Claude Goldenberg

Instructional conversations: Promoting comprehension through discussion

Goldenberg is Assistant Research Psychologist at the University of California, Los Angeles. A former junior high school and first-grade teacher, he currently works with classroom teachers to help improve the academic achievement and literacy development of Hispanic students.

Since fifth-century Greece, educators and philosophers have argued for a kind of teaching that does more than impart knowledge and teach skills. Knowledge and skills are undoubtedly important. But true education—real teaching—involves helping students think, reason, comprehend, and understand important ideas.

Yet teaching aimed at these important goals is presently most notable for its absence from U.S. classrooms. Goodlad (1984), for example, reports that:

> A great deal of what goes on in the classroom is like painting-by-numbers—filling in the colors called for by numbers on the page....[teachers] ask specific questions calling essentially for students to fill in the blanks: "What is the capital city of Canada?" "What are the principal exports of Japan?" Students rarely turn things around by asking the questions. Nor do teachers often give students a chance to romp with an open-ended question such as "What are your views on the quality of television?"...(p. 108).

If this portrait is true in mainstream American classrooms, it is even truer in classrooms with low-income, minority children. Because of the perception that these students fundamentally require drill, review, and re-
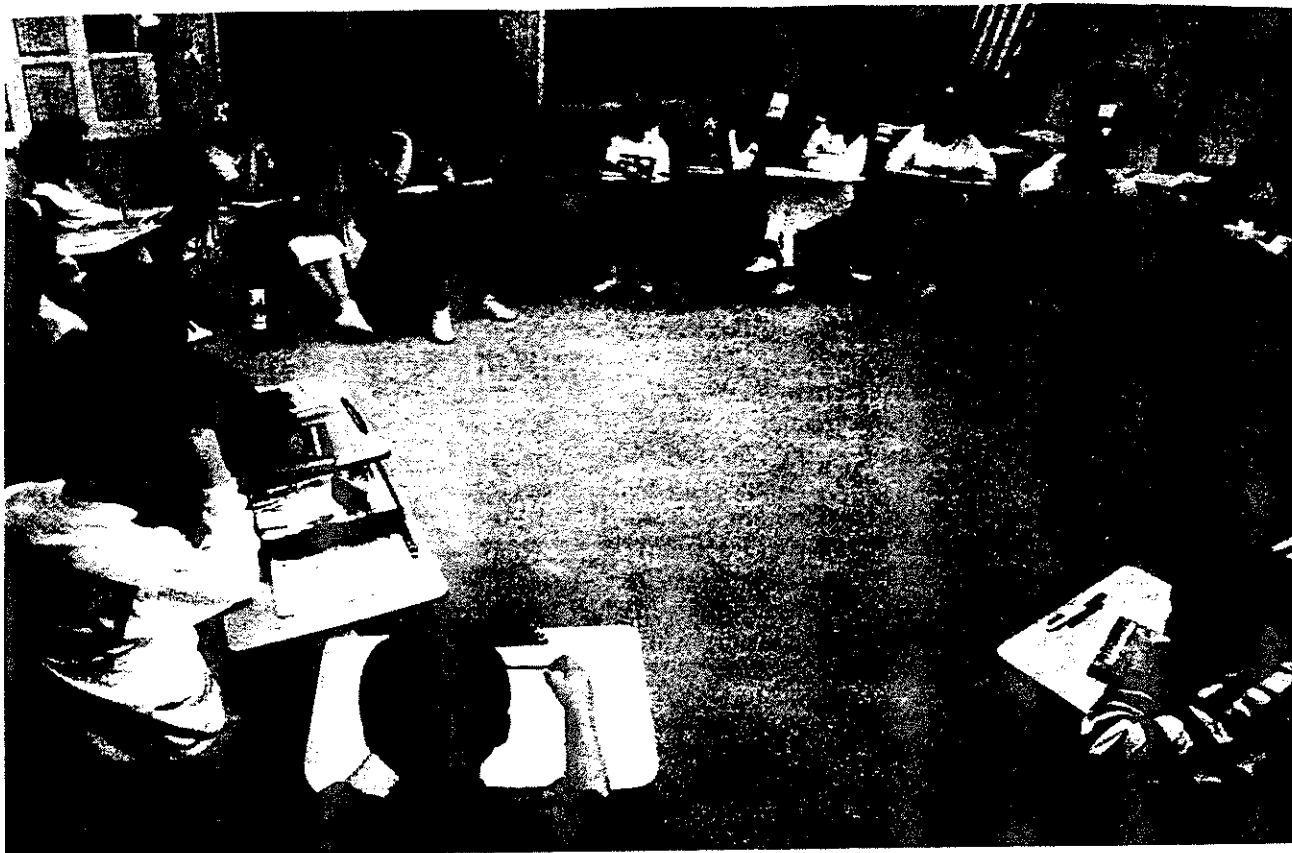
Teachers lead students in discussing complex and different views of a concept. Photo by Robert Finken

