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INTRODUCTION

This volume was conceived as an attempt to address issues associated with social constructivist approaches to teaching, which recently have attained widespread popularity. Their popularity can be seen in the previous volume in this series (Brophy, 2001), in which authors representing 14 school subjects (beginning reading, later content area reading and literature studies, writing, number, geometry, biology, physics, chemistry, earth science, history, physical geography, cultural studies, citizenship education, and economics) synthesized what is currently known (or at least believed to be true) about best practices in teaching their respective subjects. Most of these authors cited notions of learning community, social construction of knowledge, or sociocultural learning to argue that learning is most likely to be meaningful and accessible for use when it is socially negotiated through classroom discourse.

Social constructivism is primarily a theory of learning rather than a theory of teaching, so educators who identify themselves as social constructivists can and do advocate a range of teaching approaches. However, these approaches tend to share the key assumption that, ideally, learning involves negotiating understandings through dialogue or discourse shared by two or more members of a community of people who are pursuing shared goals. In school settings, the social construction of understandings typically occurs in whole-class or small-group discussions or in dialogues between pairs of students. The teacher plays an important role in structuring or guiding this discourse, but this is a quite different role from that of the traditional frontal teacher who focuses on transmission of information through lecture, demonstration, and recitation methods. The traditional transmission approach and the more recently articulated social constructivist approach are often contrasted along several dimensions. The following contrasts, taken from Good and Brophy (2000), are representative; see Table 1.

Such comparisons are useful, but they must be interpreted carefully to avoid three common oversimplifications: (1) reducing discussions of teaching to this single dimension, when teaching has other important components that do not fit easily into a transmission vs. social constructivist comparison; (2) implying that one must choose between these two approaches, when logic and some data indicate the need for a judicious blend; and (3) implying that a particular choice or blend will have universal applicability, when there is good reason to believe
**Table 1.** Teaching and Learning as Transmission of Information Versus as Social Construction of Knowledge.

<table>
<thead>
<tr>
<th>Transmission View</th>
<th>Social Construction View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge as fixed body of information transmitted from teacher or text to students</td>
<td>Knowledge as developing interpretations coconstructed through discussion</td>
</tr>
<tr>
<td>Texts, teacher as authoritative sources of expert knowledge to which students defer</td>
<td>Authority for constructed knowledge resides in the arguments and evidence cited in its support by students as well as by texts or teacher; everyone has expertise to contribute</td>
</tr>
<tr>
<td>Teacher is responsible for managing students' learning by providing information and leading students through activities and assignments</td>
<td>Teacher and students share responsibility for initiating and guiding learning efforts</td>
</tr>
<tr>
<td>Teacher explains, checks for understanding, and judges correctness of students' responses</td>
<td>Teacher acts as discussion leader who poses questions, seeks clarifications, promotes dialogue, helps group recognize areas of consensus and of continuing disagreement</td>
</tr>
<tr>
<td>Students memorize or replicate what has been explained or modeled</td>
<td>Students strive to make sense of new input by relating it to their prior knowledge and by collaborating in dialogue with others to coconstruct shared understandings</td>
</tr>
<tr>
<td>Discourse emphasizes drill and recitation in response to convergent questions; focus is on eliciting correct answers</td>
<td>Discourse emphasizes reflective discussion of networks of connected knowledge; questions are more divergent but designed to develop understanding of the powerful ideas that anchor these networks; focus is on eliciting students' thinking</td>
</tr>
<tr>
<td>Activities emphasize replication of models or applications that require following step-by-step algorithms</td>
<td>Activities emphasize applications to authentic issues and problems that require higher-order thinking</td>
</tr>
<tr>
<td>Students work mostly alone, practicing what has been transmitted to them in order to prepare themselves to compete for rewards by reproducing it on demand</td>
<td>Students collaborate by acting as a learning community that constructs shared understandings through sustained dialogue</td>
</tr>
</tbody>
</table>

that what constitutes optimal teaching varies with grade level, instructional goals, and other context factors. Given that teaching approaches are means rather than ends in themselves, it is logical to assume that optimal teaching involves an eclectic mixture of components that is suited to the students and
the instructional goals, and that the prominence of particular components will wax and wane as lessons or units progress and students develop expertise in the domain.

