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# Learning the Art of Instructional Conversation: The Influence of Self-Assessment on Teachers' Instructional Discourse in a Reading Clinic

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## Abstract

Over 2 decades of sociolinguistic research describe the teacher's powerful role in creating the communication system that supports students' learning. Yet research evidence about how to prepare and develop professionals for this role beyond their natural discourse tendencies and style remains sparse. This study examined self-assessment as a means of teacher learning that develops teachers' understanding and use of discourse strategies that support instructional conversation. Using a discourse analysis tool and related procedures (transcription, analysis, and interpretation), 9 teachers examined the conceptual and social functions of their talk from videotaped excerpts of tutorial instruction over 5 weeks. Although the teachers' analyses did not grow more precise, their interpretations of their talk revealed a growing ability to treat their discourse as an object of knowledge. Repeated engagement in the 3-phase self-assessment activity may have provided a form of self-assistance that promoted conceptual understanding. Design features of the self-assessment activity as a learning structure are also discussed.

At the beginning of the sociolinguistic research movement in the early 1970s, Dell Hymes expressed two hopes (Cazden, John, & Hymes, 1972). One was that the research would contribute to knowledge of classroom talk in its social context, and the other was that teachers would make this knowledge their own. The ensuing research provided information about language use in classrooms. Erickson (1977) and Mehan (1979), for example, identified the event and participation structures of classroom lessons, revealing the demands of meaningful participation in instruction on students' communicative competence. Exploring teachers' talk, Barnes (1976) pointed out the conceptual and sociocultural functions of

teachers' language and how these functions can affect students' learning. Teacher talk, for instance, might keep the lesson going (sociocultural function) but fail to organize the content in ways that learners can use it (conceptual function). Other researchers exposed the cultural discontinuities between home and school that can produce differential treatment and reduced access to academic learning (Heath, 1982; Wells, 1986). And still others drew on this research to design interventions that improved student achievement, for example, reading lessons in the Kamehameha Early Education Program (KEEP; Au & Mason, 1981), exploratory talk in classroom discussions (Barnes, 1995), and responsive teaching in first-grade classrooms (Goldenberg, 1992–93).

### Early Training Studies

As Hymes hoped, the sociolinguistic research movement contributed to a better understanding of the dense, intricate layers of classroom discourse. Many studies showed how the participant structure (teacher-led, student-led, or shared leadership) influences discourse patterns and the level of thinking that occurs in classrooms (Almasi, 1995; Goatley & Raphael, 1992; McGee, 1992; O'Flahavan, Stein, Wiencek, & Marcks, 1992). But, unfortunately, the movement did not address Hymes's second hope very well: that teachers might own this knowledge and apply it readily in their teaching. Studies about how research-based knowledge about classroom discourse might be manifest in teachers' everyday practice are rare—those relevant to reading instruction rarer still. These few, nonetheless, have produced information about how to develop teachers' effective use of instructional discourse beyond their natural tendencies and style. A study of Duffy et al. (1986), for example, gave an early indication of how difficult improving teachers' instructional talk might be. The research team trained a group of teachers to be more explicit in their explanations during skill instruction, guiding them to "recast basal skill

prescriptions as strategies and to present them to students so that they become better readers" (p. 240). The researchers then compared the reading achievement (comprehension scores) of these teachers' students with those of teachers who had no such training.

The results were disappointing. Although the trained teachers tended to use more explicit explanations and their students seemed more aware of strategies learned, there were no significant differences in reading achievement between the two groups. What happened? Retracing the study's procedures, the researchers discovered from exit interviews that the intervention teachers used explicit explanations inconsistently. Several teachers found it difficult to develop explicit explanation "scripts" and to incorporate them into their instructional routines and thus did so only when being observed. Others used explicit explanations but continued to stress student memorization over strategic understanding, which worked against students' application of skills when they read. In short, the teachers adapted the goal of explicit explanations to fit their circumstances, and the training failed to take this into account.

Conley and Warren (1988) encountered a similar phenomenon in a study designed to develop teachers' explanations during content reading lessons. Over 3 years they worked with six secondary teachers—three beginners and three experienced in teaching content reading—in monthly workshops devoted to lesson planning and problem solving. Given the duration of the study, teachers had ample opportunity to learn strategies of effective content reading teaching. But the researchers did not provide specific instruction in *how to explain* reading strategies to students. The results of this study were also disappointing. Teachers' explanatory talk rarely guided students' understanding of reading as a tool for learning but rather functioned to "tell" what the reading or text was about, that is, the content. The important insight to be

gleaned from this study, though, is that there were no differences between the novice and experienced teachers, which suggests that without training, teachers may not develop forms of instructional discourse that help students learn how to learn with print.

### Advances In In-Service Training

Alert to the significance of this insight through their work with KEEP in Hawaii, Tharp and Gallimore (1988) applied a four-stage training model based on Vygotsky's (1978) zone of proximal development (ZPD) construct to develop teachers' discourse toward what they described as "responsive teaching." Discourse in this approach relies less on teacher talk (traditional telling) and more on student talk, which the teacher elicits through skillful questioning and instructional conversation. Tharp and Gallimore proposed that teachers learn responsive discourse through assisted performance in their ZPDs, moving from assistance provided by more capable others to a growing dependence on the self to full internalization of scripts into their teaching repertoires. As applied, this multistage model advanced professional education in instructional discourse along two fronts: (1) it considered the power of teachers' preexisting schemas to affect their views of new teaching strategies (Feiman-Nemser & Buchmann, 1987), and (2) it sought to create instructional conditions that confronted these schemas and transformed them into more sophisticated constructions that formed the basis of teaching actions (Hewson & Hewson, 1989; Kennedy, 1997). But the approach was neither swift nor easy for teachers. Successive interactions with a more informed other were required for the teachers to see critical features of their discourse through the eyes of their coach, reconceptualize it, and then use it in practice. Such scrutiny was frequently personally uncomfortable and frustrating, calling for patience and delicate negotiation between teacher and coach. A brief excerpt of a conversation be-

tween Grace and her coach as she strived for more responsive discourse is telling (from Tharp & Gallimore, 1988, p. 239):

Stephanie: How about if you film your Blue Group lesson tomorrow?

Grace: No. I don't want to film anymore. . . . I won't. Maybe I'll [audio] tape it. I don't want to film it.

Stephanie: Because of the . . . is it easier to audiotape?

Grace: No. I just don't want to go through this [analysis of performance] tomorrow. No.

Similarly, Heaton and Lampert (1993, p. 61) recounted the difficulty and complexity in learning "how to ask questions rather than give answers" in mathematics teaching. The authors worked together on two levels—as graduate student (Heaton) and professor (Lampert) and as teachers of elementary school mathematics. To learn to teach mathematics for understanding, as envisioned in reform efforts, Heaton was coached by Lampert in the context of her own teaching. Heaton described her anxieties about changing her discourse practices, her role, and her conception of mathematics, and Lampert conveyed her concerns about how to teach responsive pedagogy to an experienced practitioner. The approach that eventually emerged for Lampert resembled the ZPD model, but it also revealed another feature of professional education in this vein. Along with successive observations and critiques of teaching discourse, Lampert focused on the integration of content and context—how the exchange of powerful concepts might be managed amid the complex social interactions of the classroom. To achieve this, Lampert engaged Heaton in problem-solving dialogues that demanded consideration of all relevant information (e.g., students, curriculum, subject matter) and intellectual precision in guiding children's knowledge constructing yet flexibility in terms of teaching actions. In other words, Lampert paid attention to the development of what Shulman (1987)

termed "strategic knowledge": knowing how to coordinate knowledge about students, subject matter, and curriculum in response to the ever-shifting social dynamics of the classroom. Thus, coaching involved not only assisting performance in context but also considering performance out of context and reasoning about it. As Dewey (1929) argued, abstracting performance from concrete concerns affords the development of an intellectual perspective toward practice and cultivates scientific habits of mind in teaching work. This is nicely illustrated in the discussions of four primary teachers and a university researcher who worked together to articulate and implement instructional conversations as a feature of constructivist teaching (Saunders & Goldenberg, 1996). Their early dialogues, providing a kind of intellectual scaffolding, resulted in richer and more precise conceptualizations of instructional conversation and direct instruction as two distinct teaching approaches. Achieving this kind of conceptual clarity at the outset appeared to contribute to the teachers' successful implementation of instructional conversation in their practice.