dundancy in order to progress academically (Brophy & Good, 1986), their learning opportunities are likely to be excessively weighted toward low-level skills and factually oriented instruction (see e.g., Barrera, 1983; Hiebert, 1983; Knapp & Shields, 1990). As important as skills and knowledge are, no less important are more intellectually demanding learning opportunities that promote, as philosopher Mortimer Adler (1982) has written, the "enlarged understanding of ideas and values" (p. 23).

A particular kind of lesson, which we call "instructional conversation" (Tharp & Gallimore, 1988, 1989), might help us redress the imbalance Goodlad and others have noted. Instructional conversations, or ICs, are discussion-based lessons geared toward creating richly textured opportunities for students' conceptual and linguistic development. They suggest a way for educators to reach for the ambitious goals held by thoughtful teachers since the time of Socrates — "to bring [students'] thoughts to birth, to stimulate them to think and to criticise themselves, not [simply] to instruct them" (Rouse, 1956, p. ix).

This article describes and illustrates an instructional conversation model that has been developed in collaboration with elementary-grade teachers interested in finding ways to promote these kinds of learning opportunities for their students.

What is an instructional conversation?

In one sense, the idea of instructional conversations is not new. Generations of educators have talked about and encouraged teachers to engage students in interactions to promote analysis, reflection, and critical thinking. The great tutors of classical Greece, of whom Socrates remains the paramount example, employed what Gordon (1990) calls a "conversational form of tutoring...[that] stimulated thinking and sharpened reason in ...search of ideal truth" (p. 15).

In this century, although the idea of "ideal truth" has lost currency and the common

school has replaced Plato's Academy, educators still put forth conversation—or in larger groups, discussion—as an important educational strategy. In the 1920s, Progressive educator Vivian Thayer wrote, "The give and take of class discussion helps...test conclusions...and generates ideas that would otherwise remain unborn." Class discussions, Thayer wrote, are invaluable for "opening up new territories for exploration [and] revealing the need of more intensive cultivation of ground already broken" (1928, p. 320).

Contemporary researchers and scholars have also advocated more frequent use of discussion or conversation in the classroom—e.g., Au and Scheu (1989), Bridges (1979), Cazden (1988), Center for the Study of Reading (n.d.), Eeds and Peterson (1991), Perez and Strickland (1987), and Wilen (1990). Thus, the kinds of classroom interactions ICs promote have a long and active history within educational thought and practice.

Perhaps most important [in a discussion], he or she [the teacher] manages to keep everyone engaged in a substantive and extended conversation, weaving individual participants' comments into a larger tapestry of meaning.

Although educators have been talking about this type of teaching for millennia, it seems to be talked about more than done. Unfortunately, instructional conversations—or good classroom discussions—are notable not only for their desirable attributes, but also for their rarity. One of the assumptions underlying the work reported here is that the development of an explicit instructional conversation model will help guide teachers in implementing this type of instruction, thereby increasing the likelihood that students will experience these sorts of learning opportunities.

An instructional conversation appears deceptively simple. On the surface, it is simply an excellent discussion by a teacher and a group of students. Most people have a reason-ably intuitive sense of what this might be like: It is, first, interesting and engaging. It is about an idea or a concept that has meaning and relevance for students. It has a focus that, while it might shift as the discussion evolves, remains discernible throughout. There is a high level of participation, without undue domination by any one individual, particularly the teacher. Students engage in extended discussions—conversations—with the teacher and among themselves.

Teachers and students are responsive to what others say, so that each statement or contribution builds upon, challenges, or extends a previous one. Topics are picked up, developed, elaborated. Both teacher and students present provocative ideas or experiences, to which others respond. Strategically, the teacher (or discussion leader) questions, prods, challenges, coaxes—or keeps quiet. He or she clarifies and instructs when necessary, but does so efficiently, without wasting time or words. The teacher assures that the discussion proceeds at an appropriate pace—neither too fast to prohibit the development of ideas, nor too slowly to maintain interest and momentum. The teacher knows when to bear down to draw out a student's idea and when to ease up, allowing thought and reflection to take over. Perhaps most important, he or she manages to keep everyone engaged in a substantive and extended conversation, weaving individual participants' comments into a larger tapestry of meaning.