Applefield, Huber, and Moallem (2001) synthesized commonly expressed constructivist views on learning and teaching. First, they noted that constructivists tend to agree on four characteristics as central to all learning: (1) learners construct their own learning; (2) new learning depends on students' existing understandings; (3) social interaction/dialogue plays a critical role; and (4) authentic learning tasks are needed to ensure meaningful learning. Other commonly emphasized concepts include situated cognition, scaffolding, cognitive apprenticeship, cooperative learning, learning communities, generative learning, and teaching in the zone of proximal development. They also discussed five myths about constructivist-based teaching and concluded with principles for optimizing such teaching.

Five myths about constructivist-based teaching are:

(1) It has no focus for learning or clear goal (although it does not prescribe particular sequences of learning activities, it involves designing learning environments to support goal-oriented knowledge construction and should not be confused with idle discussion or exploratory activities that lack clear focus).

(2) It is not carefully planned (working from clear goals, constructivist teachers identify a challenge, case, or problem – ideally, an authentic activity – that is suited to the learning goals; scaffold students' learning; and assess their goal attainment).

(3) There is no structure for learning (engagement in the activity, with the learning goals in mind, provides direction to activities such as exploring the causes of the problem to be solved, noting similarities and differences with already familiar tasks, and classifying it with reference to larger systems).

(4) Learning will take place automatically as long as learners are involved in discussion or other forms of social interaction (in fact, teachers need to monitor discussions and group activities and be prepared to intervene to redirect the discussion or address misconceptions).

(5) Since teachers are not primarily delivering instruction (lecturing and explaining), their role in the classroom is less important (the teacher’s role shifts from primarily telling to primarily guiding, but the latter is a crucial role that calls for sophisticated decision making about when and how to intervene and what is required to mentor, coach, and facilitate students’ learning effectively).
Challenges in implementing constructivist teaching include deciding how much to structure learning tasks, dealing with the breadth/depth dilemma, and finding ways to enable students to struggle productively with the confusions and conflicts involved in collaboratively addressing ill-structured, real-world problems.

Applefield, Huber, and Moallem (2001) concluded by suggesting that the following pedagogical recommendations flow from fundamental constructivist principles of learning:

1. The overall goal is to stimulate thinking in learners that results in meaningful learning, deep understanding, and transfer to real-world contexts.
2. The teacher encourages knowledge construction through primarily social learning processes by selecting authentic tasks and emphasizing ill-defined problems and higher order questions.
3. Lessons feature clear content goals and multiple ways of representing key ideas.
4. Learners are encouraged to raise questions, generate hypotheses, and test their validity.
5. Learners are challenged by ideas and experiences that generate inner cognitive conflict or disequilibrium. Errors are viewed positively as opportunities to explore conceptual understanding.
6. Students are given time to engage in reflection through journal writing, drawing, modeling, and discussion, to facilitate learning through reflective abstraction.
7. The learning environment provides ample opportunities for dialogue within a community of discourse that engages in activity, reflection, and conversation.
8. Within this community of learners, it is the students themselves who must communicate their ideas to others, defend them, and justify them.
9. Students work with big ideas – central organizing principles that have the power to generalize across experiences and disciplines.

Like most contemporary educators, I find much that is attractive in social constructivist approaches to learning and teaching. This is especially the case when they are contrasted with transmission approaches, because certain difficulties with transmission methods are well known. When transmission methods of teaching are implemented poorly or simply used too exclusively, they tend to lead to student boredom, reliance on rote learning methods, and the acquisition of disconnected items of knowledge that are mostly soon forgotten or retained only in inert forms.
However, certain predictable difficulties with social constructivist techniques can also be expected. Airasian and Walsh (1997), Weinert and Helmke (1995), Windschitl (1999), and others have observed that these techniques are difficult to implement effectively: They require teachers to possess a great deal of subject-matter knowledge (including knowledge about how to teach the subject to students at the grade level) and an ability to respond quickly to only partially predictable developments in the discourse, and they require students to participate more actively and take more personal risks in their learning. Furthermore, heavy reliance on social constructivist discourse models increases the possibility that the discourse will stray from the lesson’s intended goals and content, and that even when it remains goal-relevant, progress toward construction of the intended understandings may be erratic and include frequent verbalization of misconceptions. In terms originally introduced by Jacob Kounin (1970) in the context of studying classroom management, it might be said that such lessons have a rough rather than a smooth flow, frequently interrupted or sidetracked momentum, and a poor signal (valid content)-to-noise (irrelevant or invalid content) ratio.

