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WORKING PAPER

Looking into Learning-Centered Classrooms Implications for Classroom Management

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Contents

Goals for education and expectations for student achievement have changed dramatically in the past century. The wide gap in achievement between the most and least advantaged students, once taken for granted, is no longer considered acceptable. Today, teachers are expected to ensure that all students attain high academic standards. In addition, teachers share with other caregivers the responsibility of fostering students' social and moral development.

Students must learn before they can achieve anything. Fortunately, we now know far more about how students learn. Recent research provides new insights that teachers can use to meet the complex and difficult challenges they face. As new conceptions of learning begin to inform practice, teachers ask a very different set of questions about teaching (Danforth Working Group 1995; Bransford, Brown, and Cocking 1999; Marshall 1992). We call classrooms where teachers focus on student learning and are continuously working to understand new theories about learning and what these mean for their own teaching *learning-centered classrooms.*

Yet the central question of how teachers manage learning in learning-centered classrooms still begs to be answered. Teachers often compartmentalize "teaching" and "classroom management" activities, defining the latter as a matter of maintaining control of students and their learning activities. The purpose of this paper is to explore an alternative conception of classroom practice where teaching and classroom management blend seamlessly to create an overall climate that supports student learning and achievement.

A redefinition of management must address the interrelationship of management and instruction and how these relate to educational goals. Inattention to congruity may allow mixed signals to undermine successful student learning. For example, how can teachers ask students to think critically about literature or history but not to think or ask questions about directives related to their own behavior? Current conceptions of learning that emphasize students' active construction of knowledge, including how to regulate their behavior and interact socially with others, do not fit with conceptions of management such as behavioral control, compliance, and obedience (McCaslin and Good 1992).

Throughout the paper we use an extensive body of knowledge about learning and teaching as well as our own case studies to develop a set of conceptual benchmarks for best practice (see Box 1). The benchmarks are intended to aid teachers in understanding key distinctions between typical management practices and the kind of research-based practices found in learning-centered classrooms where management, teaching, and learning are complementary.

Box 1. Research on Classroom Management

In the past, research on classroom management emphasized behavior control. Typical classroom management practices remain consistent with this perspective. In this paper, however, the emphasis is on synthesizing more recent literature reflecting an alternative "learning centered" approach to classroom management that is consistent with new knowledge about learning and teaching.

The theoretical framework for this paper is drawn from research on learning and teaching, including cognitive, social-cognitive, and sociocultural perspectives, that has been accumulating primarily since the "cognitive revolution" of the 1970s. This extensive body of knowledge is consistent with criteria established by the National Research Council for scientific research in education (Shavelson and Towne 2002).

To illustrate learning-centered management principles, we have drawn vignettes from a theory-based case study conducted by the Classroom Organization and Management Program (COMP) at Vanderbilt University during the 1995–96 school year. Ten teachers who were attempting to shift their teaching and management practices to be more learning-centered participated in the study. Half the teachers were in elementary schools, the other half in middle schools. Most schools in the sample were located in an inner city.

Although a clearer picture of management in learning-centered classrooms is beginning to emerge, many questions remain unanswered. *A Handbook of Classroom Management: Research, Practice, and Contemporary Issues* (Evertson and Weinstein 2006) will advance knowledge in the field by bringing together and synthesizing the relevant research and its implications for practice in much greater detail.

Before we begin our argument inviting a redefinition of classroom management, we must acknowledge that learning-centered classrooms are not all the same. They are diverse, dynamic, and evolving. There is no single model for how teachers should teach and no single method of instruction that is best for all students. That makes it impossible to characterize learning-centered classrooms as an undifferentiated group. We would expect these classrooms to differ because their members are in different grade levels and because each is made up of individuals who have unique backgrounds, interests, and needs. Any attempt to oversimplify this complexity will inevitably fail to do justice to the uniqueness of these classrooms.

By focusing on central concepts, we hope to provide adaptable insight and guidance for educators grappling with managing diverse learning-centered classrooms. To illustrate how the concepts may apply in practice, we have selected two teachers from our case studies and use their classrooms as examples of the emerging challenges for teachers as they work to integrate management and instruction to achieve more challenging learning goals for all students. One is an elementary teacher; the other teaches middle school.[1] Both of our case study teachers work in schools with diverse student populations and high percentages of poor students. Their experiences are particularly relevant for teachers struggling in similar circumstances to close the achievement gap.

Our inquiry is divided into five sections necessary to understand key management issues in learning-centered classrooms:

- How have various research approaches contributed to a reconceptualization of the academic, moral, and social purposes of learning? What are the normative implications for management in learning-centered classrooms?
- How do teachers organize the environment in learning-centered classrooms, focusing on practical considerations such as use of space, time, and other resources?
- What strategies can teachers use to integrate management and instruction in their efforts to create learning-centered classrooms?
- What are the outcomes of learning in these classrooms, and how can assessment support learning and achievement?
- What dilemmas do teachers face in struggling to invent management approaches congruent with their goals for teaching and learning?

Reconceptualizing Learning

Bill[2] teaches sixth grade in an urban middle school, where he shares responsibility for two groups of students with a

[1] Although we believe the concepts discussed throughout the paper are important for high school teachers, our study did not include high schools, and therefore we could not provide examples at that level.

[2] All names in examples are pseudonyms.

partner (additional information about Bill's school appears in Box 2). Bill focuses on social studies and science; the partner teaches language arts and mathematics. A teacher for 26 years, Bill has collaborated with a neighboring university for 9 years on innovative curriculum projects designed to enhance his students' learning. He believes that students actively construct knowledge and that his role as a teacher is to find ways to enable them to learn by drawing on the diversity of his students' thinking and their prior subject-matter knowledge. On entering his classroom, a visitor would see students actively using computers. Some are designing a graphic for their joint project; some are researching their topics using information found on a CD-ROM; others are participating in a computer-based ongoing class discussion. Nearby, some students are brainstorming ideas for their joint research paper. Bill is moving in and out of these student zones providing support, answering questions, asking questions, giving direction, and probing understanding.