But moving beyond such general descriptions, what characterizes good classroom instructional conversations? What are their constituent elements? What must teachers know and do in order to implement, successfully and reliably, these types of learning interactions with their students? Working in a low-income, language-minority school district in Southern California, a collaborative team composed of teachers and researchers has attempted to address these questions over the past three years. What has gradually emerged is a more precise model, or description, of instructional conversations.

The instructional conversation model

The Table shows the list of IC elements along with brief descriptions we identified during the course of our work.

Elements of the instructional conversation

Instructional elements

1. *Thematic focus.* The teacher selects a theme or idea to serve as a starting point for focusing the discussion and has a general plan for how the theme will unfold, including how to "chunk" the text to permit optimal exploration of the theme.

2. *Activation and use of background and relevant schemata.* The teacher either "hooks into" or provides students with pertinent background knowledge and relevant schemata necessary for understanding a text. Background knowledge and schemata are then woven into the discussion that follows.

3. *Direct teaching.* When necessary, the teacher provides direct teaching of a skill or concept.

4. *Promotion of more complex language and expression.* The teacher elicits more extended student contributions by using a variety of elicitation techniques—invitations to expand (e.g., "tell me more about that"), questions (e.g., "What do you mean?"), restatements (e.g., "in other words,—"), and pauses.

5. *Elicitation of bases for statements or positions.* The teacher promotes students' use of text, pictures, and reasoning to support an argument or position. Without overwhelming students, the teacher probes for the bases of students' statements—e.g., "How do you know?" "What makes you think that?" "Show us where it says _____."

Conversational elements

6. *Fewer "known-answer" questions.* Much of the discussion centers on questions and answers for which there might be more than one correct answer.

7. *Responsivity to student contributions.* While having an initial plan and maintaining the focus and coherence of the discussion, the teacher is also responsive to students' statements and the opportunities they provide.

8. *Connected discourse.* The discussion is characterized by multiple, interactive, connected turns; succeeding utterances build upon and extend previous ones.

9. *A challenging, but nonthreatening, atmosphere.* The teacher creates a "zone of proximal development," where a challenging atmosphere is balanced by a positive affective climate. The teacher is more collaborator than evaluator and creates an atmosphere that challenges students and allows them to negotiate and construct the meaning of the text.

10. *General participation, including self-selected turns.* The teacher encourages general participation among students. The teacher does not hold exclusive right to determine who talks, and students are encouraged to volunteer or otherwise influence the selection of speaking turns.

The elements are divided into two groups—instructional (#1-5) and conversational (#6-10)—reflecting the two major dimensions of the IC. As Tharp and Gallimore (1988, 1989) have noted, ICs involve something of a paradox. On the one hand, they are **instructional** in intent, that is, they are designed to promote learning. Teaching through conversation requires a deliberate and self-controlled agenda in the mind of the teacher, which the first five elements reflect. On the other hand, ICs are **conversational** in quality—they appear to be natural and spontaneous interactions, free from the didactic characteristics normally associated with formal teaching. While having specific curricular, cognitive, and conceptual goals, the teacher tries to maintain a high degree of responsiveness and dynamic interaction with students, as the second group of elements suggests.

The metaphor of "weaving" perhaps best captures the spirit of instructional conversations (cf. Tharp & Gallimore, 1988, 1989).

The weaving takes place on many levels. First, a skilled teacher weaves together the comments and contributions made by different students with the ideas and concepts she or he wishes to explore with them. Second, a teacher weaves students' prior knowledge and experiences with new knowledge and experiences, thereby broadening the scope of their understanding while building upon understandings they already possess. Finally, during the course of conversation, a skilled teacher weaves together, in appropriate proportions and shadings, the 10 IC elements. While particular elements can be picked out and identified—just as threads of different color can be picked out and identified on a cloth—instruction and conversation are woven into a seamless whole: The conversation is instructional, and the instruction is conversational.

In developing the IC model shown in the Table, we have drawn upon the classroom experiences of practicing teachers. The model evolved as teachers attempted to implement

ICs in their classroom, then reviewed and analyzed videotapes of the lessons. We have also drawn upon several currents in educational theory and research – for example, promoting reading comprehension among at-risk minority students (Au, 1979; Tharp & Gallimore, 1988), schema theory (Glaser, 1984; Hacker, 1980), and research on reading comprehension instruction (Dole, Duffy, Roehler, & Pearson, 1991).

Instructional conversation: An illustration

To illustrate an instructional conversation, we have chosen an excerpt from a lesson conducted by a fourth-grade teacher, most of whose students were making the transition from Spanish to English reading. (See Author Notes.) These students were in a bilingual education program, but since they were in transition from Spanish to English instruction, all academic work was conducted in English.