Research on the learning of strategies, including strategies for teaching effectively, indicates that three kinds of knowledge must be acquired and integrated to enable people to implement the strategies optimally: (1) propositional knowledge of facts, concepts, and generalizations needed to understand the rationale for and nature of the strategy; (2) procedural knowledge of how to implement the strategy skillfully; and (3) conditional knowledge about when to use the strategy and how to adapt it to situational contexts. As scholarly literature on social constructivist approaches to teaching has developed, there has been considerable progress in building a base of propositional and procedural knowledge, but little progress in generating conditional knowledge. In fact, instead of offering balanced assessments of the trade-offs embedded in social constructivist approaches or discussions of when a teacher should or should not use them, writers presenting social constructivist models too often imply that teachers should use them all the time. Furthermore, although there are exceptions, most writing on social constructivist teaching has been confined to statements of rationales coupled with classroom examples of the principles being implemented in practice, without including systematic assessment of outcomes.

This problem was exemplified in a special issue of the Review of Research in Education that focused on social constructivist teaching. Noting that a large corpus of work had accumulated in which social constructivist views had been
used to design instruction, the editors asked O'Connor (1998) to assess the effect of social constructivist teaching on measurable outcomes of learning. O'Connor concluded that this question could not be addressed yet, partly because social constructivism is interpreted in many different ways, making it difficult to generalize, and partly because of the limited availability of research speaking to the question. Therefore, O'Connor instead wrote a lengthy chapter illustrating and contrasting some of these different approaches. His descriptions are useful, as are his analyses of the complexities embedded within the editors’ challenge. Nevertheless, it remains true that O'Connor was given an open invitation to build a case for the efficacy of social constructivist approaches to teaching and confessed an inability to do so.

This is troubling, because romantic or otherwise misguided interpretations of social constructivism have led to questionable practices in teaching and teacher education. Some teachers are being led to believe that frontal teaching, skills practice, and independent work on assignments are simply inappropriate and should not occur in their classrooms (which should focus instead on whole-class discussions and small-group cooperative learning activities). Other teachers are getting the impression that anything that involves discussion or hands-on activity serves worthwhile curricular purposes and will induce students to construct significant understandings.

Concerns about such problems have caused leading social constructivist spokespersons to criticize much of what has been advocated in the name of social constructivism and to clarify that a complete instructional program will include transmission as well as constructivist aspects (Sfard, 1998; Staver, 1998; Trent, Artiles & Englert, 1998; Wells, 1998) and that its constructivist aspects embody principles that are much more complex and sophisticated than a simple admonition not to equate teaching with telling (Chazan & Ball, 1999). Furthermore, social constructivist leaders in mathematics and science education have emphasized the need for teachers to provide modeling and explanations, to support students’ construction of knowledge through well-chosen questions and activities, and to scaffold the students’ work. They have rejected the notion that teachers need only to facilitate students’ intrinsically motivated explorations, characterizing this romantic view as a fundamental misunderstanding and misapplication of constructivist theory (Cobb, 1994; Driver, Asoko et al., 1994).