Box 2. Bill's School

Bill teaches in an urban school with a student population that is 60 percent African American and 29 percent white. A significant number of students in the school are poor (62% receive free or reduced-price lunch) and come from families with low levels of parental education and considerable unemployment. The school is located in a "tough" neighborhood, where many businesses have bars on their windows.

After teaching for 15 years, Patricia decided to change the way her students engaged in scientific inquiry in her fourth-grade elementary school classroom (additional information about Patricia's school appears in Box 3). Collaboration with a local university, although limited, seeded Patricia's interest in more innovative teaching practices, and she moved to a school where such efforts were valued. Supported by her principal and other teachers on her grade level, she created a forum for students to explore scientific concepts through a series of inquiry centers. She described how the greatest conflict in her own struggle in creating different learning opportunities was in becoming willing to let go and allow the students to take charge of their learning. Students described center time as the best time of the day: "We like teaching others and finding things out for ourselves." Patricia has been trying out various strategies she considers more learning-centered for about 4 years.

Box 3. Patricia's School

Patricia's school is about five miles from the city center in a neighborhood with both urban and suburban characteristics. The student population is 54 percent African American, 45 percent white. Almost half the students receive free or reduced-price lunch. The neighborhood is being regentrified and has a range of poor and middle-income families. Younger families are moving in and fixing up old cottage houses.

Bill and Patricia are each working to make new research-based concepts about knowledge, learning, teaching, and classroom management a reality in their classrooms. What shifts in theory underlie the changes in Bill and Patricia's practice? Why did they decide to make such dramatic changes in their goals for student learning and in their teaching and management strategies? Before examining their classroom management approaches in more detail, it is important to understand the major theoretical shifts that motivated them to change their norms of practice. These conceptual changes are summarized in Table 1 and discussed in the text that follows.

One type of conceptual shift prompted by current research involves the purpose of learning. Teachers typically prepare "lesson plans" that outline the academic purposes and content of their lessons. In learning-centered classrooms, however, teachers understand that every lesson is multifaceted. Every lesson conveys not only academic but also moral and social meaning. The academic aspects are usually explicit, whereas the moral and social aspects remain implicit, part of a "hidden curriculum." Classroom management strategies have as much, or perhaps even more, impact on students' moral and social development as they do on their academic development. If teachers want to integrate classroom management and instruction, recent research can help them to unpack the multiple purposes of a lesson and more explicitly consider the interconnections.

Academic Purposes

The earlier practices of these teachers, and of the vast majority of teachers nationwide, reflected a behaviorist view of learning and teaching. More recent cognitive and sociocultural approaches have expanded our perspective

Table 1. Benchmarks for Classroom Management

Benchmarks for…	Moving from…	Moving toward…
Purpose of classroom management	Teachers maintain control as an end in itself.	Teachers actively engage students in learning, encourage self-regulation, and build community.
Academic purpose of lesson	Students learn discrete facts and skills through sequential development of lesson.	Students learn multiple concepts, facts, and skills, often embedded in larger projects and problems.
Moral purpose of lesson	Students follow directions and learn compliance.	Students develop autonomy, capacity for self-regulation, and sense of responsibility.
Social purpose of lesson	Students work alone, conforming to a fixed set of acceptable behaviors.	Students are interdependent, may work collaboratively or alone; teachers allow a wider and more divergent range of acceptable roles and behaviors.
Relationship of management and instruction	Management and instruction are compartmentalized, and approaches may be incongruent.	Management and instructional approaches are explicitly integrated and seamless.

and contributed to the vision of learning found today in national standards and those of many states.

Basic Academic Content

When researchers in the 1950s through the 1970s studied teaching, they looked at specific classroom behaviors, such as teachers' questioning strategies, and attempted to relate them to student outcomes—generally, standardized test scores (for a comprehensive review, see Brophy and Good 1986). This perspective assumed that learning could be viewed as a series of steps in the acquisition of skills that would ultimately be combined into a collection of capabilities that students could use in adult life.

Instruction, then, involved breaking a skill into its component parts and teaching students how to string the parts together. Hence, behavioral objectives in teacher lesson plans were designed to ensure that students acquired fundamental skills prerequisite to learning more complex skills (Resnick and Resnick 1991). Teachers were viewed as the acknowledged experts. Their role was to deliver knowledge to students, who, in turn, received it.

Basic and Advanced Academic Content

Not all research explained learning on a behavioral level, however. Some theorists examined individuals' thought processes as well. For example, Piaget (1971) said that intelligence consisted of understanding and inventing and that these two functions are inseparable. The "cognitive revolution" in the 1970s (Bruer 1993) opened the door for cognitive psychologists to discover how mental processes work. In addition to the acquisition of basic skills, such processes as higher-order thinking, conceptual understanding, and sense making became important.

From the cognitive perspective, the human learner emerges in a different light, as an active constructor of knowledge rather than as a passive recipient. Students bring knowledge from previous experience into the classroom, and new knowledge always builds on prior knowledge. Teachers are asked to create a bridge between the needs of each learner and the attainment of more complex and meaningful learning goals (Bransford, Brown, and Cocking 1999; Darling-Hammond 1996).

Moral Purposes

Behaviorist research posited that technical subject-matter knowledge and values were entirely separate, assuming that the school was the domain of the former and the home the domain of the latter. Now, in a tradition that can be traced back to Socrates, and more recently to Dewey, these types of knowledge are again viewed as interconnected (Oser 1994; Solomon, Watson, and Battistich 2001). Thus, learning is seen as at once an intellectual and a moral activity. According to Hansen (2001), any action by teachers expresses moral meaning that can influence students' development. Two important areas of development that teachers inevitably influence through their classroom management approach are students' capacity for self-regulation and their sense of responsibility.

Self-Regulation

Self-regulation involves learning to form goals and plans to guide one's own behavior rather than behaving only in response to external commands. People differ in their capacity for self-regulation, and these differences appear to be related to the teaching strategies of caregivers. Self-regulation is fostered when teachers, in working with students to accomplish a task, guide students by asking conceptual questions rather than by giving directions, encourage student engagement and sense of agency, and gradually step back and withdraw as the child's capacity to accomplish the task grows (Diaz, Neal, and Amaya-Williams 1990).

