two days, Teacher C covered four poems, But Teacher E covered five poems in two days, and Teacher D covered six poems in three days. Also interesting is the fact that Teacher C judged the individual presentations by students as the most enjoyable part of the class for the students because "it got them actively doing something."

The three teachers with the relatively higher levels of student interaction also explained that another way they encouraged interaction and student response was to introduce difficult literature with activities they designed to make the

concepts more accessible to students and spark their interest. For example, to introduce "maggie and milly and molly and may," Teachers D and E together planned an activity to precede the reading of the poem in which each student had to pick which of five t-shirts he would prefer to wear to school (a sport jersey, an Izod "alligator," one with a Black Sabbath emblem, one with "Bee Gees" on it, or one with "whereinthehellisHayward" on it). The class discussion then focused on what each choice revealed about the person who made the choice, what assumptions they might make about the person based on his choice. Later during discussion of the poem, students were asked how these choices of t-shirts relate to the last two lines of the poem ["for whatever we lose (like a you or a me)/it's always ourselves we find in the sea"] and what each girl's choice reveals about her personality. Teacher D explained that the activity is "something very simple that involves the same skills that are required in the poem only at a simpler level, and it's something all the kids could identify with and get them interested in the [poem] beforehand." It requires the student "to look at some object a person wears or just taking something a person does and infer a personality trait from that. If they can do that, they can get at a central meaning of the poem." During the class session preceding observations, Teacher B used a similar type of activity to introduce "The Dead." His activity involved students' examining a picture ("Crab Canyon") in order to discover inductively relationships between form and content, relationships that he felt would be central to understanding

the short story. During his second class session, Teacher D used an activity to introduce the concept of paradox in which students analyzed several common paradoxes (ie. "She's so beautiful it's disgusting!") before reading "My Heart Leaps Up." He said that if the students did not understand how a paradox works, "they would be lost reading 'the child is father of the man.'"

Teachers A and C did not use activities of this sort. They did not precede reading of the poems with any activity except asking what the students could guess about the content after reading only the title or what their emotional reaction was to the title or a name like J. Alfred Prufrock.

Another interesting difference among the five teachers was their approach to stating objectives. When asked what their objectives for the day or lesson were, Teachers A and C stated their objectives mostly in terms of what they, the teacher, would do. Teacher C said, "My objective is to review and reinforce the general structural terms that we're using." In contrast, one of Teacher D's objectives was "they [the students] will examine a poem with an extended metaphor and have to identify what's being compared to what and explain in what ways the two things compared are similar." Teachers B, D, and E, who had relatively greater interaction, seemed to view objectives as statements of what students, rather than teachers, will do.

Discussion

Besides the fact that the teachers in this study see a need for and tried to encourage interaction and the fact that there was a wide range of interaction which occurred in these English classes, the findings suggest that there may be specific factors or methods that tend to encourage and discourage interaction. The use of individual student presentations and student-led small group discussions may have contributed to higher levels of interaction. In classes where small groups were used, more students had opportunities to participate, and there was more participation by students in follow-up whole class discussions. For example, in Teacher D's third session, 100 percent of the class participated in the whole class discussion which followed the student-led small group discussion. This figure contrasts sharply with Teacher C, who did not use small groups and who had comparatively low levels of interaction.

A second factor which may have played a role in determining levels of interaction is the questioning patterns of teachers during class discussions. Teachers B, D, and E, for example, all of whom, as the modified Flanders analysis indicates, shared a pattern of low percentages of teacher talk and correspondingly high percentages of student-initiated responses (see Table 2), followed a pattern during discussions of redirecting student questions and responses to the class for further student comment, amplification, or refutation. In contrast, Teachers A and C who shared a pattern of relatively higher percentages of teacher talk and lower percentages of student responses, both

followed a similar pattern of asking short recall or short answer questions followed by teacher lecture, answering student questions with long teacher explanation or analysis, or, in some instances, interrupting student answers to give "the correct answer." The differences in levels of student responses may be the result of these two different questioning patterns.

Another factor which may have contributed to levels of interaction is the way teachers introduced literature in their lessons. The activities used by Teachers B, D, and E to introduce literature--activities which involved taking themes or concepts from the literature and presenting them in some concrete or easier manner--may have encouraged higher levels of student responses during discussions. As teacher B commented, this type of activity was designed "to get them interested in what they are going to be reading" and "to approach the problems they are going to encounter" and, as a result, "this made the problem interesting--a sort of game." In contrast, Teacher A introduced "To His Coy Mistress" by discussing the meaning of the word "coy" for the purpose of, as Teacher A said, "To interest them." Yet, in the class discussion which followed, Teacher A had a considerably lower percentage of student-initiated responses and fewer students responding than Teacher B did following his introductory activity (see Table 2), 21 percent and 10 out of 18 students compared to 47 percent and 12 out of 14 students responding for Teacher B. In addition, when researchers determined the average number of student responses

per five minutes during these class discussions, the results were revealing. In Class A there was an average of 7.7 student responses per five minute interval, while in Class B the average was 19.6. These results may indicate that presenting a theme, concept, or idea to be studied in some concrete fashion prior to whole class discussions of a literary concept may contribute to higher levels of student responses.

As previously discussed, Teachers B, D, and E stated objectives for their lessons in terms of student outcomes, while Teachers A and C were primarily concerned with what the teacher would do. This difference perhaps indicates another reason why Teachers B, D, and E had comparatively higher levels of interaction in their classes. An example which suggests how objectives may play a role in levels of student interaction can be seen in how teachers responded to the question of how they would reach lesson objectives. Teacher B, for example, as discussed earlier, mentioned how his introductory activity was designed to interest students, make the literature more accessible, and enable students to grasp important concepts. When asked the same question, Teacher A, in contrast, said, "I don't know for sure yet." He then listed items which would be covered in the lesson, items such as "tone," "imagery," and "go through [the poem] for major ideas I want to get across." Teacher A then explained that this is his usual procedure. It still remains to be determined whether putting objectives in terms of student outcomes and organizing lessons so that students reach these objectives contributes to higher levels of interaction, but it

is interesting to note that in this study the teachers who did had comparatively higher levels of interaction.

While the findings of this study are only preliminary, they do indicate that, as Hillocks (1981) and Hillocks, Kahn, and Johannessen (1982, in press) found, the major factors involved in effective interaction may well be what and how the teacher puts together materials and methods to engage students. The results certainly indicate the need for further research to determine the degree to which these preliminary findings may be present in large numbers of English classes. If, in fact, large numbers of teachers do see interaction as valuable, then more research might be able to identify factors and methods which tend to encourage higher levels of interaction. Finally, although no conclusions can be drawn from these data about cognitive gains, our view is that cognitive gains are likely to correlate well with higher levels of interaction.

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