The field clearly needs more research on social constructivist teaching that includes attention to a variety of student outcomes. However, it also needs more theoretical development concerning “conditional knowledge” questions about when and why social constructivist approaches are optimally used and when and why other approaches would be more appropriate.
For example, although he did not address social constructivism specifically, Larson (2000) asked six high school social studies teachers to talk about their conceptions of classroom discussion and about factors influencing the degree to which they would emphasize discussion as opposed to transmission forms of instruction in their classrooms. He found that teachers’ reported uses of discussion were influenced by five factors: student diversity, lesson objectives, the age and maturity of students, the sense of community in the classroom, and the interest level of students. Diversity in student ability, ethnicity, culture, and other factors increases the potential for awareness of different perspectives, but it also increases the likelihood of conflict. The teachers reported talking more and beginning to dominate classroom interactions when their students became embroiled in conflict. They also reported being more likely to dominate interactions when lesson objectives emphasized content coverage but being more open to discussion when they did not feel pressured to cover particular content, especially if students already possessed information believed to be important or had spent time gathering background information to support discussion. Individual differences complicate this rule of thumb: Students who know more tend to discuss more, some students are reticent about participating, and students cannot make up for absences because discussions cannot be recreated and teachers’ notes are insufficient for accomplishing the goals that led to use of discussion in the first place. The age and maturity of students was emphasized in teacher comments about using discussion more with older, more mature, more knowledgeable, less defensive, and more socially adept students. Even though these were high school teachers, some complained that discussions were difficult with younger students, whom they viewed as requiring more teacher effort to keep them on topic and appropriate in their responses to one another. Discussion was more likely where the sense of community in the classroom had developed, featuring trust and respect for one another, feelings of personal safety, and common goals for exploring issues. Class size affected this factor: The teachers reported that whole-class discussions were difficult in larger classes. Finally, the interest level of students was considered a factor: The teachers felt that students needed to be interested in a topic if they were to participate in a discussion on it, and to believe that discussion was a worthwhile way to learn.

I believe that the development of conditional knowledge about when and why social constructivist approaches are optimally used has been slowed by two pervasive characteristics of the social constructivist literature. First, social constructivists tend to have a lot more to say about learning than about teaching. In particular, they tend to focus on epistemological issues (What is the nature
of knowledge and how is it constructed and validated? rather than pedagogical issues (What combination of approaches to teaching will optimize the students’ construction of knowledge that reflects the course’s intended outcomes?). Second, to the extent that they do talk about teaching, social constructivists tend to put forth their particular model as if it applied universally, without saying much if anything about when it would or would not be used or how it might need to be adjusted to different types of students, different subject matter, different learning activities, and so on.

CONCERNS AND INSIGHTS DEVELOPED FROM MY OWN RESEARCH

My interest in these issues has been fueled in part by my own scholarly activities. In recent years, I have been collaborating with Janet Alleman in developing instructional units on cultural universals (food, clothing, shelter, transportation, etc.) for use in primary-grade social studies, and in studying the teaching of Barbara Knighton, who implements the units with first and second graders. Our unit plans include a blend of transmission and social constructivist elements, as does Barbara’s teaching (in all subjects, not just social studies).

In planning our units, in monitoring their implementation in Barbara’s classes, and in noting other aspects of Barbara’s teaching not directly related to our unit plans, we frequently encounter evidence of a need for qualifications on the feasibility of social constructivist approaches to classroom discourse, especially when students’ cognitive development and domain expertise are limited. We have been trying to move beyond vague notions of “balancing” transmission and social constructivist approaches by developing principles specifying how and why these approaches might be combined, and their mixture adjusted, as lessons and units progress. Our tentative conclusions are as follows (Alleman & Brophy, 2001).

First, it appears that transmission techniques are best used for efficiently communicating canonical knowledge (initial instruction establishing a knowledge base) and social constructivist techniques are best used for constructing knowledge networks and developing processes and skills (synthesis and application). In the early elementary grades where our research has focused, this contrast is somewhat muted: Most transmission occurs during teacher-student interaction segments that include a lot of teacher questioning and little or no extended lecturing, and most opportunities for students to engage in the social construction of knowledge are closely monitored and highly scaffolded by teachers. Later grades more often feature lesson or activity segments that are more exclusively either transmission or social construction of knowledge.
I noted earlier that overreliance on social constructivist discourse models can lead to lessons that have a rough rather than a smooth flow, frequently interrupted or sidetracked momentum, and a poor signal-to-noise ratio. These dangers become acute when teachers face either of two conditions that we observe regularly: (1) young learners with as-yet poorly developed skills for learning through speaking and listening and undeveloped skills for learning through reading and writing; and (2) learners whose prior knowledge (domain expertise) is very low and poorly articulated, so that questions about the topic frequently fail to produce responses or elicit irrelevant or invalid statements. This commonly occurs in social studies lessons in the early grades, even when the questions deal with food, clothing, shelter, or other cultural universals with which the students have had frequent life experiences.