These studies are instructive on several counts. First, unlike traditional professional education of teachers, a situated learning approach was used wherein discourse was observed, guided, and reflected on in contexts of practice. Second, provision was made for intermediary forms of assistance, for example, consultations with a coach, problem-solving dialogues, and peer-led study groups facilitated by an expert. Third, the intellectual and personal struggles teachers face in adapting their discourse toward more responsive forms were acknowledged and accepted as part of the learning process. Change, it was understood, can be stimulating but not necessarily pleasant. Still, it is important to point out that these efforts to assist teacher learning, and therefore development, within the ZPD framework may not fit easily into preparation and training programs: the approach is

often one-on-one, assumes a knowledgeable coach/consultant, takes considerable time, and requires sustained commitment to continuous improvement. Certainly worthy and in the right direction, such demands are nonetheless hard to meet in the mainstream of professional education at colleges and universities where institutional structures and access to adequate human resources may pose barriers. How the lessons learned might be adapted to more typical professional education settings that involve groups of preservice students or practicing teachers presents a new set of challenges.

### **Adaptations in Preservice Teacher Education**

A few recent studies in the teaching of reading pedagogy provide some direction here. Herrmann and Saracino (1993), for example, described their efforts to establish a "middle ground between explicit teaching . . . and discovery learning" by restructuring their literacy methods course so as to prepare "creative, reflective and adaptive literacy teachers" (pp. 96–97). Restructuring consisted of (1) using an inquiry approach organized around a few central ideas; (2) lengthening the course from one semester to a year; (3) including an after-school tutorial as a site for practice; and (4) arranging for regular problem-solving dialogues between students and mentors/instructors. Over a 10-month period the researchers gathered data on the reflective inquiry and practice of 13 preservice teachers. Although the analysis did not focus on the preservice teachers' instructional talk, results suggested considerable to slight shifts in students' understanding of responsive reading teaching as indicated in their written reflections and informal discussion with peers and mentors. Students could, in short, talk about being more responsive (some more accurately than others), but it was not clear if they could integrate this stance into their instructional discourse. Achieving such shifts, however, was no easy matter.

Students' resistance to the hard work of inquiry and reflection, coupled with the instructors' lack of experience in teaching for understanding, created tensions and dilemmas that eroded preservice teachers' confidence and motivation to change. The experience was a struggle where neither the students nor the instructors were adequately prepared for the intellectual, social, and emotional demands of a responsive pedagogy.

Evidence from a similar study that we conducted, however, suggested that the basic architecture of Herrmann and Saracino's restructured course may be well suited to a social constructivist "learning to teach" approach (Roskos & Walker, 1994). Drawing on situated learning theory (Lave & Wenger, 1991; Newman, Griffin, & Cole, 1989), we organized our reading diagnosis course for preservice teachers around three intersecting activity settings. *Simulation activities* offered protected environments for applying the content of reading diagnosis and practicing diagnostic teaching skills in the company of peers. *Teaching tutorials* provided situated experiences where students applied what they were learning in one-to-one instructional episodes with elementary-grade problem readers. *Collaborative reflections* occurred in small-group dialogue sessions immediately following the tutorials. Here the students described their teaching experiences and sought advice from their peers. Moreover, we facilitated these "debriefing" sessions, which were similar to physician-intern "rounds" in a teaching hospital, by interjecting ideas and concepts that supported, clarified, and extended the students' thinking, interweaving their immediate experience with text-based knowledge. By the end of the one-semester course, the students had made dramatic increases in their references to procedural knowledge in their tutorial work and related problem solving with peers. But, as in the case of Herrmann and Saracino (1993), the study provided no evidence that these novice

teachers used this knowledge to monitor their discourse during tutorial instruction.

Toward this end, a study conducted by Wolf, Mieras, and Carey (1996) came a bit closer to identifying structures that might assist the development of teachers' instructional talk. Working with 43 preservice teachers, Wolf, the primary researcher, incorporated a field note component into the tutorial activity of an undergraduate children's literature class. Regularly, students were required to read to children and "to provide enough detailed information [field notes] to write the story of where they were and what they did, particularly the language used to accomplish the work-play of the literary discussion" (p. 464). Over a year's time, Wolf asked the preservice teachers to consider the kinds of questions they asked their case-study children and the kinds of responses and questions they received in turn. Her goal was to get them to "up the intellectual ante" in the flow of literary discussion—in short, to bolster the conceptual function of instructional discourse that Barnes (1976) identified earlier. Field note data then became the basis of class lectures and associated activities that focused on good, responsive questioning. Results were heartening as students' self-reports indicated better understandings of the art of questioning in developing children's higher-order thinking. As Wolf et al. (1996) argued, the analytic and self-reflective practice that the field notes offered may have situated the students' learning such that they could "see" literary response theory in practice (Lave & Wenger, 1991). Relatedly, in their study of the effectiveness of a whole-literacy curriculum, Au and Carroll (1997) underscored the utility of an implementation checklist for structuring and clarifying teachers' everyday practice consistent with the curriculum. The checklist, it appears, provided a tool for self-organizing and self-monitoring teaching behaviors and work that supported a constructivist vision of literacy instruction.

These more recent literacy studies have

indicated that at least some of the benefits of the intensive, one-to-one coaching in authentic situations first outlined by Tharp and Gallimore (1988) may be realized in more traditional professional education settings provided students and instructors expand their roles, for example, teacher as lecturer, coach, and mentor; student as listener, apprentice, and inquirer. Although learning by doing also seems critical, what may need greater emphasis is not the actual "doing" or practice teaching, but the learning it affords—made visible through artifacts, such as detailed field notes, checklists, or written self-reflections, and well-assisted, regular debriefings about specific teaching incidents. In other words, the "doing" may be the site of learning, not only in an active sense, but also in an intellectual one. When its salient features become the object of knowledge, excerpted for scrutiny, the teacher helps students to "see" and interpret their own teaching actions in increasingly more discerning, theoretical, and pedagogically powerful ways.

### The Present Study

Taken together, these studies offer a slim body of knowledge on teaching for responsive discourse practices. But in our view they rekindle Hymes's hope that what is known about responsive, student-centered instructional discourse might be evidenced in teachers' practice. Our interest is in contributing to this effort, focusing primarily on the development of teachers' understanding and use of "instructional conversation" discourse in their reading teaching. A term coined by Goldenberg and Gallimore (in Saunders, Goldenberg, & Hamann, 1992), instructional conversation refers to a mode of instruction that emphasizes building (not just checking) students' understanding through skillful questioning, probing, and discussing. The aim is to engage learners in sharing their thinking and working together toward more articulated and complete understandings of ideas and texts. Discussion-related research has

identified two major roles that the teacher plays in bringing about instructional conversation during reading instruction: sustaining a focus on the cognitive aspects of a discussion, which promotes academic understanding (Mazzoni & Gambrell, 1997), and supporting the relationship-building dimensions of interaction, which develops a sense of camaraderie and community (Ferne, Davis, Kantor, & McMurray, 1993). The literacy teacher, in sum, orchestrates the conceptual and social functions of instructional talk to involve students actively in the learning conversation.

