THE SOCIAL ENVIRONMENT OF THE CLASSROOM: A VYGOTSKIAN PERSPECTIVE ON SMALL GROUP PROCESS

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Many Language Arts educators have argued that teacher-led discussions of literature limit students' participation and focus their attention on the teacher's agenda rather than enabling them to construct meaning for themselves. Alternative classroom structures, such as small group discussions, have been proposed to empower students in literary analysis and to invest them in classroom discourse. However, researchers have conducted little systematic study of small group process to substantiate them as an alternative. Vygotsky's theory of the social influences on learning provides the framework for an exploratory study of the relationship between patterns of discourse in teacher-led discussions of literature and in the small group discussions that follow them in an instructional sequence. The data suggest that small groups, when enacted in classrooms in which the teacher's discourse (a) enables students to provide their own broader social and conceptual context for the literature, and (b) explicates analytic strategies, can be a crucial instructional stage in helping students internalize interpretive procedures initially introduced by the teacher. Classrooms in which teachers model interpretive procedures without teaching students how to employ them do not appear to empower students to lead themselves in fruitful discussions.

Many researchers have found that teacher-led analyses of literature do not necessarily enable students to participate in "authentic" discussions (Nystrand & Gamoran, 1991) in which their own experiences and responses are honored as important and integral parts of the interpretation. Observers of classroom process in English classes (Hillocks, 1986; Luka, 1983; Marshall, 1989; Marshall, Klages, & Fehlman, 1990, 1991) and other subjects (Csikszentmihalyi & Larson, 1984; Dillon, 1988; Goodlad, 1984; Sizer, 1984) have recommended that teachers experiment with alternative classroom arrangements that promote engagement among students, thus increasing the likelihood that students will draw on their own ideas and experiences in solving problems, interpreting texts, and constructing meaning.

Perhaps the most frequently suggested alternative is for students to work in small groups free of their teacher's direct guidance. Teacher-oriented publications (Johannessen, Kahn, & Walter, 1984; Kahn, Walter, & Johannessen, 1984; Smagorinsky, 1989a, 1989b, 1990, 1991a, in press; Smagorinsky &

Gevinson, 1989; Smagorinsky, McCann, & Kern, 1987) often promote the benefits of small group work through anecdotal evidence from classroom experience. Most research on the effectiveness of small groups has examined the products of group work rather than the discourse that takes place within the groups. Forman (1981) found that students who collaborated on chemistry problems engaged in higher cognitive levels of analysis than individual students could produce. Skon, Johnson, and Johnson (1981) found that students who solved math problems in collaborative groups discovered higher quality reasoning strategies through argument and discussion than did students who worked alone. Hillocks (1986) lauded the effectiveness in improving writing of the "environmental" teaching mode that features problem-centered small group practice of skills and strategies as a weaning stage between a teacher-led introduction and individual performance.

The processes that contribute to these high rates of achievement are poorly understood. DiPardo and Freedman (1987), in reviewing the role of small groups in the study of writing, conclude, "We know little about precisely why groups work when they do, or perhaps more importantly, what accounts for their failures" (p. 2). Bruner's (1975) notion of *instructional scaffolding*, derived from Vygotsky's (1978) theories concerning learning in social environments and the development of inner speech, provides a useful framework for examining the processes involved in successful small group activities. Vygotsky stressed the social and cultural aspects of learning, in particular how a learner internalizes the reality offered by the outside world. Crucial to this internalization is the *zone of proximal development*, which is *"the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers"* (p. 86). The zone is one of potential: Vygotsky envisioned cognitive ability as dynamic and subject to the shaping forces of social influence, in particular the actions of more capable people, such as teachers, in leading students to higher levels of achievement.

Bruner's metaphor of an instructional scaffold refers to the initial support a teacher provides for students in learning a skill or concept, with the support gradually withdrawn as students internalize the knowledge and learn to perform independently. Cazden (1979) argued that as the learner achieves independence the scaffold is not merely left behind but "is replaced by a new structure for a more elaborate construction" (p. 11) in the learning of related tasks of greater complexity. This argument led DiPardo and Freedman (1988) to conclude that "Vygotsky envisioned a more dynamically interpersonal, flexible phenomenon than [the term 'instructional scaffolding'] connotes" (p. 130).