Sense of Responsibility

As students learn to think and regulate their own behavior, teachers and students must consider the values that shape their beliefs and conduct. Is it enough for students to learn to think and act independently, or do we also want them to be responsible and to consider whether what they think and do is good? Teachers and students are confronted every day with complex moral problems involving truth, honesty, caring, and judgment—in fact, all the moral virtues. A "shared morality" emerges in classrooms over the course of a school year (Hansen 2001). Features of classrooms positively associated with moral development include a democratic environment, use of reasoning, opportunities for moral discourse and responsible conduct, and caring relationships (Solomon, Watson, and Battistich 2001).

Social Purposes

The most recent research on learning takes the social context into account, often by focusing on how individuals participate as they work together in communities. When we adopt this perspective, our conceptions of learning and the roles of teacher and students are transformed even further (Cohen, McLaughlin, and Talbert 1993; Marshall 1992; Wenger 1999). Learning in communities emphasizes "joint productive activity" through which teacher and students work together on shared projects that require them to assist and learn from each other. Knowledge is seen as distributed within the group, and each member is expected to contribute (Tharp and others 2000).

Shared Knowledge and Authority

In learning-centered classrooms, students and teachers share authority, expertise, and responsibility for inquiry. Their roles become less distinctly separate. Students do not construct knowledge in isolation; rather, discourse takes place among students and between teacher and students as the norm rather than the exception through conjecture, questioning, criticism, constructive discussion, and presentation of evidence (Brown and Campione 1994). Students rely on both their own and others' expertise and formulate ideas by interaction with others. This distinction is important because the social aspects of the classroom become central to the complexities of learning (Jackson 1968; Florio-Ruane 1989).

Hansen (1987) emphasized the collective knowledge that students have in classrooms where "community building" is important. Students raise concerns and discuss them with the teacher and their peers until they come to another level of understanding. This process differs greatly from classrooms where collections of individuals are doing individual work. Hansen (1987) described how building community contributes to the valuing of each student's ideas:

> We share and others share with us. We want to learn, and through sharing we know what others know. This notion of everyone as a possessor of knowledge for everyone's use differs from our previous systems, which insisted that every student keep to herself and which established hierarchies of haves and have-nots. (p. 15)

Community Membership

As we rethink the nature of learning, community building becomes integral to students' construction of knowledge (Brown and Campione 1994). In classrooms that support this type of learning, we have seen an emphasis on teamwork and recognition that classroom communities address the academic, moral, and social needs of students. Short (1998) suggested that members of such classrooms engage in a number of community-building experiences:

- Coming to know each other
- Valuing what each has to offer
- Focusing on problem solving and inquiry
- Sharing responsibility and control
- Learning through action, reflection, and demonstration
- Establishing a learning atmosphere that is predictable and yet full of real choice. (p. 35)

The shift from individuals working independently under the control of a teacher to a community of interdependent members working together has implications for every aspect of life in classrooms. Excellent teaching in

these settings necessitates building a sense of community and concurrently fostering individual students' intellectual and moral development. Most importantly for this paper, these fundamental changes in assumptions invite a redefinition of the central purposes and strategies of classroom management.

Creating Learning-Centered Environments

We have examined new conceptions of learning and the influence of constructivist learning research on the goals of teachers in learning-centered classrooms. Now, we take a closer look at classrooms where instruction and classroom management are integrated and serve a multifaceted set of academic, moral, and social purposes. One of the first questions to ask about a learning-centered classroom is, What does it look like? The overall environment includes not only the physical arrangements but the organization and use of social, temporal, and information resources as well. The examples discussed are drawn from the classrooms we visited. Table 2, focusing on the classroom environment, continues our exposition of benchmarks for classroom management.

The decisions made by teachers in the learning-centered classrooms we studied were driven by their philosophies about how students learn. Their environmental arrangements were not ends in themselves but means to learning. When teachers believe that students develop knowledge and expertise by interacting with others to co-construct their learning, they organize the environment in ways that provide flexible seating arrangements, a variety of forums in which to work with others, multiple sources of information, and more fluid use of time.

Flexible Room Arrangements

In learning-centered classrooms, teachers no longer determine physical arrangements primarily to provide personally assigned individual space. Rather, the spatial environment is designed to facilitate collaboration. Some teachers in learning-centered classrooms arrange their rooms in advance; others set up the room arrangement after negotiations with their students. In reviewing research on seating arrangements, Lambert (1995) concluded that seating flexibility—as opposed to a perpetually fixed seating arrangement—is a necessary prerequisite for an interactive classroom.

Appropriate room arrangements that support the curriculum will often shift across grade levels, and these tend to become more formalized with increasing grade levels (Gallego and Cole 2001; Johnson 1985, as cited in Gallego and Cole 2001). Therefore, teachers at the higher grade levels who are establishing learning-centered environments will be especially aware of the shift from the prevailing norms as they arrange seating to support more face-to-face interaction. If room arrangements change, students must be socialized to working in these different configurations.

Both Patricia's and Bill's classrooms were carefully arranged before students entered for the first time. Desks were clustered, typically in groups of four, although these arrangements were flexible. They changed depending on

Table 2. Environmental Benchmarks for Classroom Management

Benchmarks for…	Moving from…	Moving toward…
Physical space/room arrangement	Teacher-determined; each student has assigned space (single option).	May be teacher-determined or jointly determined to facilitate collaboration; changing based on use (multiple options).
Social forums and groups	Teacher determined. Students usually work independently. No movement.	Teacher-student determined. Flexible and diverse groupings. Teacher structures student movement.
Information resources	Students have single text or limited sources	Students have access to multiple sources including print, electronic, other people in and outside classroom.
Use of time	Time frame fixed, defined by subject within specific blocks of time (e.g., 50-minute period for science).	Time frame fluid, but time management emphasized. More opportunities for longer, complex projects or subject integration.

the current learning goal. Around the sides of the room were desks or tables where students could work on projects together, work as individuals or in small groups around computers, or work in a private space. The front of the room was sometimes apparent, but it was not prominent. Because Patricia and Bill used the central chalkboard sparingly for essential directed teaching lessons, having all desks and "all eyes" face the front of the room was rarely necessary. Instead, desks were arranged to maximize face-to-face interactions between students.