Our research interest is in self-assessment as a means of organizing and regulating instructional talk so that it moves from recitative tendencies (telling, correcting, supplying answers, saying how) and toward more responsive tendencies (asking, focusing, elaborating, discussing, connecting) that promote instructional conversation. In this respect, we seek to examine that aspect of development where responsibility for performance shifts from the direct guidance of a more knowledgeable other to the self, thus stimulating self-regulating processes. Considerable research has examined assistance provided by more capable others in the ZPD, such as parents, experts, or peers (Wertsch, 1985). Less, however, has explored the emergence of self-assistance in progression through the ZPD, where performance once assisted by the more capable other begins to be guided by the self using other forms of support, for example, self-talk (Tharp & Gallimore, 1988).

Prior to this study, we developed a prototype tool for assessing instructional discourse in literacy teaching (Roskos & Walker, 1997). The design of the tool emerged from existing discourse coding schemes (e.g., instructional conversation elements) as well as needs in practical teaching situations and represented a responsive or student-centered teaching approach (Goldenberg, 1992–93; Newmann, Secada, & Wehlage, 1995; Schachter, 1979). The tool met four criteria of functional ca-

capacity derived from sociolinguistic research and a situated view of directed action (Suchman, 1987). In brief, the tool incorporated (1) strategies for the social language function at work in the instructional setting and (2) strategies for the conceptual language function performed by the teacher; practically, it seemed (3) relatively easy for practitioners to use and (4) potentially instructive with repeated use. As a cultural artifact, the tool incorporated a constructivist view of instructional action and belief.

We are in the early stages of designing instructive procedures and tools for teachers' learning that help them to understand responsive discourse and to incorporate its elements into their practice. Our emphasis on design stems from the ecocultural view that artifacts and artifact-mediated action are starting points in the development of conceptual tools that stimulate thought and behavior (Cole, 1996, chap. 5). We also are striving to be teacher centered, working from where teachers are and assisting and challenging them to achieve high levels of engagement and performance in their teaching work. In this study we investigated teachers' engagement in a self-assessment activity, organized around the aforementioned instructional discourse tool, as a means of self-assistance in a reading clinic. To determine if the activity might serve a self-organizing and self-regulating function favoring responsive discourse strategies, we examined (1) teachers' analyses of their instructional talk and (2) their interpretations of these data. Evidence that teachers specified terms and strategies of responsive discourse more precisely and more critically through repeated self-assessment interactions would suggest attempts to adapt instructional talk to this discourse structure. With this evidence in hand, we might infer the viability of the activity as a form of self-assistance in helping to regulate performance previously directed by external means (a more capable other). We also explored the transfer of the self-assessment activity from the clinic to the classroom to

estimate its efficacy and practicality under these conditions. Through our investigation, we hoped to learn more about teachers' understandings and adaptations of their discourse as well as to equip them with a means of self-assessment for guiding and monitoring their instructional talk toward instructional conversation.

## Method

### Participants and Setting

Nine experienced teachers (eight females, one male) who were completing a graduate-level reading practicum volunteered to participate in the study. All were elementary school teachers who had taught for 5 years or more. Seeking master's degrees in education and reading specialist certification, all nine were in the final stages of their advanced studies. They were enrolled in graduate programs at two universities that were comparable in size, student composition, and general professional education curriculum.

### The Reading Practicum

We developed collaboratively the content and procedures of the practicum course offered at the two institutions; it was taught by authors Roskos and Walker at their respective institutions. The course reflected a constructivist perspective on children's literacy learning (Dixon-Kraus, 1996) and an inquiry approach to professional education (Cochran-Smith, 1989; Feiman-Nemser & Buchmann, 1987; Schon, 1987).

Content focused on the application of reading pedagogy concepts (e.g., strategy instruction) and diagnostic skills (e.g., miscue analysis) within an instructional framework derived from literacy research (Clay, 1993; Walker, 1996). The framework served as the architecture of daily tutorials where teachers tutored one or two children at a time; it included five recurring activities across a 5- to 6-week period: (1) warmups to ease into literacy instruction, (2) familiar text time for children to show what they know well and can already do, (3) new text

time where readers apply strategies and skills in unfamiliar text situations, (4) strategy and skills lessons wherein teachers model new strategies and skills for students to try out in familiar reading selections, and (5) personalized reading and writing activities that offer students literacy choices.

Teaching procedures were tied to three primary activities that fostered the intersection of practical and personal experience with theoretical understandings: (1) the formation and development of teaching teams, which encouraged collaboration among peers, (2) on-the-spot assistance from instructors during tutorial sessions that forged connections between practical experience and theoretical knowledge, and (3) ample opportunity for reflection on instructional actions through shared text experiences (e.g., journal articles), daily recording of observations, assessing selected teaching episodes, and periodic conferencing with instructors, colleagues, and parents.

Although our day-to-day instruction necessarily adapted to conditions at each site, we maintained fidelity to the instructional framework and central procedures through weekly communication, joint problem solving, and sharing of student work.

#### The Instructional Talk Assessment Tool

In an earlier study we designed and tested a prototype tool for assessing responsive discourse in literacy teaching (Roskos & Walker, 1997). Three design elements were incorporated into the construction of the tool. First, drawing on descriptions of instructional conversation from sociolinguistic research (Goldenberg, 1992–93; Goldenberg & Gallimore, 1991; Tharp & Gallimore, 1988), we organized the tool to identify the conceptual and sociocultural functions of instructional talk. According to Barnes (1976) and, more recently, others (Collins, Brown, & Newman, 1989; Roth & Bowen, 1995), the conceptual function develops the cognate aspects of conversation and promotes academic understanding. The teacher builds a framework or “scaf-

fold” for children to fill in, thus encouraging them to construct meanings with content while simultaneously providing them with a template for verbal reasoning. Three talk strategies support the conceptual function: (a) *focusing* on the cognitive aspects of discussion; (b) *naming* ideas, strategies, or phenomena; and (c) *elaborating* on comments and questions with the intent of eliciting more complex verbal responses of reasoning. Skillfully used by the teacher, these strategies guide learners to grapple with alternative ways of thinking and may add intellectual precision to exchanges (Mercer, 1993). The sociocultural function, in contrast, negotiates social relationships in the situation, conveying information about roles, routines, and how to participate in what is going on. Communication, in short, centers on the social nature of interaction. Three strategies support this goal, providing a kind of social “oil”: (a) *overlapping* others’ comments to keep conversation flowing, (b) *directing* attention to preserve the instructional structure of the context, and (c) *discussing* in an open-ended way in order to build relationships (Fernie et al., 1993).

Second, the tool was designed for use in practical situations of professional education and daily practice. To achieve practical utility, we adapted three research-based discourse analysis schemes, yielding a hybrid scheme with an easily recognizable unit of discourse analysis and a manageable number of coding categories. We derived the unit of analysis from the standards of authentic pedagogy (Newmann et al., 1995) and described it as an interchange or an instance of verbal interaction between teacher and student that may include one or more comments. A teacher, for example, might ask a student a question but buttress the question with clarifying information, and the student might respond with multiple remarks: this would constitute one interchange. Six coding categories were selected as generic strategies indicative of conceptual and sociocultural functions in student-centered, responsive discourse. Described

above, these were induced from Schachter's (1979) elicitation/response scheme and Goldenberg's instructional conversation scheme (Goldenberg, 1992–93; Tharp & Gallimore, 1988).

Third, we attempted to invest the tool with instructive power by making its purposes clear, procedures simple, and results understandable yet precise (Suchman, 1987). A streamlined format and memorable descriptors for the six language strategies partially met this aim (see Table 1). In addition, the tool allowed multiple coding of each interchange, which drew users' attention to the complexity and nuance in instructional discourse. That is, the tool did not oversimplify talk but rather sought to challenge users to consider the communicative possibilities of interchanges from several vantage points. Finally, we outlined a four-step procedure for applying the tool: (1) number each interchange in a lesson transcript or excerpt; (2) enter the interchange number in the appropriate column; (3) put a check in the appropriate box each time a strategy was used during an interchange; and (4) compute the percentage of interchanges in the excerpt or transcript in which each strategy occurred.