The problems that we have observed when teachers overuse social constructivist discourse models (or use them ineffectively) have sensitized us to the need for adaptation of these models when teaching in the early grades, especially when addressing topics about which students have minimal prior knowledge. One adjustment that we suggest is to rely more heavily on transmission techniques early in a lesson or unit, to establish a common base of information that includes clear articulation of big ideas. Another is to adapt the discourse model that has been developed with middle- and secondary-school classrooms in mind to make it more attuned to the discourse forms and rhythms that are predominate in the primary grades (e.g. more frequent but shorter exchanges, with more teacher scaffolding to help students express themselves). Our goal is to incorporate as much of the social constructivist ideal as is possible under the circumstances, but in ways that result in more smoothly flowing lessons that have more acceptable signal-to-noise ratios. In this regard, it is important to plan to either avoid predictable misconceptions or focus attention on them, especially if they involve big ideas and are particularly memorable or difficult to eradicate once verbalized.

Attempts to use social constructivist discourse with young children often are complicated by the problem of egocentrism. Primary-grade students often use questions posed by the teacher as occasions for launching stories that they want to tell. These stories may have little or nothing to do with the topic, in which case they distract from the focus of the lesson. In the case of lengthy anecdotes, they derail lesson momentum completely. Our observations of Barbara Knighton indicate that she is skilled at using helpful and constructive comments to prevent this from happening in the learning community that she has established. She also follows up by making time for one-to-one sharing during later interactions, such as while eating lunch with her students.
A core idea of constructivism is that each student builds his or her own unique representation of what is communicated. However, a student may or may not create a complete and accurate reconstruction of what the teacher intended to convey, so that learning is often incomplete or distorted. Barbara blends and balances transmission and constructivist teaching in ways that address these limitations of young learners, yet encourage them to personalize their learning and apply it to their lives outside of school. She provides basic information during whole-class instruction early in a lesson or unit, then follows up with small-group or partner activities that allow every student to draw on what he or she knows or has experienced. If necessary, she uses direct instruction with checking for understanding at the beginning of the segment, then gradually moves to reflective/interactive discussions.

Barbara models the knowledge construction process by using examples from her own life to articulate and illustrate major understandings in ways that legitimate students' feelings and encourage them to share their insights. She also frequently laces metacognitive self-talk into the conversation, to help students learn to reflect on how they know things or what implications their new learning might have.

Because topic-focused whole-class discussions are difficult to sustain for long with young learners, Barbara frequently scaffolds her students' participation in these lessons or shifts to alternative formats. Her scaffolding may include cueing the students to "listen for," "think about," "listen to the story and be ready to share," "listen and decide how you would choose," and so on. If students struggle to respond to her questions, she may help them to express themselves, thus minimizing interruptions and sidetracks. As she scaffolds students' thinking, she often revoices their contributions in ways that focus on big ideas.

Following (or even in between segments of) whole-class lessons, Barbara frequently will arrange for the students to communicate in small groups ("Talk with your table group to decide what you think was the most important idea") or pairs ("Turn to your partner and share your ideas"). Even these small-group and paired activities, however, may need to be kept short and to be carefully scaffolded if they are to function as worthwhile learning experiences for young learners.

One way that our unit plans compensate for young learners' limited capacities for sustained knowledge construction in classrooms is to arrange for them to engage in such knowledge construction at home with their parents or other family members. Our lessons include daily home assignments calling for students to collaborate with their parents in carrying out some activity that applies what the students learned that day in class. These home assignments
are not conventional worksheets or other traditional "homework." Instead, they call for students to engage in sustained conversations with their parents as they talk about how the family came to live where it currently lives, inspect clothing labels to identify where their clothes were made, talk about how the furnace works, or discuss other lesson-based content.