The class had just read a story in an English basal reader about two friends, one of whom deviously convinces the other to buy bubble gum with the money his mother had given him for a haircut. The teacher uses the story as an opportunity to engage the children in a discussion about the various facets of friendship – that friends are not always perfect, that they can have problems and get mad at each other, and that sometimes they can resolve their difficulties through talking.

In previous discussions with the class, the teacher realized that students had fairly simplistic and exclusively positive constructions of "friends" and "friendship" – for example, friends always get along, they never fight, and they do thing together. Her theme for this lesson, therefore, was the more problematic aspects of friendship – friendship does not always constitute a perfect or idealized relationship between two people. Although she was not trying to impart a particular lesson or moral, the teacher wanted to encourage her students to consider and weigh various facets of friendship. Her goal was to help students see friendship in a more complex and differentiated light.

In the early part of the discussion, the teacher writes on a chart students' comments and contributions about the characteristics of friends. At one point, a student (Ca) says that friends must demonstrate patience:

Ca:	yep, patience because, he didn't get mad when they cut the hair...
Teacher:	Who didn't get mad when they cut the hair?
Ca:	Rob
S:	Robert.
Teacher:	Rob didn't get mad so you think he fits in here? (points to friendship chart)

This exchange provided the teacher with the opportunity to pursue the theme she wanted to explore with her students – the more problematic aspects of friends and friendship.

The ensuing discussion (illustrated in the following segment) demonstrates various IC features. There is a clear thematic focus (element #1, Table), that of friendship, more specifically, some problematic aspects of friendship. Phrases in **bold** show the theme of the discussion threading its way through the segment.

The teacher clearly uses student background knowledge as she asks students to draw upon their knowledge and experiences about friendship (element #2). She also elicits more speaking, for example, in turns 11 and 36, when she asks students to elaborate ("tell me more") on comments they have made (element #4). The teacher also asks questions for which different answers are acceptable (element #6), for example, if friends don't share "does that keep you from being friends?" (turn 15).

Teacher and students are responsive to what others say (element #7); in fact, the entire segment was in response to Ca's observation that friends must be patient. There are multiple and connected student turns (element #8), all of which are related to the topic at hand. Overall, the tone of the lesson is positive, yet challenging (element #9), as the teacher identifies points of disagreement among the group and challenges students to justify their statements (element #5; e.g., turns 18, 29).

Note: In the following segment, these transcribing conventions are used: Single parentheses denote words are unclear, and transcriber has written best guess. Double parentheses denote actions by participants. Pairs of brackets stacked vertically denote speakers speaking simultaneously.

Turn	Speaker	
	Teacher:	why should Rob get **mad**,
00	Ca:	because, because **he cut his hair wrong**. awful, [crooked, and
01	Teacher:	[oh. well, do we sometimes, [get **mad** at our friends?
02	Ca:	[you have to **forgive them**, too, but.
03	Teacher:	do we sometimes get **mad** at our friends?
04	Ss:	yes
05	Ca:	yes, **course**.
06	Teacher:	when do we **get mad** at our friends. (why d'you) say **"course"** (like) of course, what happens when you get **mad** at your friends.
07	Ca:	they get **mad** at you,
08	Teacher:	oh, you **get mad** back at each other, ((laughter))
09	Ml:	they do **something** [that you don't like or.
10	Ca:	[((they bounce the ball around)
11	Teacher:	okay. tell me a little bit more about that.
12	Ml:	they do **something that you don't like** or. they'll. not **talk to you** or. not, **share** or. not, **be a good friend.**
13	Teacher:	okay, so, friendship, I'm gonna add, this time I'm gonna put it in capital letters the new ideas we got. ((writes on chart)) friendship, friends CAN get mad at each other. right? what else did you say, they,
14	Ml:	they, they **can not talk to you** or **don't share with you** or nothing,
15	Teacher:	okay. so sometimes they, **DON'T share with you**. does that **keep you from being friends?**
16	S:	[yes
17	S:	[no
18	Teacher:	okay, I heard different answers. who said "yes" it keeps, if they don't share it **keeps you from being friends.**
19	Ja:	because if you talk to them.
20	Ml:	**you have problems,**
21	Ce:	**you have problems** with them and,
22	Teacher:	okay, **friends have problems?**
23	S:	((immediately)) oh yes.
24	Teacher:	and I even heard (a word bigger than) problems, **fighting, can friends fight?**
25	Ss:	yes.
26	S:	no
27	Ss:	YES!
28	S:	yes. so.
29	Teacher:	[okay someone that said yes, tell me (how **friends can fight**)
30	Ca:	[my friend my friend one day, we were out of order and uh.
31	V:	like, umm, yesterday, I was playing with my sister, and I told her, let me see that for a second and she said "no you always get it," and we **started**
32	Teacher:	fighting, and then we went with my mom and then, we said she doesn't wanna give me that, she doesn't wanna give me this, and I started crying, and um, we got in problems because my mom spanked us. okay but if that hadn't been your sister, would you **still have been a friend?**
33	V:	nope. ((laughter))
34	Teacher:	(inaudible) do you agree with Melissa?
35	S:	yes
36	Teacher:	okay Melissa, you got someone who agrees with you. So (inaudible) tell the rest of they all said, that **true friends (can) fight** you say no. tell me more about it.
37	Ml:	**if, true friends fight then, that's not true friends.** it just, it just doesn't work out, it's not true friends.
38	Teacher:	so, **if you are a true friends you would never fight.** but how **would true friends** solve problems?
39	S:	[talking.
40	Ml:	[by **talking, not fighting.**
41	Teacher:	**by talking not fighting.**
42	Ce:	[aha, Ms. Fuller, so many times, like friends when, when they want to **talk to you**, they **make friends again**, unless they **fight.**
43	Teacher:	okay so you're telling me that you can have a FRIEND, that can (keep it COOL) because of the **problem**, maybe even **fight** each other, real **fighting up there**, Melissa said no. you,
44	Co:	I said yes,
45	T:	changed your mind,
45	Co:	I say yes, because, my friend, she always plays with us and. we were playing and. **she gets mad** because she wants to be this or she wants to be that and they don't let her. so **then I told her,** umm, you don't if you don't want to be that you don't have to. And she screamed and then said yes! I wanna be that, but you can change. if you WANT to she said, I can change if I want to and you be something you are gonna have to um. do that! then okay, cause we were both doing the same thing and then, she, she started, winning the others my friends (and I) **fighting with** and, she said that she **wasn't gonna be her friend again** and then she was her **friend again! was talking** to her later,
46	T:	okay so, **shall I put fighting up here?** ((points to board))
47	S:	yeah
48	Ss:	yeah