Examining small group functions as a social phenomenon represents a departure from most research on small groups as an educational method. Aside from the studies of product-based measures of gains previously reviewed, most small group research has focused on *mechanical* and *managerial* aspects of group formation, such as the reward structure of groups (Slavin, 1989), the necessity for problem-based activities (Hillocks, 1986), and the responsibilities of group members (Stodolsky, 1984).

The present investigation examined the social environment of small groups by exploring the relationship between the patterns of discourse in two related

settings that represent an attempted instructional scaffold. The first setting was the conventional teacher-led discussion, with teachers guiding students through the analysis of a short story. The second setting involved the same teachers and students, but had the students discussing a second, thematically-related short story in small groups of four or five students. The instructional sequence represented a scaffold in that the teacher-led discussion was intended to provide initial support and instruction in how to analyze the story, and the small group session was designed to provide peer support for applying and internalizing the analytic procedures provided by the teacher. The research aimed to explore the relationships between the differential use of a particular scaffold (modeling and guiding a critical interpretation process) and the subsequent process of interpretation engaged in by students when constructing meaning independently.

This investigation was exploratory, with the data and their implications serving heuristic, illustrative, and instructive purposes, rather than being conclusive. We offer this limitation not as a disclaimer, but to acknowledge the restraint one must impose in a study confined to four cases. In spite of its limitations, the study offers teachers examples of distinct patterns of classroom discourse that appear to affect the thinking and communication of students engaged in independent problem-solving. The data, although treated empirically for the purpose of discerning patterns, are perhaps most compelling and persuasive if regarded as qualitative illustrations of classroom discourse with implications for teaching and learning.

METHOD

PARTICIPANTS

The study took place in a large racially, socially, and ethnically diverse midwestern suburban public high school. Participants in the study came from four sophomore classes in the school. The classes were selected by soliciting volunteers from among the seven teachers who taught regular track (the middle of three tracks) sophomores. Of the seven (one of whom included the senior investigator), three agreed to participate. At the last minute one of these teachers withdrew from the study and the investigator, who had originally piloted the study with his own students, substituted the data from his classes in that cell (identified in the results as "Mr. Stone"). The fourth teacher also taught sophomores, but in the honors track. The study had originally intended to focus on the interactions among regular track students with their teachers, but the insufficient number of volunteers changed the data base to include one honors section.

METHODS AND MATERIALS

The discussions studied in this investigation came in the normal course of instruction during a thematic unit in the curriculum on "Coming of Age" stories from the course literature anthology. On the first day of data collection, teacher-led discussions of short stories were tape recorded. On the second day, each class was divided into five groups of four or five students each, with each small group discussion of a short story recorded separately. Thus, each teacher contributed taped sessions of one teacher-led discussion and five small group

discussions. The great amount of resources required to analyze classroom transcripts limited the number of small group discussions analyzed in the study. Two small group discussions from each of the four teachers were selected for analysis using a table of random numbers. Of the randomly selected discussions, some tapes were inaudible and so were randomly replaced with another tape from the same class.

PROCEDURES

Teacher-led discussions typically ran 25–35 minutes of the 42 minute class period; small group discussions varied in length, running from 15–35 minutes. A basic story heuristic that covered the essential elements of "Coming of Age" literature was developed to guide both teacher-led and small group discussions. It included the following questions: (a) What values and characteristics does the protagonist have at the beginning of the story that you would call "immature"? Give examples and explain why they are immature. (b) What key incident causes the character to change? Why does this incident cause change? In other words, what makes this incident more powerful than other experiences the protagonist has had, so powerful that it causes a major change? (c) How does the protagonist change from the beginning of the story to the end? Why does the protagonist change? Give examples to support your answer. (d) Is the protagonist better off or worse off due to these changes? Why?

For the teacher-led discussions, the teachers were asked to use these questions as a framework for whatever discussion they might ordinarily conduct. Teachers were advised that the study hoped to capture discussion under "normal" conditions in which the teachers' personalities, styles, and methods showed through; they were encouraged to cover the same basic issues as the small groups while retaining their personal instructional style and interests, and fitting the stories in with their own interpretive emphases. Students in small groups were instructed to discuss the questions, with students individually responsible for written answers.