Both the parents and the children tend to find these interactions enjoyable. In the process, the children learn a lot about the goals and decision making that lie behind much of their parents’ behavior, and the parents learn that their children are more curious and knowledgeable than they realized. Discussions that begin in our home assignments often lead to personal or family projects, trips to the library, expansion of discussion to other topics, or other elaborations that provide opportunities for both social construction of knowledge and reinforcement of family ties. We believe that the home has great potential for exploitation as a site for extension of knowledge construction begun in the classroom (Alleman & Brophy, 1994).

**RATIONALE AND PLAN FOR THIS VOLUME**

I envisioned this volume as a sympathetic but analytic and critical view of social constructivist teaching principles, developed with the recognition that instructional approaches are not ends in themselves but means – tools to accomplish certain jobs (In this regard, I recognize that many educators might argue that reflective discussion and other desired classroom processes are ends in themselves. I would argue, however, that upon finer analysis, these processes can be seen as aspects of designed learning experiences that have been included because they are believed to support students’ progress toward ultimate outcomes – not just narrow content and skills objectives but broader dispositions toward reflective and critical thinking, use of disciplinary discourse genres, etc.). Like other tools, particular instructional approaches are ideal for accomplishing some jobs, useable but not ideal for accomplishing others, and irrelevant or even counterproductive for accomplishing still others.

The volume explores the applications of this truism to social constructivist teaching. It was planned as an attempt to generate conditional knowledge about such teaching by inviting researchers who value social constructivist approaches to draw on their own work and any other work that they viewed as appropriate to address this issue. Its contributors include people who have done research on relatively generic aspects of teaching as well as people who have studied instruction in particular subject areas. They were invited to participate because I viewed them as scholars who emphasize teaching for understanding and are sympathetic to social constructivist perspectives, but not so committed to social
constructivist teaching models that they could not be analytic and objective. I asked them to focus on theory and research relating to social constructivist teaching, not social constructivist ideas about learning (except to the extent of clarifying the rationales for the teaching strategies). I also asked them to address the following six questions:

(1) What does social constructivist teaching mean in the area(s) of teaching on which your scholarly work concentrates?
(2) What is the rationale for using these approaches, and what forms do they take?
(3) What are the strengths/areas of applicability of these teaching approaches, and what are their weaknesses/areas of irrelevance or limited applicability?
(4) When, why, and how are social constructivist approaches used optimally?
(5) When, why, and how do these approaches need to be adjusted from their usual form in order to match the affordances and limitations of certain students, instructional situations, etc.?
(6) When and why are these approaches irrelevant or counterproductive (and what methods need to be used instead in these situations)?

Unfortunately, educational innovations commonly get oversimplified, taken to extremes, or otherwise distorted. This volume attempts to counteract that tendency with respect to social constructivist teaching approaches by combining sympathy (exploring their affordances) with realism (acknowledging their limitations).

In my original conception, the volume would have focused on classroom discussion, particularly whole-class discussion, which I viewed as the prototypical social constructivist teaching method. However, review of the literature and discussions with some of the authors made it clear that many educators who identify themselves as social constructivists emphasize the interactions that occur in pairs or small groups as much or more than the interactions that occur in whole-class discussions in their models of teaching, and that they emphasize the nature of the task or activity as much as the discussion that occurs within it. Consequently, the title of the book uses the term “social constructivist” rather than the term “discussion,” because the former term better describes the contents of most of the chapters.

It also is worth noting that my original ideas about the title of the volume and my early correspondence with chapter authors referred to social constructivist teaching “methods.” Most of the authors objected to this term because it carries connotations that conflict with social constructivist philosophy. Some authors even expressed discomfort with the term “social constructivist teaching.” They were more comfortable talking about learning
and ways to support students’ construction of knowledge, and they viewed such support as highly contextual and dependent on instructional goals, emergent student discourse or task responses, and other factors. Several were leery of any attempt to talk about social constructivist “teaching” in terms that might lead to its representation as a set of “methods.” Some of the authors comment on these issues in their chapters.