In this segment, beginning with the teacher's follow-up question ("Do we sometimes get mad at our friends?") to Ca's comment that Rob did not get mad, the teacher has prompted her students to consider aspects of friendship that previously had not formed a part of their discussions. The teacher led the students in discussing a more complex and differentiated view of the concept, while framing an important context for the story they have read and will discuss. Notice the progression of ideas in this segment — from the suggestion that friends need to be patient, to the idea that sometimes friends get mad at each other because they do things the other does not like (turn #12 and following), to the idea that friends sometimes have problems or can even fight with each other (turns #22-23 and following). On this last point there was some disagreement, as one of the students (MI) insisted that if friends fight, they are no longer friends (e.g., turns #36, 37, and 43). The rest of the students, however, argued that friends can fight, then talk over or otherwise resolve their difficulties.

Perhaps because they require balancing or juggling a number of potentially conflicting elements...successful ICS seem to require considerable time and effort from teachers.

We have found that when students participate in discussions such as this, their writing about a complex concept such as friendship demonstrates greater sophistication and depth of understanding without sacrificing literal comprehension of the story they have read (Saunders & Goldenberg, 1992).

Planning and implementing instructional conversations

Conducting ICs is more challenging than at first appears. Many teachers seem to assume that they do ICs naturally, as a matter of course, in their classrooms. Our experience in southern California (Goldenberg & Gallimore, 1991), in addition to earlier experiences in Hawaii (Tharp & Gallimore, 1988, 1989), suggests otherwise — that instructional conversations are professionally and intellectually demanding teaching/learning events that come neither easily nor naturally.

Perhaps because they require balancing or juggling a number of potentially conflicting elements — e.g., maintaining a clear thematic focus while being responsive to unanticipated opportunities offered by students — successful ICs seem to require considerable time and effort from teachers. Learning to manage such inherent tensions requires repeated attempts to implement ICs, coupled with videotapings, discussion, and analysis of lessons.

In our ongoing work in Los Angeles, we have found it productive to have teachers meet weekly in a small group to discuss, plan, and evaluate IC lessons. At the beginning of the year, teachers read and discuss relevant papers and articles. They also identify aspects of their classroom programs that they feel could benefit from the use of instructional conversations. Teachers see videotaped examples of ICs and are encouraged to try them out on their own. Teachers are also encouraged to focus on no more than one or two IC elements at first before attempting to incorporate all 10 into any one lesson. As teachers become more comfortable, they volunteer to bring in stories or books they plan to use when teaching an IC lesson. The entire group then discusses possible approaches that can be taken. Teachers are videotaped conducting the lessons in their classrooms, and the tapes are viewed and analyzed at the next meeting.