Varied Social Forums

Another important aspect of the environment is providing flexible and diverse forums for students to gain information and share expertise. In some classrooms, teachers design small group inquiry centers through which students rotate on a weekly basis (Bruer 1993). In others, students are members of different groups created for different purposes. For example, in Bill's classroom, each student was a member of multiple groups. One group might be a special topics research group, one might be a student's homeroom "family" group, and one might comprise members gathered to share specialized information.

To provide multiple forums and flexible grouping arrangements in her classroom, Patricia changed seating patterns from unit to unit and from activity to activity. For example, each student participated in a home group of four students as well as a center group of four students, but the mixture of students was different in each group. During center time, groups were given freedom to move to a carpeted area or other space for private workspace or needed supplies and equipment.

For many students, center time was the highlight of their day because they could have their "own" space. Some researchers (David 1979) have found that students consistently listed as concerns adequate personal space and having private places. The emphasis on collaboration in learning-centered classrooms should not be misinterpreted to mean that students never work alone. Not all students learn in the same way. Classrooms that nurture a social environment can also attend to students as individuals. Students have more choice about when they might need personal space. Teachers have more flexibility to confer either with groups or privately with individual students, as needed.

Bill and Patricia wanted students to be able to move to various locations based on their needs. But, as teachers, Bill and Patricia also recognized a need for order in student movement. Each teacher therefore devised a system to structure movement during group work. Bill created a system of rotations that allowed him to record where students would be during each period of work time. His chart was public and visible to students and allowed everyone to know what each group was doing as the week progressed. He described how he planned the movement of the groups: "I could see what was taking place and what was going to take place. It was a way for me to visualize how this unit [studying] Mars was going to end and how to get from one point to the next." Patricia designed a system to trace movement between centers by creating a pocket chart with movable cards identifying group members and activities. We observed students figuring out where they were to go next by tracing in the air their group's path from the chart.

Multiple Information Resources

If learning opportunities are to shift from students' extracting information from a single source, such as a textbook, to utilizing multiple information resources, then classrooms must be arranged so that students have access to these sources. They need access to their peers; to the teacher; to other information, including primary resources; to computer technology; and to resources outside the classroom.

When his middle school students conducted research, Bill did not designate particular resources to be used. Instead, Bill encouraged students to seek out resources in the classroom, on the computer, and in the library. He did not strictly control use of materials. This student-directed access to materials created some management concerns even as it eliminated others. For example, Bill's planning efforts included locating and gathering helpful resources, and during instruction he faced ongoing decisions about when and how much to intervene in student research. At the same time, because students had free access to an array of resources, they did not have to wait to use a designated and more limited set of resources, and that prevented some potential management problems.

More Fluid and Effective Use of Time

The use of time is a key element in any classroom. We made two observations about time in learning-centered classrooms: time for specific subject matter or skills was much less discrete, and time spent on transitions was minimized.

In observing these classrooms, we were less able to pick out a particular skill students were working on during a given time frame. Students seemed to have the freedom to structure their own time based on the nature of the project

with which they were working. For example, Bill set up his research units based on multilayered goals (i.e., academic standards from science, mathematics, and reading, and the social goal of relying on both oneself and peers for expertise), and students decided how to spend their time working toward the goals.

To ensure learning in classrooms with fluid use of time, teachers must teach students how to use their time effectively. A more open-ended block of time gives students opportunities to structure longer and more complex projects, but students still must be taught how to segment their time to achieve their goals. For example, Bill often asked "focusing questions" that promoted efficient use of time: "When you finish your initial research, what should you do? What can you do if you need more information?" He also held class discussions in which students thought aloud about how to plan their time. In part, discussions on use of time focused on helping students generate questions for themselves so they could monitor their own progress.

In smoothly operating classrooms, transitions are minimized. As students entered, Bill greeted them with a question or comment that refocused them on the activity they had been completing before they had left the classroom. Students often refocused and engaged in their work before all members of the class had returned. These tight transitions sent a message that time is precious and must be used to the fullest. The quick pacing built momentum that began as students returned to their work and continued throughout the lesson.

Redefining Classroom Management

At a surface level, learning-centered classrooms may have the look of management in absentia or no management at all (Randolph and Evertson 1994). That is, they may look seamless, yet they are carefully orchestrated at a complex level so that meaningful learning can occur. Learning-centered classrooms are much more complex than traditional classrooms in terms of long- and short-term goals enacted, variety and flexibility of activities offered, and opportunities for multiple roles for students and teachers. The need for effective management is critical in all classrooms, but the complexity of a learning-centered classroom increases the challenge.

The first few weeks are critical in establishing norms and expectations for the year. The "getting started" period offers special opportunities to set the tone for successful learning. In a series of studies (Evertson and Emmer 1982; Evertson and others 1983), researchers documented the importance of the first day of school for establishing these expectations. Beginning-of-the-year activities contribute to the level of student cooperation during the remainder of the year. The teachers whom the researchers observed described how planning for the first few days is complex and involves many aspects of classroom life, including beginning community building, establishing classroom rules and norms, and practicing classroom procedures. Students in elementary classrooms who receive explicit information and signals early in the school year learn about the classroom environment and settle in more quickly.

Attention to these immediate goals continued throughout the year, but as the year progressed, Bill and Patricia had to grapple with deeper issues. Their evolving understanding of the interrelationship of management and instruction was one key to the productivity of the learning environments that they established. They orchestrated their teaching and management strategies to serve as supportive and mutually reinforcing elements of their classroom approach. In addition, Bill and Patricia reconsidered the issue of authority. They were able to shift their overall approach to classroom management from teacher direction and control to an emphasis on student engagement, self-regulation, and community responsibility with teacher guidance. Table 3 summarizes the changes Bill and Patricia made in their classroom management strategies that are discussed in this section.