ANALYSIS

The coding system was adapted from Marshall's system for analyzing classroom discourse (Marshall, 1989; Marshall et al., 1990, 1991; Marshall, Smagorinsky, & Smith, in press; Smagorinsky, 1992; Smagorinsky & Fly, 1992). The system codes "communication units" (an utterance on a single subject, usually a sentence in length) on three different levels. Marshall's (1989) system was designed "in order to examine the linguistic patterns and intellectual content of classroom discussions" (p. 6) to determine sources of authority and impetus in teacher-led classroom discussions of literature. The present investigation was designed to complement Marshall's (Marshall et al., in press), with the focus shifted to the relationship between teacher-led discussions and subsequent small group discussions.

Described below are those codes that are relevant to the present data analysis.

Level I codes describe the basic purpose of a communication unit. They include: (a) *Inform*—a statement of fact or opinion; (b) *Question*—a statement that invites a response; (c) *Respond*—a reaction that focuses on a preceding remark; and (d) *Other*—a statement not codable according to the other categories.

Level II codes are subcategories of Level I codes, and are of two types. First, for statements initially coded *Inform* or *Question*, a Level II code describes the *knowledge source* of the statement. These include: (a) *Text*—from the text under study; (b) *Personal*—from the speaker's own experience; (c) *General*—from the media, culture, or other widely available source; (d) *Previous discussion*—from information or ideas revealed during a previous class discussion; (e) *Procedural*—from knowledge of how to go about the process of interpretation; and (f) *Classroom logistics*—related to the management of classroom activities (e.g., getting a book out).

Second, for statements initially coded *Respond,* a Level II code describes the *nature* of the response. These include: (a) *Request for elaboration*—a prompt to a speaker to go into greater detail; (b) *Repeat*—a more or less verbatim restatement of a just-uttered statement; and (c) *Positive*—a statement that approves of a just-uttered statement.

Level III codes describe the kinds of reasoning involved in statements initially coded *Inform* or *Question.* These include: (a) *Describe*—a literal summary of an experience, fact, or text; (b) *Interpret*—an inference about meaning or significance; (c) *Generalize*—an extrapolation from the particular to the universal; and (d) *Metastatement*—a discussion of the process of discussion or interpretation itself.

Beyond the coding of communication units, the coding system also identifies two types of boundaries in oral discourse, *turns* and *episodes.* A *turn* consists of a speaker's uninterrupted sequence of units, no matter how few or many. An *episode* represents a sequence of turns taken by any number of speakers on a single, identifiable topic. In the discussions analyzed in this study, the episodes were usually organized around the questions in the story heuristic.

Following the coding of the transcripts by one of the investigators, a second rater (the other investigator) coded 4 of the 12 transcripts. The two raters agreed on 92% of all coding decisions, with no individual category receiving fewer than 50 codes rating less than 80% agreement.

RESULTS

All four teachers in the study attempted to provide some sort of scaffold for literary understanding. Their discussion leading procedures included a number of moves and emphases that most observers of classrooms might assume would lead to clear thinking on the part of students: They posed challenging questions about the text, they sought to provide a relevant framework from personal experiences or other external sources, they generalized about human nature; in short, the discussions led to interpretations that relied on higher level thinking derived from a variety of sources. The patterns of discourse in the small groups, however, varied greatly from class to class.

In particular, the small group discussions of Mr. Harris's students were characterized by brief, unelaborated interactions that drew on few external knowledge sources; and the small group discussions of Mr. Stone's students included lengthy, detailed exchanges that drew on an array of external sources. (Both teachers taught regular track students.) The students of the other two teachers tended to fall somewhere between those of Mr. Harris and Mr. Stone, with the honors students of Mr. Azarov engaging in generally more elaborated discussions than the regular track students of Ms. Sanders.

Because their classes represented the greatest differences in the data analysis, and because they were not confounded by the variables of teacher gender and student ability, analysis of the transcripts focused on the classes of Mr. Harris and Mr. Stone. The inclusion of data from the class of the senior author ("Mr. Stone") is potentially problematic and contributes to the exploratory status of the research; however, at the time of the data collection he believed his transcripts would be pilot material and not actual research data, so he was not attempting to skew the data with a performance that confirmed the hypotheses that motivated the study.

An analysis of the transcripts of both the teacher-led and small group discussions suggests reasons for the different interactions of students of different teachers. The following sections describe differences among teacher-led discussions in two areas—*generating an extra-textual context* and *explicating analytic procedures*—and illustrate their apparent impact on subsequently enacted small group discussions.

GENERATING AN EXTRA-TEXTUAL CONTEXT

All teachers in the study attempted to establish a personal, social, or conceptual context through which to interpret the story. These extra-textual frameworks were generated by relating the literature to personal experiences or to current events, by analyzing the literary characters in terms of a broad concept (e.g., maturity), or by relating the issues from the story under discussion to concerns from previous class discussions.