Elaborated definitions of the coding

categories are provided in Table 2. Initial trials with the tool demonstrated its potential effectiveness and practicality in professional education. Some adjustments were made over the course of the study, for example, clarifying coding descriptors and details related to computation of results.

### Procedures

Orientation and data collection activities took place during the 5-week practicum period, which occurred during the summer. At the outset of the course, we provided all of the teachers enrolled with background reading materials on classroom talk and instructional conversation as an alternative to the traditional recitation approach (Almasi, 1995; Gallimore & Tharp, 1992; Goldenberg, 1992–93; Walker, 1996). Teachers studied descriptions of instructional conversation strategies as differentiated from recitation in reading instruction (see Table 3). Teachers were informed that they would be regularly guided to use these discourse strategies in their daily tutorial work. Following whole-group discussion of effective verbal interaction in the tutorial setting and key elements of instructional conversation, we asked for volunteers to participate in self-

TABLE 1. Example of Discourse Excerpt Coded with the Instructional Talk Analysis Tool

Interchange	Conceptual Function			Sociocultural Function		
	Focusing	Naming	Elaborating	Overlapping	Directing	Discussing
1						X
2						X
3						X
4				X		
5				X		X
6	X					X
7	X				X	
8				X	X	
9				X		X
10				X	X	
11			X	X		X
12			X		X	
Total	2		2	6	4	7
Percent	17		17	50	33	58

TABLE 2. Instructional Talk Coding Categories

Language Strategy	Definition	Examples
Focusing	T <i>focuses</i> the student's thinking	<ul style="list-style-type: none"> <li>Asking lesson-related questions (e.g., "What happened to the apple [in the story]?")</li> <li>Tapping background knowledge related to the lesson (e.g., "Did you notice any words in here that you know?")</li> <li>Stimulating memory (e.g., "Do you remember what the shells looked like that we had downstairs?")</li> </ul>
Naming	T <i>names</i> instruction	<ul style="list-style-type: none"> <li>Saying unknown words (e.g., "To . . ." T: "Soak.")</li> <li>Naming strategies or techniques (e.g., "Break it up. There's a word in there.")</li> <li>Naming activity (e.g., "Okay, this is a warm-up, and we're going to do a couple of poems together. And for our first poem it is going to be a poem that we learned yesterday but is still very new to us.")</li> <li>Defining a concept (e.g., when explaining the meaning of weep, "weep: if somebody would cry," or when discussing the word reluctant, "Okay, let's say that your mom tells you to clean your room and you are very reluctant to do it. You go do it, but you're very reluctant. You don't want to do it.")</li> </ul>
Elaborating	T <i>extends</i> student's thinking	<ul style="list-style-type: none"> <li>Triggering memory (e.g., "Do you remember the holiday it might be around when she got to the new school?")</li> <li>Providing hints (e.g., "When you touch, you taste, you smell . . . Those are all your . . .," or "What happens if it gets really wet? The dirt turns into . . .")</li> <li>Adding to a student's comments (e.g., S: "Because it's [the fish is] probably dead." T: "Because maybe it's all washed up on shore?" or S: "When people play in the ocean." T: "They may be splashing around.")</li> </ul>
Overlapping	T <i>maintains</i> the flow of instruction	<ul style="list-style-type: none"> <li>Restating what the student says (e.g., S: "She's not going to say a word. She left." T: "Okay, she's mad.")</li> <li>Providing feedback to the student (e.g., "You're right. She did think she was very nice to be a good friend.")</li> <li>Reinforcing what the student has said or done (e.g., "I liked how you first read that one as pyramid and then you realized a pyramid wasn't going toward a pyramid. It was a . . .")</li> <li>Praising (e.g., "Good," or a nod and smile)</li> </ul>
Directing	T <i>tells</i> information and <i>commands</i> attention	<ul style="list-style-type: none"> <li>Directing the student's attention (e.g., "We're going to put that over there," or taking paper from student's hands)</li> <li>Disciplining the student's behavior (e.g., "Okay, but it's Trevor's turn now.")</li> <li>Directing the student's attention to a task (e.g., "How about if we read it together?" or "Are you ready?")</li> </ul>
Discussing	T <i>discusses</i> information with the student	<ul style="list-style-type: none"> <li>Asking open-ended questions (e.g., "I hear the waves splashing and splooshing. What do you think about that?" or "Do you think we're going to have more describing words or action words?")</li> <li>Commenting on the student's ideas (e.g., "Maybe I can go to your [school] library and . . . check [the student-authored book.]")</li> <li>Eliciting more information (e.g., "Carlos, when did you make this book [at your school]?")</li> </ul>

assessment related to their own instructional discourse during tutoring sessions.

Volunteers attended a 2-hour orientation session that familiarized them with the self-assessment activity, which included (a) *transcribing* excerpts of videotaped instruction, (b) *analyzing* lesson excerpts using the

discourse analysis tool, and (c) *interpreting* results in written reactions. The first portion of the session focused on how to collect discourse samples and included six steps: (1) each week select one videotaped instructional session for analysis, (2) choose a 10-minute excerpt for transcription and pro-

TABLE 3. Description of Language Strategies by Type of Discourse

Language Strategy	Recitation	Instructional Conversation
Focusing	T asks questions that are text based and established before the story is read	T asks lesson-related questions using the background knowledge of the readers and what has been discussed in other settings
Naming	T introduces key concepts and vocabulary words with definitions before the story is read	T explains and names strategies students are using as they read and respond to text
Elaborating	T responds to students' statements as to the correctness of the responses and asks more direct questions	T responds to students' statements by providing hints and encouragement that will extend the students' thinking
Overlapping	T maintains the interactions by keeping students' thinking focused on a single interpretation of the text	T maintains the flow of instruction by restating what students say in a clarifying manner, asking for clarification, or through positive comments about what students say
Directing	T regulates task-oriented behaviors by redirecting any off-task behavior immediately, often interrupting the discussion	T regulates task-oriented behaviors by focusing on what is being said and carefully selecting who to redirect and when to redirect to maintain the conversational flow
Discussing	T does over half the talking and regulates who will respond, with most of the interactions cycling through the teacher. T has students read text aloud to find correct answers	T asks open-ended questions and makes comments that encourage multiple responses from students. T remains silent, letting students discuss and comment on each other's ideas. T offers ideas in the process of discussing

vide identifying information (e.g., date, participants, type of learning activity), (3) transcribe the excerpt verbatim, (4) identify and number the interchanges between you and the student(s), (5) code the interchanges using the instructional talk assessment tool, and (6) write your reactions to what you observed about your discourse. The second portion dealt with identifying language strategies teachers use to accomplish instructional interchanges, how to code them using the tool's categories, and examining the broad language functions the strategies supported, that is, conceptual and sociocultural functions of instruction. The volunteer teachers practiced coding two transcripts followed by a discussion of coding discrepancies to achieve consensus. We reviewed procedures and reminded teachers to provide sufficient identifying information related to video excerpts, assessment data, and written reactions.

Over the next 5 weeks we monitored the teachers' self-assessment activity and provided technical support as needed. We did not, however, intervene in the teachers' assessment or written reactions to their instructional discourse, because our aim was to investigate the activity as a form of self-assistance. It should be noted, however, that within the broader instructional context of the tutorials, as instructors, we continued to encourage, discuss, and highlight responsive discourse according to the constructivist goals of the practicum course. The volunteer teachers videotaped their daily instruction, selected video excerpts each week for transcription, applied the assessment tool, and reported their reactions in writing. They submitted all materials to us at the end of the practicum course; these consisted of 45 transcribed video excerpts with accompanying assessment data, and written reports. Teachers discussed their ex-

perience in the study with us at a group interview and through informal individual conferences.