Building Community

If we recall the earlier definition of community—which allows for its members to learn from each other and to co-construct knowledge—we can see that communicating and negotiating classroom norms is essential. Classroom community arises not serendipitously but from the shared ways its members develop for relating to each other (Battistich 1995; Watson and Ecklen 2003). The more diverse the classroom, the more important clarity, assistance, and preparation become in understanding the norms and performances expected of students (Tharp and others 2000). Building community begins immediately and is negotiated and strengthened all year long.

Bill saw community building as a key management strategy that needed to be developed in the first few weeks of school. He saw his role as fostering the interweaving of the social, moral, and academic aspects of community. Social and moral aspects included students' understanding of how to respect and rely on others, listen, share, and be constructive partners and team members. These demands were embedded in academic aspects of community such as

Table 3. Strategic Benchmarks for Classroom Management

Benchmarks for…	Moving from…	Moving toward…
Building community	Little emphasis; sense of membership unavailable as a means of social regulation.	Strong emphasis; members share authority, expertise, and responsibility.
Establishing norms and rules	Teacher-determined and enforced.	Co-constructed by teacher and students; shared responsibility for enforcement.
Practicing classroom procedures	Simple procedures explained by teacher.	Procedures more complex. Students given opportunities to learn through experience.
Handling conflict	Teacher responsibility.	Shared teacher-student responsibility.
Locating authority and control	Teacher sole authority.	Distributed authority; concern for student autonomy.

engaging students in problem solving, using multiple sources of information, and using computers effectively during the first days of school. In an interview, Bill explained, "I tried to help create a community where kids feel good about themselves, and I tried to organize the beginning of school so that what takes place will be built upon the rest of the year."

Bill helped create a sense of community in his classroom in several ways. He stated his expectations about how a classroom community functions and coupled that with activities designed to help students experience a sense of belonging. He recognized and encouraged behaviors such as helping a teammate and volunteering for a needed chore. Encouraging these actions from the onset of school helped develop socially constructed norms that could be expanded and supported throughout the year. As the year progressed, however, creating and maintaining the community became the collective responsibility of the whole class, not just Bill. In this way, management of behaviors and individual responsibilities were passed on to the students themselves as they developed the capacity for self-regulation.

Several activities in which Bill's students engaged during the first few days of school highlight important elements in creating community. One activity dealt with helping students change their previous ideas about the purposes of school. Pairs of students were asked to change something about themselves secretly and see if their partner could guess what had changed. Bill created this activity about dealing with change to help students understand that being a part of this classroom would require them to change their ideas about school and coming to know their classmates. Within the first hours of school, he also communicated that sharing and participation with others was a part of his definition of learning. He assigned each group of four a brief passage to read to the class from the student handbook. In this way, Bill conveyed his expectations for how students work together and set the stage for future instruction.

Establishing Classroom Norms and Rules

Another important aspect of planning for the year is establishing norms and rules. Teachers must look ahead to the kinds of knowledge, skills, and materials students will need and then use this information to plan rules and procedures. If they are to participate effectively, students must know the following:

- How and when to move from group to group
- What the appropriate noise and voice levels are for group interactions
- How, when, and from whom to get help with academic content
- How, when, and from whom to get help with procedural content
- How, when, and where to obtain needed materials (Evertson and Randolph 1999).

One way teachers establish norms of participation is by creating activities that allow students to practice participating in discussion and then recognizing student behaviors, both publicly and privately, that support the norm. Making public what is meant by a successful assignment—defined not by mere completion but by having garnered

information from others and contributed to others' collective knowledge—helps students understand how participation in the classroom manifests itself in academic work.

Participation in the classroom is also defined in other ways. Norms such as students calling on each other and contributing to the discussion without teacher direction, and students looking at the person who is speaking rather than at the teacher, might be part of the shared norms for classroom participation. Student and teacher roles become less clearly delineated. For example, in Patricia's classroom, students felt responsibility for teaching each other and for teaching Patricia during class discussions. As in the classroom described by Randolph and Evertson (1995), the "teacher" roles and tasks were sometimes delegated to students; the "student" roles were often taken on by the teacher; and teacher and students shared in the negotiation of meaning.

Thus, in the learning-centered classroom, teachers alone do not establish and support classroom norms; students also play a vital role. An example of how students communicate norms for participation occurred when a new student, Alex, arrived in Bill's room. Bill led him to his newly formed research team. Instead of waiting for directions given by the teacher, the students in his group immediately engaged Alex. Isaac, a team member, described for Alex his possible new role: "Here, you collect the research questions we are going to save." Within the first half-hour of being in the classroom, Alex knew what participation during group work meant. This experience is in contrast to entering during a more teacher-directed lesson, where Alex might have joined by sitting quietly, listening to the teacher, and working independently until the teacher had time to teach him classroom procedures.

Practicing Classroom Procedures

A third aspect of planning for the year involves practicing classroom procedures. Participating in learning-centered classrooms involves knowing complex procedures because of the variety of resources and activity structures, moving around the room, and engaging in multiple and simultaneous activities. For example, one assignment may include students discussing issues with others, locating various sources for research, writing in journals, and producing a final draft of research on the computer. Practicing parts of a more complex procedure, and allowing students to have success with each part, encourages a more thorough understanding of procedures. Bill and his partner teacher planned daily activities by which each day they gave a specific piece of the puzzle. "We built upon that piece the next day. We then would take that same piece and expand it. And the third day, we would take those two pieces and add a third."

Patricia explained how her students practiced procedures common to centers throughout the year. At the beginning of the year, Patricia led whole-group lessons about how to use computers and how to handle science equipment. Thus, when working at centers, the students would already know how to operate and take care of equipment. Patricia described the value of such preparation: "One lesson might be spent working with the computer program that goes along with a theme and teaching students how to print their work. So when they came to it [in centers], they didn't have to figure out how to do it. They could concentrate on the material. There's some security in knowing what to do."

Close teacher monitoring of aspects of complex procedures enhances students' ability to be successful once they are on their own. Once students have internalized key procedures, they are able to transcend "procedural display," which involves engaging in the behaviors without understanding the content (Bloome, Puro, and Theodorou 1989). As Patricia suggested, students and teacher can then concentrate on a deeper understanding of the subject.