I understand these concerns, and sympathize with them to an extent (for example, in my own contributions to the volume, I have avoided the term “method” and instead referred to social constructivist “teaching,” “approaches,” or “principles”). However, I believe that social constructivist (or any other) views on learning that are used as a basis for planning teaching need to lead ultimately to relatively systematized models of teaching, for two main reasons. First, I believe that it is unrealistic to expect to be able to educate teachers to implement social constructivist principles without systematizing them into operational models of teaching (especially given the widespread agreement that these principles are much harder to implement successfully than transmission principles). Second, systematic models of social constructivist teaching, or at least operational descriptions of social constructivist principles in action, are needed to provide a basis for conducting research on such teaching. Much more research on the feasibility and effectiveness of social constructivist teaching is needed, and this assumes the existence of reasonably clear teaching models and the possibility of reliably assessing the degree to which these models are being implemented in classrooms.

The contributors to this volume have studied social constructivist teaching as implemented at various grade levels and in several subject areas. In the process, they have developed or identified both general models and situational adaptation strategies for applying social constructivist principles in ways that match the students, the subject matter, and other affordances and constraints embedded in the schools in which they work. They summarize what they have learned in the first eight chapters. Then, in the last chapter, I conclude the volume with a discussion of what their collective efforts suggest as state-of-the-art responses to the six questions listed previously.

REFERENCES


INTRODUCTION

In this chapter, I wish to explore the role of language – and of meaning-making practices more generally – in promoting students’ learning in all areas of the curriculum. As might be expected, I shall give some attention to reading, broadly conceived, since acquiring information from books, maps, diagrams, and texts of all kinds, plays an increasingly important role in education as students increase in age (Kress, 1997; Lemke, in press). I shall also devote some attention to writing – in non-narrative as well as narrative genres – as, with Langer and Applebee (1987), I believe that it is in the writer’s dialogue with his or her emerging text that an individual’s understanding of an issue or topic is most effectively developed and refined.

However, meaning making is not restricted to interaction with texts. It can certainly also occur in design work, both aesthetic and practical (Smagorinsky, 1995), and in planning and carrying out experiments, surveys and other forms of empirical investigation. But, most importantly, it is taking place almost continuously in almost all classrooms, in the various kinds of talk that constitute or accompany the vast majority of activities. Some twenty years ago,
it was calculated that, in a typical classroom, somebody is talking for at least two thirds of each lesson, and that two thirds of that talk is contributed by teachers (Flanders, 1970). Clearly that estimate needs to be qualified according to subject and grade level and will probably need to be radically revised for those classrooms in which group work for different purposes constitutes a significant form of activity. Nevertheless, until recently, the talk through which learning and teaching is enacted was treated – like water by fish – as transparent and taken for granted. It was therefore rarely considered as a matter for serious investigation or as a domain deserving efforts at improvement.

My argument will be, therefore, that, first, we need to give adequate recognition to all the modes of making and representing meaning through which the activities of learning and teaching are enacted and that, second, of these, talk in particular deserves sustained attention. This is because, as I have suggested, it is the medium in which meaning is most readily and ubiquitously negotiated. It is also, I believe, the foundation of a social constructivist approach to education. Before continuing, therefore, I need to justify this latter claim.

**THE SOCIAL CONSTRUCTION OF MIND: A VYGOTSKYAN PERSPECTIVE**

The term “social constructivist”, used in the title of this book and in several of the chapter titles, certainly identifies some key assumptions that all the authors share. For example, there would be general agreement that knowledge is constructed by individuals through an active relating of new information to their personal experience and their current frameworks for making sense of that experience. There would also be agreement about the ineluctably social nature of knowing and coming to know, if only because, in John John Donne’s memorable words, “No man is an island...” Therefore, although we each construct our own knowledge, we do so in the context of activities carried out in conjunction with others – in the family, the community, and in public institutions such as school, church and workplace. More disputable is the status of any particular item or body of knowledge. Some would make a distinction between ‘public’ knowledge and ‘personal’ knowledge – between ‘what is known’ and ‘what I know’ – treating the former as independent of individual knowers. For others, by contrast, the relativity of all knowledge seems to be an inescapable implication of acceptance of the fact that knowledge in any domain is constructed and reconstructed by countless unique individuals who occupy different locations in time and space and belong to different cultures that have diverse worldviews and systems of values (Chinn, 1998).