Following the practicum course, one of the participants volunteered to videotape her classroom teaching during the upcoming school year and to engage in the self-assessment activity under these conditions. At three times across the school year (November, January, and March), she informally reported to one of us on the practicalities of conducting the activity in the classroom. She also described three examples of her self-assessment activity, one of which was used to trace, in a preliminary way, how the activity fared in the classroom context. Due to job changes, family issues, and professional pursuits (e.g., doctoral studies), the other eight participating teachers were unable to implement the self-assessment activity in their classrooms.

### Data Analysis

The focus of our analysis was on examining teachers' self-assessment activity as aided by the discourse analysis tool and on identifying the tool's salient features as a form of self-assistance. We carried out data analysis in three phases. To prepare for analysis, we reviewed all videotaped lesson excerpts and transcriptions for technical adequacy. We eliminated lessons with poor sound or video quality, infrequent interchanges (e.g., silent reading), or excessive disruption. Thirty-six lessons comprised the final data set, totaling 360 minutes of reading instruction. These were sorted into three time periods: nine early lessons occurring during the first week of the practicum; 18 midphase lessons taking place during weeks 2 and 4; and nine late-occurring lessons in the latter days of week 4 and in week 5. Each lesson was also labeled as to its type, either skills focused (e.g., learning how to figure out an unknown word or to spell a word,  $n = 11$  lessons) or meaning focused (e.g., retelling a story or making predictions to set a purpose for reading,  $n = 25$  lessons).

We first examined the teachers' coding decisions from the instructional talk assessment tool to learn what they were "seeing" as patterns in their discourse and to assess the precision of their observations. We used our own observations of the teachers' discourse as a standard of comparison to assess precision. As teacher educators knowledgeable about responsive discourse, we reasoned that our coding decisions would likely be more discriminating than those of our students and therefore more precise. We independently coded a sample of three lesson transcriptions and, after achieving an interrater reliability of 92%, coded the remaining lesson transcriptions. Because the tool permitted coding an interchange for more than one language strategy, we converted frequencies of language strategies to percentages and then computed the total percentage of language function in a given lesson. We analyzed the teachers' assessment of their discourse at three points in time during the study: early phase (at 8 days), midphase (at 18 days), and late-phase (at 25 days). We also compared their assessment to our own, noting the similarities and differences between us.

In our second analysis we examined through analytic induction how the teachers interpreted their observations of their teaching (via the video) and their assessment of their discourse (via the tool) as reported in their written reactions. Analytic induction involves the use of a constant comparative method to develop categories or typologies that appear to describe events, behaviors, or relationships in a setting (Goetz & LeCompte, 1984; Silverman, 1993). We organized each teacher's written reactions into meaning units, totaling 530 segments (statements and phrases). Our repeated readings indicated three types of meaning units in the teachers' written statements: action-oriented, evaluation-oriented, and practice-oriented meaning units.

For example, in describing her reactions, Kristine said, "What I really noticed was how I listened to Brittany's ideas." This

type of meaning unit was labeled action of the teacher, because she described what she did in the teaching situation. Other times teachers described specific actions of students, for example, "She read the paragraph," which was coded as action of student. Or they described actions they and their students took together, for example, "We became involved in a discussion," which was coded as joint action.

Teachers' reactions also indicated how they felt about or judged their actions, those of their students, or those performed in collaboration with their students. Commenting on an instructional episode with Brittany, Kristine judged her performance as "not teacher directed," which was marked as evaluation of teacher. She also evaluated Brittany's affective state as not feeling "anxious" or "pressured," which indicated that she was evaluating the student. Sometimes teachers evaluated their collaborative activity with students, as in Kristine's remark about "evidence of enjoyment in both Brittany and my actions," which was coded as an evaluation of self and as student action.

Third, our readings indicated evidence of pedagogic considerations on the part of the teacher. We found evidence, for example, of pedagogical intentions in relation to lesson goals (e.g., to teach summarizing or to recall main ideas) and the use of teaching techniques (e.g., to try the technique "say something" or "timed repeated readings"). Teachers also related insights about their discourse patterns (e.g., "Elaborating and discussing were higher than I expected") and broader principles of discourse practice (e.g., "I am beginning to theorize that certain questions may be better suited depending on the task at hand"). We coded such statements and phrases for gist, that is, goal, technique, discourse pattern, or discourse principle, and viewed them as indicators of teachers' theorizing and constructed knowing (Belenky, Clinchy, Goldberger, & Tarule, 1986; Kitchener & King, 1990).

Two of us coded selected reactions to establish and refine coding categories. The va-

lidity of the categories and examples was then established by asking our third colleague to code a number of transcripts according to the definitions. In addition, we asked her to examine the transcripts for meanings not included in our coding system. Following discussions and modifications, one of us coded the transcripts; then two others reviewed them to ensure consistency in coded categories. Disagreements were resolved by reviewing transcripts and through discussion. Our analysis of the written reactions then consisted of determining the percentage of meaning unit type and examining the types displayed at three points during the 5 weeks of the study.

In our third analysis we attempted to pursue, in an exploratory way, how the self-assessment activity worked in the classroom. We were interested in any evidence of effects of the self-assessment activity on classroom discourse and of the practical utility of the tool in this context. Drawing on the videotapes of our volunteer teacher's classroom teaching during the school year, we selected one 10-minute excerpt for analysis. We asked the teacher to assess her instructional talk in the excerpt, using the tool, and to reflect on her observations. Following our earlier procedure, we also coded her instructional talk. We then analyzed these results first for comparisons between us to determine precision and then across all the teacher's self-assessment samples (intra-individually) to observe trends. Finally, we examined and coded the teacher's written reflection on the excerpt, comparing it with her others and noting any mention of procedural differences. Informal discussions with the teacher about the practical utility of the tool also occurred.

## Results and Discussion

### Teachers' Analysis of Their Instructional Discourse

One of our research goals was to determine if the teachers' analyses of their instructional discourse, using the assessment tool, helped them build a representation of

their talk as instructional conversation in the clinic. As an extension of instructor assistance during regular tutorial supervision, the tool offered the teachers explicit information about the responsive features of their talk. We were interested in what the teachers observed as they used the tool, that is, their findings, as well as the precision of their observations. Observational data, we reasoned, would indicate the teachers' awareness, whereas evidence of growing precision in their observations would point to any instructive qualities of the tool as an artifact.

The bar graph in Figure 1 shows the teachers' and our own observations of their instructional talk during clinic sessions along the two broad dimensions (conceptual and social) of language function defined by the tool. Turning first to the teachers' observations, the results showed that their talk was relatively balanced, for the most part, between conceptual and social functions and that this pattern was stable over the 5-week period. Our own observations, however, suggested otherwise, indicating the teachers' preference for social over conceptual language functions in in-

struction. Their use of conceptual language strategies in fact showed a slight decrease over time. What might account for these differences between the teachers and us? For all practical purposes, one might expect such discrepancies, considering the short duration of the study, which allowed the teachers few opportunities (once each week) to observe their instructional discourse, analyze it, and make adjustments in their talk. Moreover, the discourse analysis tool itself may have been too hard to use, too inscrutable for obtaining instructive feedback, or too vague for precise decision-making. The information it supplied may have been insufficient to direct teachers' attention to the finer-grained features of their talk strategies that identified talk as conceptual or social in function. Thus, the tool may have had design flaws that limited its use.