The coding system revealed differences in the manner in which the teachers established these external frameworks. The Level II categories identified units as drawing on either a Personal, General, or Previous Discussion knowledge source, each of which is external to the text. As detailed in Table 1, teachers varied in their ratio of Inform codes to Question codes in Level I in units with Level II Personal, General, or Previous Discussion codes. Mr. Harris, for instance, tended to provide the broader context of interpretation himself without posing questions that would help students generate an external context, as indicated by the 31.33:1 ratio of Inform to Question codes related to an

TABLE 1

INFORM/QUESTION CODES PRECEDING EXTRA-TEXTUAL CODE

	Mr. Harris	Ms. Sanders	Mr. Stone	Mr. Azarov
Teacher-led Discussion				
Total extra-textual codes: Teacher	97	88	54	10
Total extra-textual codes: Students	4	30	31	2
Teacher: Inform	94	62	34	7
Teacher: Question	3	26	20	3
Student: Inform	4	30	31	2
Ratio: Teacher: Inform/Teacher: Question	31.33:1	2.38:1	1.7:1	2.33:1
Ratio: Teacher: Inform/Student: Inform	23.5:1	2.07:1	1.1:1	3.5:1
Small Group Discussion				
Mean Extra-textual Codes: Inform	2.5	18	22	8.5
Mean Extra-textual Codes: Question	.5	5.5	14	3
Mean Extra-textual Codes: Total	3.0	23.5	36	11.5

extra-textual knowledge source. (The coding system did not differentiate among question types, such as synthesis and analytical.) The following excerpt typifies his custom of providing his students an appropriate interpretive framework without involving them in the production:

Mr. Harris: Roxanne, what happens after he jumps into the water? [Question/Text/Describe]
Roxanne: He saves the girl. [Inform/Text/Describe]
Mr. Harris: Is it an easy saving? [Question/Text/Interpret]
Roxanne: No, because the current pulls them under. [Inform/Text/Interpret]
Mr. Harris: That is described in great detail. [Inform/Text/Describe] Why do you suppose the author describes the saving in such great detail? [Question/Text/Interpret]
Karla: [inaudible]
Mr. Harris: It has to be arduous for anything to be important. [Inform/General/Generalize] It has to be difficult. [Inform/General/Generalize] For example, if it were easy to play the guitar, we would all be Eric Clapton. [Inform/General/Generalize] But all of us probably have sat down with either our guitar or somebody else's guitar. [Inform/General/Describe] The first thing you find out is that it sort of hurts and it is hard to keep the frets down. [Inform/General/Describe] So you get one chord and you struggle for a while, like, row, row your boat. [Inform/General/Describe] You got to change it, and it is difficult. [Inform/General/Describe] Now, if it is a matter of just hopping off a two foot bridge into three feet of water and saying, don't be silly, you're all right honey, that is not going to be something that changes him very much. [Inform/Text/Interpret]

As this excerpt indicates, Mr. Harris tended to provide extended contexts for his students without providing questions that would prompt students to generate contexts of their own. His students rarely participated in the generation of the context, producing only 4 such statements to Mr. Harris's 94 (see Table 1). Furthermore, although his discussion included a 1:1 ratio of teacher turns to students turns, Mr. Harris's turns were substantially longer than those of his students by a margin of 3.13:1 (see Table 2).

TABLE 2

UNITS, TURNS, AND EPISODES

	Mr. Harris	Ms. Sanders	Mr. Stone	Mr. Azarov
Whole Class Discussions				
Teacher turns	61	116	101	98
Student turns	61	128	112	113
Teacher units	235	371	238	244
Student units	75	171	147	174
Teacher: Units per turn	3.85	3.2	2.36	2.49
Student: Units per turn	1.23	1.33	1.31	1.54
Ratio: Teacher units per turn/Student units per turn	3.13:1	2.4:1	1.8:1	1.61:1
Total # episodes	1	4	2	3
Mean turns per episode	122	61	106.5	73.3
Mean units episode	310	135.2	192.5	139.2
Small Group Discussions				
Mean turns per discussion	88.5	155	287	186.5
Mean units per discussion	131	212.5	402.5	244.5
Mean # episodes	4.5	5	3.5	3.5
Mean turns per episode	19.64	31	82	53.28
Mean units per episode	29.11	42.5	115	69.85