In reflecting on the past year, both teachers described how they would spend even more time at the beginning of the year establishing procedures and expectations. The time spent at the beginning of the year "bought" these teachers a great deal because it made the ongoing management in their classrooms easier for the rest of the year. Teachers who take time at the beginning to teach units with lower content demands and higher emphasis on procedures are more likely to have classrooms that function effectively and that truly facilitate student learning in the long run (Emmer, Evertson, and Anderson 1980).

Handling Conflict

In classrooms where norms for behaviors are negotiated and sanctioned by the teacher and students, students play a role in ensuring adherence to social norms and handling conflict. Some conflicts may arise as a natural outcome of the creation of an environment that fosters the exchange of ideas and are a normal part of classroom life (Putnam and Burke 1992). For example, a classroom debate over a controversial topic will naturally foster strong differences of opinion among students. Other conflicts may occur as students encounter problems in learning to regulate their behavior and work responsibly with peers. According to Dewey (1938), in a collaborative community, control is part of the shared responsibility.

Although the responsibility for managing conflict rests with all members of the classroom community, teachers cannot assume that students already know how to resolve problems or how to help peers. Therefore, one task for the teacher is to create opportunities for students to learn how to manage conflict when it occurs. Patricia described a "circle the wagons" time where she would facilitate a classroom discussion about problems, such as playing during center time or not taking turns, and have the students devise class strategies to address them. The benefits of this kind of guidance played out during center time in Patricia's room. It was not uncommon to see group members correct each other on behaviors not accepted by the classroom norms. Supported by their peers, students felt responsible for maintaining the sanctioned classroom norms. Peers often had a powerful impact on others' behaviors.

During this same center time, a group of students was exploring "concepts of light" by using various lenses. Disagreement arose about who should be able to use the submarine telescope and the kaleidoscopes next. Patricia casually joined the group and facilitated conversation that helped the students solve the problem themselves by deciding to rotate the lenses among themselves. She did not assign blame or make decisions for students. In this way, Patricia facilitated the rotation of the materials without dictating whose behavior had been incorrect or how the resolution should occur.

Managing conflict also has implications for the teacher who may decide to use personal influence unobtrusively as a sanctioning technique instead of using public "desists" (Bossert 1979). One example of the use of personal influence during a private conversation occurred in Bill's classroom. Bill did not correct student misbehavior publicly because he believed this would erode the sense of community he had helped create. He handled needed conversations privately and relied on the personal rapport he had with his students to influence behavior. Bill often knelt beside students' desks and held private conversations on varied topics including, but not limited to, behavior. Because this type of interaction was common, others were not aware of the specific nature of the conversation.

Research from the student perspective (Hoy and Weinstein, 2006) indicates that students consider the types of strategies employed by Bill and Patricia to be fair and reasonable. Students consider public reprimands, harsh sanctions, and negative group sanctions for individual misbehavior as unacceptable means for handling conflict and other disciplinary problems. Students often respond badly to discipline they consider threatening, rigid, or punitive.

Whenever conflict arises, even in the most efficiently organized learning communities, it must be addressed. These examples illustrate three strategies teachers in learning-centered classrooms use for handling conflict: teaching students how to participate in handling the conflict, leading discussions among students to resolve conflict, and holding private discussions with individual students.

Sharing Authority and Responsibility

In classrooms where the teacher's focus is on controlling behavior, an emphasis on punishments and rewards is common. The decisions and rules come from an outside authority and are enforced by the power of the teacher over students. According to Henderson (2000), this "do as I say" discipline is not classroom-community leadership but rather *reactive discipline.* That is, when problems arise, teachers react to the immediate misbehavior. Such a response may extinguish the undesirable behavior for the time, but it does not address the long-term needs of students to develop the capacity for self-regulation and responsible community membership.

In the learning-centered classroom, the teacher still manages the class in the sense of establishing the environment and creating meaningful learning opportunities for students (Putnam and Burke 1992), but the teacher may not necessarily control behavior directly. Authority relationships are less hierarchical. Marshall (1990) describes them as "authoritative rather than authoritarian" (p. 99). However, the authoritative role of the teacher is often implicit.

When asked whether students ever challenged the explicit and the implicit rules of the community, Bill stated that even with the most thorough foundation work, problems could arise. He handled them on an individual basis by assessing the underlying problem of the student or group of students. Sometimes a student is disruptive because he or she is trying to figure out what it takes to "fit in" with peers. Other times it is because he or she does not comprehend the academic task at hand. Classroom management is not about "posting on the wall a one-size-fits-all discipline policy."

Students play a much greater role in supporting the academic, moral, and social norms of the classroom. In terms of academic behavior, students are more self-directed and carry greater responsibility for guiding their own learning than in classrooms where the tasks are more narrowly defined. Being responsible for one's learning also suggests that students take on responsibilities for monitoring their

own and others' social behaviors, in contrast to relying on the teacher as the sole authority for what is appropriate behavior.

An example of peers taking responsibility for the academic and social learning of themselves and others occurred during center time in Patricia's room. Patricia introduced an exploration lesson on light and magnetism. Each of the six centers dealt with some aspect of the topic, such as experimenting with the refraction of light using concave and convex lenses, and using a computer program to simulate ways different levels of light affect changes in color. Three boys were at the microscope center, where the main task was to examine prepared slides of cells using the microscopes. Two of the boys, Hal and Jermaine, decided to examine their own hair follicles under the microscope. The discovery of their hair follicles was thrilling for them and several students around them. Peers encouraged them to experiment with different objects and share their findings.

Two points are worth noting about this event. First, Patricia had designed the activity to allow for exploration; the use of microscopes was open-ended, which stimulated divergent experiences for students. Second, Hal and Jermaine were encouraged by peers to continue their hair follicle exploration. "Now let's look at dry skin!" exclaimed the third student at the center. Decisions about what to do next were guided by their peers. Their peers became sources of knowledge and monitored the progress of their activity.