Considering the conceptual nature of artifacts (Cole, 1996), though, the differences in our observations and the teachers' may belie the teachers' lack of discrimination and their biases. Their persistent view of equivalence between conceptual and social functions in their talk may have reflected an intuitive belief that responsive discourse

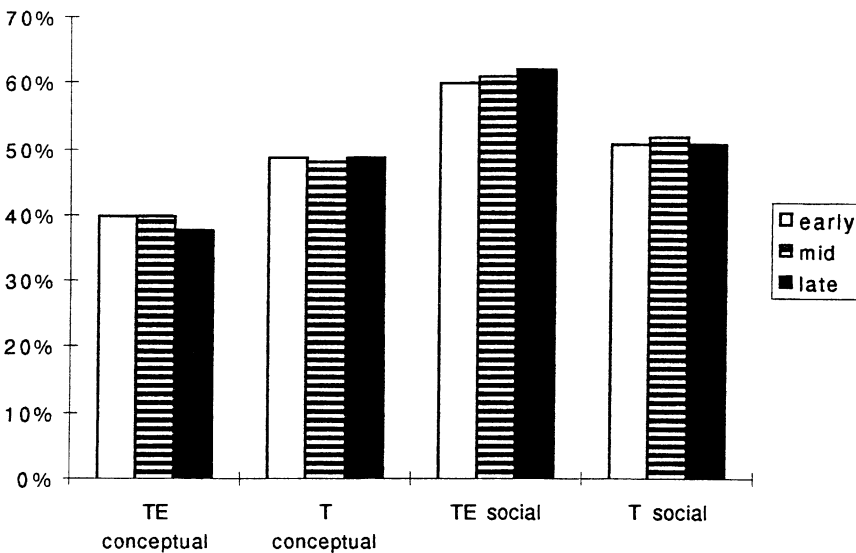


FIG. 1.—Comparison of teachers' and teacher educators' analyses of percentages of conceptual and social talk in three phases of the study.

consists of "equal amounts" of these functions. Acting on this belief, they may have seen in their performances what they wanted to see (or hear) as committed professionals—direct, concrete evidence of balance between the two language functions. The tool, in other words, may have helped to transmit the teachers' thinking, which did not appear to grow more discerning through repeated use of the tool.

Taking both of these considerations into account, it appears that the teachers' analysis of their talk, aided by the tool, may have guided them to an awareness of their instructional talk, that is, to "see" it. Their analytic work, however, did not seem to promote a deeper understanding of responsive discourse that reflected sensitivity to contextual demands on communication.

#### Teachers' Interpretations of Their Instructional Discourse

Although the teachers' analyses of their discourse, which were discrepant from ours, remained even over the 5 weeks, their *reactions* to their discourse emerged as less stable. Even as the teachers reported consistency in their talk performance, they expressed shifting and changing rationales in relation to it as they began to scrutinize their discourse through repeated self-assessment. Figure 2 summarizes these data, showing the teachers' reactions to their as-

essment data as action-oriented (describing what happened), evaluation-oriented (judging what happened), or practice-oriented (thinking critically about what happened as pedagogy) at three points during the study. Assuming a symbolic interactionist position (Blumer, 1969), the teachers' written communications about their talk portrayed their process of meaning-making about their discourse.

Our examination of Figure 2 revealed two patterns of sense-making: a subjective, person-centered pattern that characterized early encounters with the discourse data, which seemed to shift to a more objective, practice-centered pattern over the 5 weeks. Understandably, the patterns overlapped, given the time constraints of our study; however, the significant rise in practice-oriented statements (from 36% to 49% of the total meaning units) coupled with the decrease in evaluation-oriented statements (from 37% to 24% of the total) suggested the teachers' developing critical stance toward their instructional talk. Described below, the salient features of each pattern provide support for this observation.

In the early days of their self-assessment activity, the teachers tended to discuss their discourse primarily in evaluative terms, commenting on how well they thought they or their students did or by diagnosing students' behaviors. Kim's reaction to her

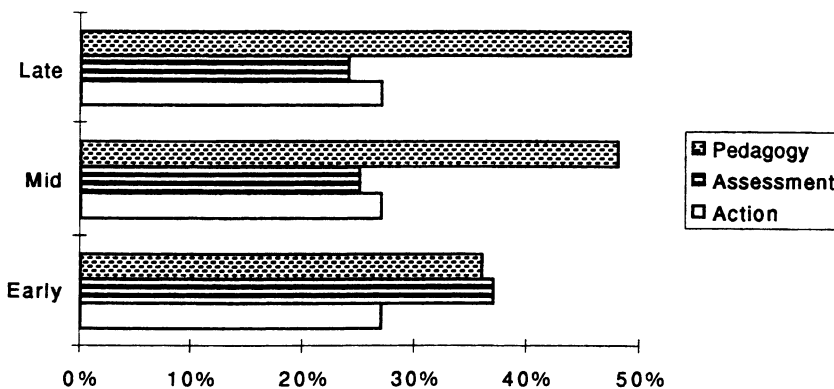


FIG. 2.—Percentage of statements teachers made in interpreting their discourse, by meaning unit type and phase of study.

work with Carlos when she introduced new text illustrated this tendency to judge teaching actions. She said "I often find myself being very structured within a lesson. I find that time is a concern to me. I seem to plan more than I actually have time to accomplish . . . [but] . . . I was pleased to see I used more overlapping-type comments." Others evaluated instructional interchanges by judging students' actions, like Colleen, who described her student Jesse as having a "very low tolerance to frustration," or by describing students' reading behaviors, as Alea who pointed out, "You can see that she [Catie] was not able to make inferences."

Early in the study, though, teachers also began to think critically about their discourse as pedagogy, that is, to focus on what to believe or to do by reasoning or reflecting from their pedagogic knowledge and experience (Ennis, 1985; Swartz & Perkins, 1990). Three tangible, albeit inferential, lines of evidence suggested this. First, the teachers highlighted teaching goals and structures as rationales for their discourse, as in Lynda's explanation that her "instructional focus was sharing ideas/and modeling summarization" [through a] "prediction technique" that provided a frame for conversation. Colleen's discussion of an interchange also showed this highlighting approach. She wrote, "We were doing the herringbone technique [because] . . . [Jeff] needs practice at orally putting it together in ordered thought units." Here she focused on a teaching structure (herringbone technique) coupled with a teaching goal (to provide practice) as ways to interpret her discourse in the situation. In other words, she drew on pedagogic evidence to reason about and reflect on her discourse observations.

Second, the teachers used the coding scheme embedded in the instructional talk assessment tool to organize their thinking and reasoning about their own talking. Colleen noticed, for example, that she used four language strategies "equally often: focusing, overlapping, discussing, and naming"

and concluded that she needed to make "a conscious effort to maintain this naming strategy because it does not come naturally . . . yet." And Shirley remarked, "Elaborating, overlapping, and discussion [strategies] were fairly representative of my perceptions about my talk." In sum, the teachers began to use the language of the tool (which supported a constructivist teaching view) to describe their experiences and to interpret their discourse.

Third, the teachers derived pedagogic principles that appeared to serve as plausible conclusions about their discourse in light of accumulating evidence. Interpreting a warm up lesson, Kristine hypothesized, for instance, that less-directive teacher talk "may lead the child to even greater conclusions and [create more] opportunity for sharing ideas." She seemed to punctuate a series of inferences she made about her discourse with an assumption that could be supported by reasoning and experience.

Overall, evidence of these cognitive strategies at work in the teachers' meaning-making suggested a generative, intellectual, and reflective stance toward their interpretation of their discourse. They strived to analyze carefully, search for valid evidence in pedagogic as well as personal experience, and reach sound conclusions that might inform decision making in relation to their instructional talk.

To a lesser extent, teachers made sense of their discourse by describing literally what happened, and, as the graphs show, their tendency to do so remained stable over the 5 weeks of the study. Accounting for their discourse in this way involved stating explicit actions, for example, "I listened" or "Jesse predicted." In some instances, it appeared that this more literal approach to interpretation served as a kind of "getting set" to think more substantively about one's observations, as in Kim's account, "I found myself asking Carlos to perform a small task . . . I asked him to put his pencil down, then I took it" which prefaced

her dismay at her considerable use of directing as a language strategy in the lesson.