In planning for an instructional conversation around a story or a book, the following steps seem helpful:

1. *Select a story or book that is appropriate for your students.* We have found that suitable texts can be found in many places — anthologies, basal readers, and trade or literature books.

2. *Read the story (or book) several times until you feel you understand it thoroughly.* It is also helpful to have colleagues, friends, or family members read the story and discuss it with you, since there are often dimensions of meaning not immediately apparent to a single reader. Although this can be time consuming, we have found this sort of teacher scholarship

to be indispensable; it provides the intellectual foundation for discussing a text with students and for being prepared to respond to their contributions (Fuller & Gallimore, 1992).

3. *Select a theme to focus the discussion, at least initially.* Any good story will have a number of possible themes; choose one that is meaningful and interesting to you. But also consider what will be meaningful and interesting to students. Remember that the theme you select will be a starting point. During the course of the discussion, a better or more compelling theme might emerge.

4. *Identify and provide, as needed, background knowledge students must have in order to make sense of what they will be reading.* Students sometimes need factual information, for example, if they are reading a story that requires an understanding of native peoples' cosmology and religious beliefs. Sometimes students do not need factual information as much as they need an opportunity to bring into conscious awareness things they might already know but have not consciously considered, such as the attributes of friendship. In either case, teachers need to be sure that relevant background knowledge and schemata are activated and accessible. This can often be accomplished in lessons or activities (e.g., a writing or research assignment) that precede the actual IC.

5. *Decide on a starting point for the discussion to provide an initial focus.* This might be a key word (e.g., "friendship") or a key question, either of which can be written on the board or a chart to help focus students' and the teacher's attention. It is often very effective then to write student contributions on the board or chart as the discussion proceeds. This can be done as a simple list or organized semantically, using one of many semantic mapping techniques (e.g., Alvermann, 1991; Pehrsson, 1985).

6. *Plan and think through the lesson mentally.* Think about possible ways the discussion might proceed, how the initial focus might eventually lead to an exploration of the theme and, ultimately, how the theme will tie into the story students are reading. Consider, for example: How might students respond to the initial focal point you have chosen? What will you do if they do not respond? Do you have a story, illustration, or anecdote you can share that will help the discussion begin? How

will you "chunk" the text, that is, what portions will you read, before stopping for discussion? What meanings and interpretations might students bring to this theme or text?

7. *Finally, consider some suitable follow-up activities, particularly ones that will help you gauge what students have learned from the IC.* We have used writing as one way to determine whether students have actually learned something from the discussion. Depending upon the age and abilities of students, we would expect that student writing will reflect a more sophisticated understanding of the topics discussed (Saunders & Goldenberg, 1992). Other follow-up activities might include projects or reports or simply answering questions designed to probe student comprehension.

Clearly, all of the above is time- and labor-intensive; indeed we have found that time is an absolute requirement, particularly to allow for adequate planning. Teachers have found they cannot conduct satisfactory ICs if they attempt to glance at a story hurriedly and attempt to teach it "cold." One of the major lessons of our first year's work was precisely this—teachers had to prepare themselves intellectually by reading the story several times, analyzing it, and thinking about possible ways to approach it with a group of students. The intellectual, as opposed to procedural, side of lesson planning is rarely mentioned, yet we found it to be critical. One teacher, for example, commented at year's end,

> ...if you read it [the story], and if you think about it, and you think about the kind of ways that you can present it and what you're gonna do with it, it makes all the difference in the world.

This sort of analysis is so important that we have made it a regular feature of our weekly meetings; the entire group discusses possible themes, meanings, and approaches to stories. Invariably, teachers comment that as a result of these discussions (which themselves resemble ICs, see Saunders, Goldenberg, & Hamann, 1992), they make new discoveries about the texts they have brought in.

Selecting an appropriate theme is especially important, since the theme becomes the focal point of successful ICs. In the words of one teacher, a good theme provides the glue that gives an instructional conversation coherence. Selection of a good theme and its successful elaboration in the lesson requires

planning and preparation in order to search out important ideas that might be brought to bear in discussing texts with students. Planning carefully and selecting a good theme also make it more likely that the teacher will take advantage of unanticipated opportunities students provide for extending the discussion. For example, when Ca observed in the earlier example that friends often need patience, the teacher was able to use her comment as the entry-point for a discussion on problematic aspects of friendship.