This type of learning experience also implies a shift in responsibility for teachers in monitoring and supporting academic and social behaviors. Patricia had designed the center activities to be open-ended. Her management had to be equally open-ended. She was now in the role of extending the learning opportunities of students, rearticulating the goal of the lesson to individuals or groups that needed assistance, and sharpening the focus of a given lesson. She determined who needed help on a given center task, who needed access to different resources, and who needed to utilize her as a resource. In this case, Patricia was not monitoring the room with the purpose of targeting who was off-task, nor was she intervening the minute talk in a group started to diverge from the topic. However, she knew that at times, students needed to be redirected.

Similar to what we found in the classrooms of Bill and Patricia, Cohen (1994) described the research base for teachers' changing roles in student-centered classrooms. She highlighted studies that articulate the fluid and diverse nature of the teachers' role in more complex, multitask classrooms (see also Lotan, 2006). In learning-centered classrooms, students play a larger role in management and instruction. Thus, it is important to understand how both teacher and student roles change when the responsibility for learning and classroom management is shared by the teacher and students. Here, academic and social norms inform and support each other as part of classroom processes. Another study (Mehan 1979) reminds us that "participation in classroom lessons involves the integration of academic and social interaction skills" (p. 34).

Understanding and Assessing Outcomes

We have argued that management is not a precondition for content instruction; rather, it carries messages about content and should be seamlessly interwoven with instruction to attain learning goals (Evertson and Randolph 1999; Randolph and Evertson 1994). Schools are about student learning. Ironically, in recent years only slight attention has been paid to what is being learned (Hamilton 1983; Murphy 1991), but a great deal of attention has been paid to assessment. Now we take a closer look at the nature of what is learned, or the outcomes of learning, and at how assessment is integral to learning and achievement. In learning-centered classrooms, any instructional design, management strategy, or assessment is predicated on the kind of student outcomes one envisions. Table 4 summarizes changes in assumptions about student outcomes and assessment in learning-centered classrooms.

Learning Different Things

What do students learn in the kinds of classrooms we have been examining? What outcomes should we expect? Students in learning-centered classrooms do not learn the same things students learn in typical classrooms. They learn essentially different things. Recall the initial vignettes where Bill and Patricia were introduced. These teachers changed their student learning goals and decided to approach the subjects they taught in fundamentally different ways. They wanted students to construct knowledge actively, and they challenged students to attain high standards, including basic and advanced skills and subject knowledge.

As they integrated their teaching and management approaches, they changed their conceptions of authority and their relationships with their students in ways that influenced not only the students' academic learning but also their moral and social development. Instead of learning only to comply with directions, the students began to develop autonomy, including the capacity for self-regulation as well as a sense of responsibility for themselves and others. Instead of learning to work alone, and perhaps to compete with others, the students learned how to participate in a

Table 4. Benchmarks for Outcomes and Assessment

Benchmarks for…	Moving from…	Moving toward…
Achievement goals and measures	Overemphasis on standardized tests that do not validly measure multiple dimensions of achievement.	A coherent set of multiple measures that better matches and more validly measures achievement goals.
Valuing both process (learning) and product (achievement)	Outcomes of learning are final student products. Summative assessment.	Outcomes include both the process and the final products of learning. Balance of formative and summative assessment.
Responsibility for assessment	Teacher is the sole assessor.	Combination of teacher assessment, student self-assessment, and peer assessment.

community where the members collaborate in getting tasks done and care about the common good.

Learning as Both Process and Product

In addition to what students learn, there are some other important questions we must ask ourselves about learning. How do we know that students are learning? What counts as evidence? Student learning in a more teacher-directed classroom might look like students raising hands to give correct responses to teacher-led questions or like teachers evaluating what students have learned by correcting written responses to an assignment. Products such as written homework assignments and tests might be considered evidence of learning.

In learning-centered classrooms, there is an emphasis on the process as well as the products of learning. Evidence of learning might be different. The kinds of products mentioned above would count as evidence, but so would evidence relating to the process along the way. Examples of process-related learning outcomes might include multiple drafts of a research paper tracing how a student's thinking changed, increasingly sophisticated conversations with peers and teacher about science concepts, and student discussions of divergent ways of addressing a mathematics problem.

Bill emphasized the process of learning while his students conducted research. He developed a science unit about the planet Mars that started with a question: "What do we need to know in order to travel to Mars?" With Bill as a guide, students generated an exhaustive list of questions, sorted the questions into categories, and devised research groups. Each group then assigned roles to members and spent several weeks researching their topics by using expertise from others, information from the Internet, and books in the library and classroom. Throughout this process, students shared their findings within and among the groups and received feedback that served to correct mistakes and guide the next step. The final product was a feasibility study for a mission to Mars.

Bill's role in this process demonstrates a subtle and complex kind of leadership. He had to pace and manage the diverse activities involved in this unit. During research, some groups or members of the same group worked more rapidly than others did. When some members had conducted their investigations, he guided them to the next stage of the process—making an outline or creating a graphic on the computer representing some aspect of their work. Some students directed themselves; some needed more guidance. Bill's leadership also involved foreseeing potential problems or barriers. Because he was constantly monitoring student work, he shared resources and asked questions of students *before* they got "stuck." In this way, he helped students sustain momentum.

In the classrooms we observed, student assignments were complex and required multiple steps and a more sustained level of involvement. Another teacher in our study placed a visual reminder on the front board about the process of learning. It stated, "There is no such thing as being finished." She described to students how they could go back, revise, edit, and elaborate ideas in their work. Teachers who value divergent thinking, meaningful interaction with peers, and students' ability to utilize their environment to construct knowledge might ask themselves several questions: How will I know students are learning? What will I hear? What will I see?

Learning and Assessment

An in-depth analysis of ways that assessment can support learning and increase achievement is beyond the scope of

this paper (see Black and Wiliam 1998; Black and others 2002; Hart 1993; Linn, Baker, and Dunbar 1991; Pellegrino, Chudowsky, and Glaser 2001; Shepard 2000; Stiggins 1994; Wiggins 1993). Yet, at a time when there is so much emphasis on assessment, it seems important to discuss how the practices of teachers such as Bill and Patricia are congruent not only with research on learning but with the best research-based practices in assessment as well. We therefore review some key assessment principles and, using a unit on Mars taught by Bill as an example, briefly discuss how they are realized in learning-centered classrooms. We also consider how existing assessment policies might constrain teachers who aspire to create learning-centered classrooms.