Thus, the pattern emerging in the early stages of the tutorials featured explaining one's discourse by evaluating what happened or what individuals did or what students could or could not do (37% of total meaning units). Comparably, it also involved pedagogic thinking in the critical sense as reasonable, reflective thought involving pedagogical knowledge and practical experience in interpreting self-assessment data (36%). In other words, the teachers used means other than their own intuition to build and validate claims about their discourse. As well, teachers relied on the literal description of what happened for help in representing their discourse, although less frequently (27% of total meaning units). Altogether, the pattern leaned toward a subjective, person-centered interpretation of discourse data that primarily referenced personal attributes and characteristics, concrete events, and individual intuitions to account for instructional talk.

The second pattern, appearing mid-phase (weeks 2–4) in the practicum course and holding into the later period (week 5) of the teachers' self-assessment, however, demonstrated a clear shift from this more person-centered perspective. Although action-oriented interpretations remained consistent, those focused on pedagogy rose dramatically to dominate thinking, representing nearly half of all statements, and those oriented to evaluation declined sharply at first, finally settling somewhat below literal action in teachers' meaning-making efforts, to about 25% of statements.

This practice-oriented pattern suggested that the teachers may have assumed a more objective and critical stance toward their discourse data. Increasingly, they began to view their discourse as a source of knowledge about their practice, to "see" their talk apart from the immediate, personal situation in which it was embedded. The more frequent generation of pedagogic principles

was one of the strongest indicators of this possibility, growing from 36% of the meaning units in the early part (weeks 1 and 2) of the self-assessment to nearly 50% of units midway (weeks 2–4) into the self-assessment experience. Having scrutinized her use of the naming strategy in her discourse, for example, Colleen hypothesized that "when students are given names for successful strategies and shown how to use them effectively, it empowers them to take control of their own learning." Similarly, Andrew related his emerging theory that "certain questions may be better suited" to different reading tasks. And several of the teachers remarked on a potential relation between lesson goals and certain discourse strategies. Lynda said, "This [session] really shows how the task determines [the shape of] the instructional conversation." Such principles, as conceptual structures, seemed to help teachers to unify their immediate experience (their impressions) and simultaneously to single out elements for broader consideration (abstracting). What might be made of this apparent shift in the teachers' interpreting toward the closer scrutiny of pedagogy over person?

Vygotsky (1986) proposed that evidence of the use of intellectual tools, such as principle formation, may signal that a more elaborated meaning system is taking shape that eventually makes the conscious, deliberate use of concepts achievable (pp. 171–173). The teachers' growing consciousness of their own talk as responsive pedagogy provided evidence of their effort to incorporate these ideas into representations of their instructional talk. Vygotsky further argued that new concepts do not come full-blown "from outside," displacing existing ideas. Rather, they are positioned into a system of generality "from within," through a restructuring process that builds new meanings. The teachers' repeated reviews of their data so as to express their reactions in writing may have triggered this restructuring and assisted them in constructing more elaborated understandings of their

talk as responsive discourse. Because our evidence is thin, we recognize how speculative this conjecture is. Still, the trends in the results indicate an expanding awareness on the part of the teachers that, as some have claimed (e.g., Anderson, Evertson, & Brophy, 1979, p. 220; Goodwin, 1994; Schon, 1987), may prompt conceptual development and change. Following the analytic task of coding one's talk, the interpretive phase of the self-assessment activity, therefore, may have shaped the teachers' awareness around the concepts in the tool and led them to evaluate their talk in these terms. They may have become more conscious, in other words, of their own competence as instructional conversationalists.

#### Influence of Self-Assessment on Classroom Discourse: A Case Illustration

In our final analysis we searched for evidence of how the clinic-based self-assessment activity carried over into the classroom. Our intentions were exploratory: to monitor the activity as a means of self-assistance in this context and to assess its ease of use. We followed Arlea, our case study teacher, into her multiage primary classroom serving mostly special needs children. At the end of the clinic she had made the following observation about her discourse: "In this particular [tutorial] session, I used all the components (of conceptual and sociocultural functions). My percentages were fairly even (between the functions), showing that I was not overusing one component while neglecting others." Like her peers, Arlea indicated a strong belief that a quantifiable balance between language functions represented instructional conversation. She worked hard to achieve this and in the process had shifted from using predominantly focusing and directing strategies in her tutorial work to incorporating more elaborating and overlapping strategies that increased student participation. Throughout the fall, she engaged in the self-assessment activity periodically and talked with one of

the researchers regularly, describing her classroom instruction and her assessment results.

In the late spring, Arlea selected a 10-minute video excerpt of her reading instruction for analysis and reflection—a story discussion. As before, she applied the discourse analysis tool to the excerpt transcript and prepared a written reaction to her observations; one of the researchers also coded the excerpt for comparison purposes. Figure 3 shows these results, which seem promising in at least two respects.

One hopeful sign is the evidence of accuracy in Arlea's observations of her discourse as indicated in the comparison, suggesting the utility of the tool in guiding analysis of talk functions in classrooms. Her profile, which demonstrated a rather even distribution among the language strategies, indicated continuity in her effort to achieve balance in her talk. This explicit goal, even as it tended to overlook the importance of contextual variables (e.g., text difficulty), nonetheless appeared to alter Arlea's talk in ways that supported rather than controlled discussion. With this image of instructional talk in mind, she reduced her earlier reliance on focusing and directing strategies into the classroom. Nearly a year later, she commented on her results: "I noticed that I am showing even more equaliter use of the components [language functions]."

Analysis of Arlea's written reaction also indicated potential instructive influences of the self-assessment activity. Taking a critical stance, she commented that when working with a difficult story to read, she knew she probably would need to employ more focusing and elaborating strategies. She challenged her own notion of balance, stating, "There are many factors that affect the conversation, such as the difficulty of the text, students' mood, interest levels, and other outside influences, but as I consider *all* these, I see I am more successful with my students." Her words reflected a deepening understanding of her own instructional talk, showing a growing ability to flexibly

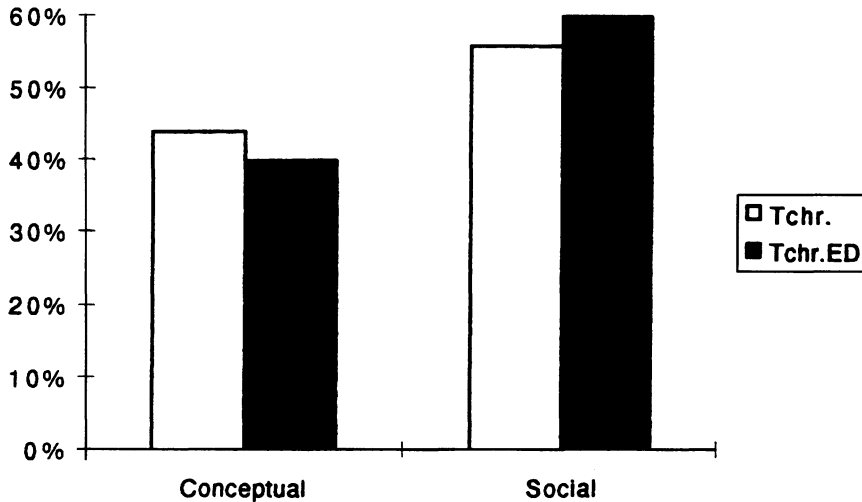


FIG. 3.—Comparison of Arlea's and the teacher educator's analyses of the percentage of conceptual and social talk in the classroom.

use her pedagogical knowledge and her intuitions to select language strategies.