The place of instructional conversations in the school curriculum

Instructional conversations stand in contrast to many relatively "traditional" forms of teaching (e.g., lectures, recitation, direct instruction), which are based upon the assumption that the teacher's role is to help students learn what the teacher already knows and can do. ICs represent an approach to teaching that is more in keeping with the contemporary shift toward a "constructivist" curriculum. According to constructivist views, students are expected actively to *construct* their own knowledge and understanding—e.g., making connections, building mental schemata, and developing new concepts from previous understandings—rather than to *receive* knowledge transmitted by their teachers (see, e.g., California State Department of Education, 1987; Resnick, 1987; Resnick & Klopfer, 1989; Shuell, 1986). In this sense, ICs can be seen as consistent with perhaps this most important shift in mainstream educational thinking since the "back to basics" movement of the 1970s.

Nevertheless, even when expertly done, instructional conversations do not constitute an all-encompassing instructional method; nor, much less, do they offer educational panaceas. Rather, we suspect that ICs might be particularly suited to certain educational goals, such as helping students comprehend texts, learn complex concepts, and consider various perspectives on issues. Other forms of teaching, such as direct or explicit instruction, are probably more suited to different, but no less important, purposes.

Rosenshine (Rosenshine, 1986; Rosenshine & Stevens, 1986), for example, has argued that explicit teaching is highly effective for "well-structured" skill and knowledge domains. Well-structured domains, as the name suggests, are well-defined knowledge or skill areas—e.g., mathematical computations, explicit reading comprehension strategies, map reading, reading decoding, and conventions of punctuation and grammar. In these areas, the procedures and criteria for successful performance can be made explicit. Explicit, or direct, teaching—which comprises teacher functions such as stating an objective, providing step-by-step instruction, modeling, guiding practice, and giving feedback—has been shown to be highly effective for these goals and objectives (e.g., Gage, 1978; Rosenshine & Stevens, 1986; Walberg, 1990).

Instructional conversations, in contrast, will be more suitable for domains of learning that are relatively less clearly or hierarchically organized. In these so-called "ill-structured" domains, concepts are fuzzier and, therefore, explicit steps toward successful performance cannot be followed. Examples of such areas of learning include analysis of literary or historical themes, learning and understanding complex concepts, mathematical reasoning, applying quantitative understandings, and oral or written composition (Rosenshine, 1986; Simon, 1973; Spiro & Myers, 1984). It is in these domains that we expect instructional conversations to be powerful instructional tools.

In the work described here, ICs have been used primarily to guide reading comprehension lessons and activities with small groups of elementary-age students. However, the general model is probably applicable for promoting comprehension of ideas and concepts in a wide range of situations. Schneider, Hyland, and Gallimore (1985) provide examples of a similar approach in junior high social studies classes. Other educators have explored the utility of discussions for high school social studies and English (Wilen, 1990), and for learning science vocabulary (Stahl & Clark, 1987) and mathematical reasoning (Lampert, 1991, April). In our own work, we are also investigating the use of ICs to guide teacher-student interactions that contribute to children's development as writers.

As educators, we are responsible for student growth and learning in many areas, and it seems unlikely that any one approach or strategy will be sufficient. We would therefore ex-

pect professional teachers to have at their disposal a wide range of skills and knowledge suited to particular goals they have for students' learning. Improving our educational system—and more specifically, improving teaching itself—depends upon achieving a successful synthesis of instructional strategies that will enable educators to accomplish important educational goals. To this extent, instructional conversations suggest a way to expand teachers' instructional repertoires while fulfilling the visions of generations of educators.

Author Notes

References

Adler, M. (1982). *The Paideia proposal: An educational manifesto.* New York: Macmillan.

Alvermann, D. (1991). The Discussion Web: A graphic aid for learning across the curriculum. *The Reading Teacher, 45,* 92-98.

Au, K. (1979). Using the experience-text-relationship method with minority children. *The Reading Teacher, 32,* 677-679.

Au, K., & Scheu, J. (1989). Guiding students to interpret a novel. *The Reading Teacher, 43,* 104-110.

Barrera, R.B. (1983). Bilingual reading in the primary grades: Some questions about questionable views and practices. In T.A. Escobedo (Ed.), *Early childhood bilingual education: A Hispanic perspective* (pp. 164-184). New York: Teachers College Press.

Bridges, D. (1979). *Education, democracy & discussion.* Windsor, England: NFER Publishing.

Brophy, J., & Good, T. (1986). Teacher behavior and student achievement. In M. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed.) (pp. 328-375). New York: Macmillan.

California State Department of Education. (1987). *English-language arts model curriculum guide, kindergarten through grade eight.* Sacramento, CA: California State Department of Education.

Cazden, C. (1988). *Classroom discourse: The language of teaching and learning.* Portsmouth, NH: Heinemann.

Center for the Study of Reading (n.d.). *Teaching reading comprehension: Experience and text* (videotape). Champaign, IL: The University of Illinois.