Mr. Harris's students appeared to struggle in their small groups discussions, producing relatively short discussions characterized by brief episodes (see Table 2). The following excerpt is typical of the episodes in the discussions of his small groups:

Ellen: [Reads from story heuristic] "What characteristics does the protagonist have at the beginning of the story that you would call immature? [Question/Text/Interpret] Give examples and explain why they are immature." [Question/Text/Interpret]

Betty: I don't know. [Other]

Judy: Wait, I forgot the story. [Other] Let me get my book right here. [Other]

Ellen: I think that at the beginning of the story, he thinks that to be mature, he's going to be six feet tall, he's going to have arms of steel and he thinks he's going to be in control. [Inform/Text/Interpret]

Judy: He watches TV too much. [Inform/Text/Interpret]

Ellen: And he thinks he's rebelling by eating grape seeds just because his mother is not there. [Inform/Text/Interpret]

Ginny: Good answer. [Respond/Positive]

Ellen: Somebody else talk. [Inform/Classroom Logistics] Does anyone else have any more reasons why he is immature? [Question/Text/Interpret]

Betty: Nope. [Other]

This episode illustrates the brief, perfunctory discussions of Mr. Harris's students in their small groups. They did not attempt to establish an extra-textual framework to inform their interpretation as Mr. Harris had done, but settle on the first plausible answer and then move on to the next question. As Table 2 indicates, their small group discussions produced the briefest, least elaborated discussions in the sample.

The coding system reveals that the teacher-led discussions of Mr. Stone were more interactive than the discussions of Mr. Harris. His ratio of Inform to Question codes prior to a Personal, General or Previous Discussion code was 1.7:1, and his students provided 31 statements coded Inform followed by such extra-textual references to Mr. Stone's 34 (see Table 1). His turn lengths were 2.36 to his students' 1.31, a ratio of 1.8:1, suggesting a balance in the levels of interaction (see Table 2). The following excerpt illustrates how he used questions to push his students to generate an extra-textual context to help interpret the story:

Patsy: He thought it was mature to, well, he was eating grapes and staying up late with, he was eating grapes and grape seeds [Inform/Text/Interpret] and staying up late [Inform/Text/Interpret] and watching TV without his mother's approval. [Inform/Text/Interpret]

Mr. Stone: Okay, eating grapes and seeds and a couple of other examples. [Respond/Repeat] He was staying up late. [Respond/Repeat]

Patsy: Yeah. [Respond/Positive]

Mr. Stone: And he was also . . . [Respond/Request Elaboration]

Patsy: Watching TV. [Inform/Text/Describe]

Mr. Stone: And watching TV when told not to. [Inform/Text/Interpret] And all these fall into the category of what? [Question/Text/Generalize]

Patsy: Huh? [Respond/Request Elaboration]

Mr. Stone: These all have in common something. [Question/Text/Generalize]

Patsy: Well, disobeying. [Inform/Text/Generalize]

Mr. Stone: Okay, he was disobeying his mother. [Inform/Text/Describe] All right. [Respond/Positive] Now what can you do with this? [Question/Procedural/Metastatement] In other words, what are you trying to tell us by bringing up these points? [Question/Procedural/Metastatement]

Patsy: That he thought he was mature by disobeying his mother. [Inform/Text/Interpret] He

thought it made him a more mature person and older by doing things he wasn't supposed to do. [Inform/Text/Interpret]

Mr. Stone: Thought he was mature through these acts. [Respond/Repeat] Okay, and what does Patsy think? [Question/Text/Interpret] Do you agree with it? [Question/Text/Interpret]

Patsy: What? [Respond/Request Elaboration] No. [Inform/Text/Interpret]

Mr. Stone: Why not? [Respond/Request Elaboration]

Patsy: He was just showing how immature he is by doing that. [Inform/Text/Interpret]

Mr. Stone: And what criterion of a definition of maturity are you using to make this judgment? [Question/General/Generalize] Why is this, you are saying that this is, in fact, immature even though he thought he was mature? [Question/Text/Interpret] That is what you are saying, right? [Question/Text/Interpret]

Patsy: Yes. [Inform/Text/Interpret]

Mr. Stone: Why? [Respond/Request Elaboration] You are saying he is immature because of something and that because is your definition. [Inform/General/Generalize] And what is it about your definition that allows you to make this judgment? [Question/General/Generalize]

Mr. Stone's role in these discussions appears to be more of an inquisitor than a raconteur. His style seems to be to relate the literary character to an external concept (in this case *maturity*) and question students in order to have them make the connections.