Our other exploration—ease of use—provided some helpful information as well. Getting ready to do the self-assessment activity, according to Arlea, was not easy, because she had to make arrangements for video equipment; it also involved preparing the children for this experience. The “set up” took time, which is hard to find in the daily work of teaching. The actual tasks of self-assessment (transcribing, analyzing, interpreting), although time-consuming at first, got easier as familiarity with them grew and they became part of her regular routines. Arlea found that she could conduct a self-assessment about once every 2 months and found herself coordinating this activity with other assessment goals. She began, for example, to use the videotaped sessions not only to observe her instructional talk, but also to observe the children's reading performance. Over time, she remarked, these video clips were illuminating, showing subtle growth in the children's reading that she otherwise might have missed. Finally, the periodic support from the researcher was helpful, motivating her and helping her to solve any practical prob-

lems the implementation of the self-assessment activity posed.

Based on this exploratory evidence, which is admittedly limited, the self-assessment activity showed promise as a means of ongoing professional development in classrooms under certain conditions. Arlea, for example, first practiced the activity in the supportive, more protected setting of a college clinic before using it to monitor her classroom discourse. In addition, she had the advantage of frequent, informal contact with knowledgeable others (e.g., classmates and her professor) with whom she discussed key concepts of responsive discourse and examined her performance over time. Whether practicing teachers could use the tool and effectively engage in self-assessment for their own development without such social supports, however, remains to be seen.

### Summary and Conclusions

Instructional talk is an important topic of study in professional education, for its content and form shape the learning events in which students participate. How teachers talk and what they say signal students as to the learning required of them and how they

are to go about their intellectual work (Barnes, 1995). For over 2 decades sociolinguistic researchers have examined classroom talk, describing recitative and responsive discourse structures and exploring their effects on learning environments for all students (Cazden, 1986; Edwards & Mercer, 1987; Gambrell, 1996). It is clear from this body of work that the teacher plays a powerful role in creating the classroom communication. Yet it is also clear that not much is known about how to prepare teachers for this role or equip them with the necessary resources (knowledge, strategies, and tools) to implement it. Evidence as to how the professional education of teachers might develop discourse practices beyond teachers' natural tendencies remains sparse.

Our study, following on the pioneering work of others, explored self-assessment activity as a means of informing and instructing teachers about their discourse during reading instruction. In the more controlled and protected environment of the reading clinic, we focused teachers' attention on their instructional talk as an object of scrutiny. We provided a discourse assessment tool and procedures that guided their observations toward elements of responsive discourse (e.g., instructional conversation). We then studied the influences of this activity on the teachers' seeing and thinking, examining how it shaped their understanding and adaptation of their discourse in practice. Our results were enlightening.

At first glance, the self-assessment activity did not seem to move the teachers much, for their use of the discourse analysis tool showed little variation over the 5-week practicum period. They steadfastly viewed their talk as involving the equivalent use of conceptual and social functions, which we strongly suspect may be a case of "seeing what they wanted to see," because our observations did not corroborate this view. With just this evidence in hand, we might conclude that self-assessment may not adequately support professional development and learning, because the teachers' obser-

vations did not become more discriminating, nor was there evidence of mental restructuring in relation to what constituted "balanced" discourse. It was as if the teachers were mentally standing still in this regard.

Probing further, though, into the teachers' interpretations as to what they were seeing, we found evidence of active understanding: teachers constructing concepts, weighing evidence, and clarifying goals. This suggests that repeated engagement in the three phases of self-assessment may have triggered a recursive process or feedback spiral that supported learning and development (Costa & Kallick, 1995). Having to transcribe their talk and code seemed to draw the teachers' attention to the complexity of their discourse, which we argue pressed them to study it. Study prompted scrutiny through the demand for written reactions to their analyzed data, which afforded opportunities for critical reasoning, thus creating conditions for building new meanings.

The teachers' growing ability to treat their discourse as an object of knowledge provides evidence that the self-assessment activity produced such conditions. The results showed them shifting from knee-jerk reactions expressed in evaluative terms to a more critical stance marked by attention to subtleties and the development of propositions to unify new, emerging understandings. Their use of cognitive strategies, such as highlighting salient features of instruction as the basis for discourse decisions, employing the coding scheme to categorize and explain their talk, and forming principles to synthesize observations and impressions, indicates the teachers' intellectual engagement in the self-assessment activity and their active problem solving. Using these intellectual means, they appeared to be developing a broader, more richly organized conceptual network of examples and generalizations that supported the flexible and appropriate expression of responsive discourse features in teaching perfor-

mance. The case illustration suggests that, even a year later in the classroom, newer understandings of instructional conversation remained active and may have influenced practice. The self-assessment activity in its entirety, therefore, may have "coached" the teachers toward a *conceptual* understanding of their discourse, which allowed them to "see" and adapt their own talk toward responsive discourse forms. The activity, in sum, may have been self-instructive as well as self-informative, leading the teachers' development toward understanding that transcended intuition and the immediacy of experience (Vygotsky, 1986, p. 185).

The insights we gleaned from introducing the self-assessment activity into the teachers' reading practicum contribute to our larger goal of understanding and designing effective contexts for teacher learning. The structure of the self-assessment activity, for example, underscores the importance of several design features apparently critical in the teaching of teachers for understanding and higher levels of performance. The self-assessment activity was *situated in the real work of teaching*, specifically, tutoring a struggling reader. It emphasized *learning by and from* doing through ongoing, critical examination of authentic teaching actions. And it provided *a practical tool*, an artifact, that assisted the hard, intellectual work of observing, analyzing, critiquing, and interpreting the complexities of instructional talk functions in teaching episodes.

Additionally, the activity itself did not seem overly demanding in terms of human resources, time, or special arrangements in the reading clinic. As reading educators, we were able to use it in our practicum course, which already included videotaping of instruction and an emphasis on responsive discourse, and teachers needed only a minimum of training in order to participate. Although teachers in the practicum required some initial practice in transcribing and coding video excerpts, the activity could be

accommodated with daily planning. In the elementary classroom, however, the procedure may be less user-friendly at the outset, because access to video equipment as well as the logistics of in-classroom videotaping could pose problems. Audiotaping may offer an easier alternative for gathering data. Once resolved, though, the self-assessment activity may be manageable for the teacher in the classroom, especially if it is integrated with other assessment goals (e.g., students' reading performance). The activity, in short, seems "do-able" without major alterations in teacher education programs or too much intrusion into daily classroom practice. Finding and taking the time to engage in self-assessment, however, will likely remain a barrier without strong individual motivation for continuous improvement buttressed by social support.

Finally, our work with the self-assessment activity alerted us to its potential *and* its risks as a means of professional learning. Certainly the teachers in our study gained self-knowledge through their participation in the activity; they began to realize that the language strategies they used influenced the frequency and quality of conversations in the instructional setting. The theoretical orientation of the activity, deliberately embedded in the discourse analysis tool, also helped them see their talk from a constructivist perspective. However, the activity as it was structured held few safeguards against the formation of faulty, stubborn misconceptions that might impede understanding. The teachers' view of balanced instructional talk as "equal amounts" of conceptual and sociocultural functions provides such an example. Over the 5 weeks, they generally failed to see balance in any other way, for example, as the orchestration of contextual variables (e.g., text difficulty or student motivation) with learning goals. Put another way, their analytic observations did not reflect any developing strategic knowledge about their discourse, that is, the coordination of different kinds of knowledge about text, about students,

about the curriculum in response to shifting social dynamics in the tutorial setting (Heaton & Lampert, 1993), although their interpretations gave hints of these considerations. Thus, although the self-assessment activity did encourage teachers to study, scrutinize, and perhaps even adapt their discourse, it may not have afforded sufficient guidance and support to assure *learning* the art of instructional conversation beyond a ritualistic, mechanical understanding. The many-layered implications of this possibility spur us to continue our study of self-assessment as a professional development opportunity and also remind us that there is much to be learned about the design and delivery of effective professional education for practicing teachers.

## Note

We wish to acknowledge the nine teachers who participated in the study for their intellectual curiosity and generous spirit in sharing their teaching work with us.

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