Dole, J., Duffy, G., Roehler, L., & Pearson, P. (1991). Moving from the old to the new: Research on reading comprehension instruction. *Review of Educational Research, 61,* 239-264.

Eeds, M., & Peterson, R. (1991). Teacher as curator: Learning to talk about literature. *The Reading Teacher, 45,* 118-126.

Fuller, W., & Gallimore, R. (1992, April). *Let's talk: Conversation, instruction, and the teaching of reading comprehension.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Gage, N.L. (1978). *The scientific basis of the art of teaching.* New York: Teachers College Press, Columbia University.

Glaser, R. (1984). Education and thinking: The role of knowledge. *American Psychologist, 39,* 93-104.

Goldenberg, C., & Gallimore, R. (1991). Changing teaching takes more than a one-shot workshop. *Educational Leadership, 49* (3), 69-72.

Goldenberg, C., & Patthey-Chavez, G. (in press). Discourse processes in instructional conversations: Interactions between teacher and transition students. *Discourse Processes.*

Goodlad, J. (1984). *A place called school.* New York: McGraw-Hill.

Gordon, E. (1990). *Centuries of tutoring: A history of alternative education in America and Western Europe.* Lanham, MD: University Press of America.

Hacker, C. (1980). From schema theory to classroom practice. *Language Arts, 57,* 866-871.

Hiebert, E. (1983). An examination of ability grouping for reading instruction. *Reading Research Quarterly, 18,* 231-255.

Knapp, M., & Shields, P. (1990). Reconceiving academic instruction for the children of poverty. *Phi Delta Kappan, 71*(10), 753-758.

Lampert, M. (1991, April). *Representing practice: Learning and teaching about teaching and learning.* Invited address presented at the annual meeting of the American Educational Research Association, Chicago, IL.

Pehrsson, R. (1985). *The semantic organizer approach to reading and writing instruction.* Rockville, MD: Aspen Systems Corp.

Perez, S., & Strickland, E. (1987). Teaching children how to discuss what they read. *Reading Horizons, 27,* 89-94.

Resnick, L. (1987). Constructing knowledge in school. In L. Liben (Ed.), *Development and learning: Conflict or congruence?* (pp. 19-50). Hillsdale, NJ: Erlbaum.

Resnick, L., & Klopfer, L. (Eds.) (1989). *Toward the thinking curriculum: Current cognitive research.* Alexandria, VA: Association for Supervision and Curriculum Development.

Rosenshine, B. (1986). Synthesis of research on explicit teaching. *Educational Leadership, 43,* 60-69.

Rosenshine, B., & Stevens, R. (1986). Teaching functions. In M. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed.) (pp. 376-391). New York: Macmillan.

Rouse, W.H.D. (Trans.) (1956). *Great dialogues of Plato.* New York: New American Library.

Saunders, W., & Goldenberg, C. (1992, April). *Effects of instructional conversations on transition students' concepts of 'friendship': An experimental study.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Saunders, W., Goldenberg, C., & Hamann, J. (1992). Instructional conversations beget instructional conversations. *Teaching and Teacher Education, 8,* 199-218.

Schneider, P., Hyland, J.T., & Gallimore, R. (1985). The zone of proximal development in eighth grade social studies. *The Quarterly Newsletter of the Laboratory of Comparative Human Cognition, 7*(4), 113-119.

Schuell, T. (1986). Cognitive conceptions of learning. *Review of Educational Research, 56,* 411-436.

Simon, H. (1973). The structure of ill-structured problems. *Artificial Intelligence, 4,* 181-201.

Spiro, R., & Myers, A. (1984). Individual differences and underlying cognitive processes in reading. In P. Pearson (Ed.), *Handbook of reading research* (pp. 471-501). New York: Longman.

Stahl, S., & Clark, C. (1987). The effects of participatory expectations in classroom discussion on the learning of science vocabulary. *American Educational Research Journal, 24,* 541-555.

Tharp, R., & Gallimore, R. (1988). *Rousing minds to life: Teaching, learning and schooling in social context.* Cambridge, England: Cambridge University Press.

Tharp, R., & Gallimore, R. (1989). Rousing schools to life. *American Educator, 13*(2), 20-25.

Thayer, V. (1928). *The passing of the recitation.* Boston, MA: D.C. Heath.

Walberg, H. (1990). Productive teaching and instruction: Assessing the knowledge base. *Phi Delta Kappan, 71,* 470-478.

Wilen, W. (1990). Forms and phases of discussion. In W. Wilen (Ed.), *Teaching and learning through discussion* (pp. 3-24). Springfield, IL: Charles C. Thomas.