In their small group discussions Mr. Stone's students appeared to have internalized this procedure of posing questions to provide an external context for interpretation. In the following excerpt, the group members begin by discussing the character in the text and then stepping outside the story to discuss conceptual issues through which to understand his behavior:

Alicia: Is he actually immature for these, [Inform/Text/Interpret] I mean, how can you be immature? [Question/General/Generalize]

Patsy: It's, it's kind of like when you're not really mature until you're . . . [Inform/General/Generalize]

Alicia: Until you're social? [Question/General/Generalize]

Rose: Well, yes. [Inform/General/Generalize]

Alicia: So, a person's shy so they're . . . social? [Question/General/Generalize]

Patsy: It takes maturity to be social. [Inform/General/Generalize]

Alicia: No. [Inform/General/Generalize]

Patsy: Well, a four year old is not mature and does she come, or he or she come out and like say, "Hi, my name is so-and-so. Would you come out and play with me?" [Question/General/Generalize]

Rose: Yeah. [Inform/General/Generalize]

Alicia: Yeah, but I mean, no, I don't think you have to be social to be mature. [Inform/General/Generalize] I think there are lots of people who are. [Inform/General/Generalize] But you're not as successful if you keep to yourself. [Inform/General/Generalize]

Patsy: Yeah, but that . . . [Other]

Rose: But you are not as successful when you are, when you keep to yourself. [Inform/General/Generalize]

Alicia: So you have to be successful to be mature, too? [Question/General/Generalize]

Rose: Yes. [Inform/General/Generalize]

Alicia: Why? [Respond/Request Elaboration]

Rose: I mean, not really successful, I mean, you have to . . . [Inform/General/Generalize]

Alicia: In what way successful? [Respond/Request Elaboration]

Rose: I don't mean like aspiring, I mean like you don't have to be rich and a billionaire or anything. [Inform/General/Generalize]

Alicia: Yes. [Inform/General/Generalize]

Rose: You just have to like, you can work in a book store and be successful, [Inform/General/Generalize] I mean, it depends on what your standards are. [Inform/General/Generalize]

Alicia: Yeah but if you worked in a book store and you were shy and you were antisocial, you're still not mature? [Question/General/Generalize]

Rose: You really wouldn't be. [Inform/General/Generalize]
Alicia: Why? [Respond/Request Elaboration] Yeah, but I don't understand why. [Respond/Request Elaboration]

We report here only a portion of this episode, which continued in this fashion for some time. Mr. Stone's small groups provided long and elaborated episodes such as these, averaging 402.5 units per discussion and 115 units per episode (see Table 2). Much more so than students of other teachers, Mr. Stone's students spent a great deal of time relating the story to extra-textual knowledge sources (see Table 1). The contrasting styles of Mr. Stone and Mr. Harris, then, appear to have had different effects on their students' ability to discuss related problems in small groups. Again, we focused on these two teachers because the data reveal both their teacher-led and small group discussions to be dramatically different. Mr. Azarov, the honors teacher, relied far less on extra-textual references, so much so that his data are difficult to interpret on this measure (see Table 1); Ms. Sanders fell somewhere in the middle of the extremes in every regard. From the data, we infer that a relationship exists between a teacher's manner of generating an external interpretive framework and students' ability to produce one on their own through considerable discussion.

EXPLICATING ANALYTIC PROCEDURES

A second teacher behavior that appeared to affect small group interactions was the teachers' ability to step outside the discussion and make analytic procedures explicit. They might do this by pointing out the need to pose questions, the need to support a generalization with evidence, and so on. Such statements were identified with a Level II code of Procedural and a Level III code of either Metastatement or Describe (see Table 3).

TABLE 3

PROCEDURAL CODES

	Mr. Harris	Ms. Sanders	Mr. Stone	Mr. Azarov
Whole Class Discussions Procedural Codes	0	5	25	9
Small Group Discussions Mean Procedural Codes	0	1	14	2

In the following excerpt, Mr. Azarov explicates the need to pose a question in order to arrive at a well-considered interpretation:

Mr. Azarov: Do those four kids live in the house? [Respond/Repeat] She had four kids. [Inform/Text/Describe]
Chorus: Yeah. [Inform/Text/Describe]
Mr. Azarov: Yeah. [Respond/Positive] I think we assume they must because she is supporting them, right? [Question/Text/Interpret]
Chorus: Yeah. [Inform/Text/Interpret]
Mr. Azarov: There is something else that we need to ask. [Inform/Procedural/Metastatement]
Female Student: What happened to the uncle? [Question/Text/Describe]
Mr. Azarov: We don't get any information about the young boy's father or the grandfather, for that matter. [Inform/Text/Describe] Any of the men, we don't learning anything about in the story. [Inform/Text/Describe] But there is another question from the beginning, at least about his behavior. [Inform/Procedural/Metastatement]

Table 3 reports the frequency of each teacher's procedural statements, as well as occurrances in the small group discussions. Once again, data from the extreme cases offer the strongest suggestion of a relationship between teacher and small group patterns of discourse. Mr. Stone appears to stress interpretive procedures quite frequently, while Mr. Harris does not. These patterns are carried out in the small group discussions. It appears that an awareness of discussion procedures is related to the levels of elaboration reported in Table 1.

Civikly's review of studies on teacher clarity (1992) finds "consistent support for a positive relationship between levels of teacher clarity and student achievement, and between teacher clarity and positive student perceptions of teaching effectiveness" (p. 142). Powell and Harville (1990) further found that teacher clarity was correlated positively with students' willingness to engage in the behaviors taught in class. If the explication of analytic procedures is what Civikly (1992) calls "low-inference teacher behaviors that specify the clarity construct" (p. 139)—that is, those that are clear and unambiguous and that therefore result in high observer agreement—then it is not surprising that students appear to have internalized and implemented them when left on their own.

DISCUSSION

This study is more exploratory than conclusive, the limited sample allowing only for a suggestive interpretation of the data. More conclusive evidence can only come from continued investigation into the problems examined in this research, perhaps with larger samples and more diverse teachers and students.

Nonetheless, we see this study as providing the grounds for generating hypotheses to account for the successes and failures of small group work. The hypotheses emerge from the data in light of Vygotsky's theories regarding the internalization of language. To Vygotsky, learning was a dialectic experience dependent on an interaction between a learner and more capable peers and adults. A youth's development relies on the ability of those more capable people to accelerate the learner's progress towards the highest reaches of potential. The data from this study suggest that the type of interaction between teacher and learner is crucial for promoting student achievement. Teachers who perceive their role as that of a model who does not engage learners in the act of inquiry are not likely to help learners internalize requisite skills. On the other hand, teachers who participate with students in inquiry and whose role involves them as less a model and more a prompter and inquisitor stand a greater chance of helping students internalize the skills of interpretation that will enable them to perform independently.

Results of this study suggest a relationship between the patterns of discourse in teacher-led discussions and the small group discussions that follow them. If the teacher-led discussions analyzed are typical of the long term patterns of discourse enculturated in the students over the course of the year, then the small group discussions are not so much derivative of the particular teacher-led discussions captured in the research but an extension of the continuum of discussions that have led up to them throughout the school year. The importance of the patterns of discourse that govern a classroom may well supercede the consideration of managerial and mechanical aspects of the formation and implementation of small groups in determining their success in particular classrooms.

Several researchers (DiPardo & Freedman, 1988; Dyson, 1990) have raised the concern that Bruner's scaffolding metaphor connotes a rigid, one-directional relationship between teachers and students that does not represent the dynamic interaction envisioned by Vygotsky. Such a top-town flow of information is ineffective, they argue, in promoting fruitful independent learning; and indeed, in the teacher-led discussions in this study in which the teacher provided the model but not the means of enablement, the students did not provide elaborated interpretations of the literature when left on their own. The point that stands out is that if teachers *perceive* the instructional scaffold as providing top-down support, then the instruction is not likely to enable students to perform independently. The more favorable instructional approach seems to be to provide students the *means* of interpretation through a constructive interaction that urges them to provide an appropriate interpretive framework and to elaborate their responses and analyses.

This study suggests that each class has its own unique culture that provides a particular learning environment that affects the ways in which students grow. Certain environments appear to help nurture students through the zone of proximal development more effectively than others. This study also suggests that researchers cannot investigate particular classroom episodes without examining how they represent the broader sequence of events that lead up to and follow from them. The processes of small groups are not isolated events amenable to isolated study, but a function of the overall classroom discourse. Therefore, accounting for their processes requires an understanding of the patterns that govern the life around them.

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