Multiple Achievement Goals and Measures

Clarifying learning goals, determining the kinds of accomplishments needed to attain the goals, and communicating these expectations clearly to students are the first steps in any valid assessment (Bass and Glaser 2004; Pellegrino, Chudowsky, and Glaser 2001). The commitment that Bill and Patricia made to understanding how students learn and their rethinking of what students should learn forced them to reflect on, revise, and be more explicit about their goals.

Once goals for student achievement are clear, assessments are valid only when they actually measure the desired outcomes. Teachers with broad and rigorous learning goals develop multiple ways of assessing achievement in their classrooms that include, but are not limited to, required accountability testing. Although teachers everywhere feel pressure to "teach to" standardized tests, effective teachers take external assessments into account and weave the necessary knowledge and skills into the curriculum without allowing tests to dictate instruction (Herman 2004; Langer 1999).

Assessment issues extend beyond the classroom. State accountability systems are insufficient to communicate and assess the kinds of learning goals that Bill and Patricia developed. Standardized accountability assessments are often not aligned with content standards and fail to measure achievement of more challenging academic goals (Goertz 2001; Herman 2004). These assessments also do not measure achievement of the kinds of moral and social goals that matter in learning-centered classrooms. It is not clear how or at what level nonacademic outcomes should be assessed. Teachers cannot be expected to reconceptualize learning, instruction, and management without supportive assessment policies at the school, district, and state levels. Research suggests the need for multiple standardized and nonstandardized assessments to track learning and validly measure the multiple dimensions of achievement (Baker 2003; Herman 2004).

Tracking Progress and Providing Feedback

Assessment is integral to learning. In learning-centered classrooms, teachers engage in both summative and formative assessment. Summative assessment measures achievement at the end of a learning sequence. Formative assessment measures and guides learning as it progresses. It helps teachers understand the learner's starting point, an important step because new knowledge always builds on prior knowledge. It provides ongoing feedback needed by teachers, to guide their instruction, and students, to guide their work (Bass and Glaser 2004; Black 1998; Pellegrino, Chudowsky, and Glaser 2001; Shepard 2001). A balanced emphasis on both formative and summative assessment is consistent with the notion that both the process and products of learning matter.

Bill's approach to the teaching of writing is illustrative. During the Mars project, and periodically throughout the year, Bill engaged students in discussions about how they might know when they were ready to write their reports. He did not assume that they would know when they were ready. For example, he guided them to consider whether they had sufficient information. He shared pieces of work that represented various stages of readiness. From time to time, the class would discuss what an outline might look like if the author were ready to write.

During the writing phase of Bill's unit on Mars, students engaged in an ongoing process of reflection and self-assessment in which Bill negotiated with students and guided them at key points. Students read their research journals and highlighted information pertinent to their topic. At this point, if students decided they needed more information, they researched their topics in the library or classroom. If they decided their information sufficiently covered the topic, they proceeded to the outlining stage. The same process occurred at each of the other stages—making an outline, making a rough draft, and revising and editing the draft. This ongoing formative assessment was a means for determining what had been learned and what else was needed. It gave structure to the recursive nature of the writing process.

Although often neglected in U.S. classrooms, there is considerable evidence that formative assessment is an essential component of classroom work that facilitates learning and can substantially raise student achievement (Black and Wiliam 1998).

Sharing Responsibility for Assessment

In classrooms where authority is shared and student autonomy is valued, it makes sense to share responsibility for assessment. Sharing this responsibility enhances student learning. When students engage in self-assessment and peer assessment, they develop a better understanding of learning goals, internalize the criteria for high-quality work, and develop metacognitive skills. Students will not be able to assess their own or peers' work unless the teacher devotes considerable effort to teaching them assessment skills (Black and others 2002; Pellegrino, Chudowsky, and Glaser 2001). Successful use of student assessment in classrooms requires a combination of careful teacher guidance and respect for student autonomy.

In the classrooms we observed, assessment was not the solitary purview of the teacher. The responsibility for assessment was shared. Bill made decisions about when he would assess student work and provide feedback and when he would allow students to assess their own progress. Although he gave his students considerable latitude in organizing their research, Bill reviewed the students' work after they wrote their outlines for the Mars project. This "stepping out" and "stepping in" was a part of his judgment about how and when to guide student learning more directly. He tried to balance teacher-influenced assessment and student self-assessment.

Designing learning activities that are more open-ended and ambiguous suggests that both the products of the assignment and the process for dealing with it are often highly divergent. Because Bill wanted students to experience ownership of their ideas, he did not begin with an exact image of the outcome of their work. He traded off the ability to predict the final product for the opportunity to allow students to find their own voices and motivations for exploring ideas in greater depth. But Bill did not make his classroom into a place where "anything goes." He had rigorous quality criteria for the end product as well as for the process of getting there. These included evidence of thorough research, use of multiple resources, conferencing with peers and the teacher, and expectations for a polished product. Bill taught his students criteria for self-judging.

Continuing Dilemmas

A clearer picture of management in learning-centered classrooms is beginning to emerge, but many questions remain. Where do practitioners go from here? The teachers we observed described how shifting their perspective on student learning and changing classroom practice involved wrestling with many core issues. They made significant changes in their classrooms, but they continued to struggle with dilemmas. These dilemmas included envisioning new kinds of learning experiences, balancing the predictable and unpredictable nature of learning, and negotiating their own stepping in and stepping out of their involvement in learning based on student needs.

As teachers reconceptualize learning—or learn to see learning differently—their perspective on the intellectual work of teaching changes. The teachers we described bought in to the idea that emphasizing concepts and principles, helping students build connections among concepts, and focusing on the processes involved in problem solving were essential for student learning. Their role in facilitating discourse looked very different from how it would in classrooms where the emphasis was almost exclusively on products and certain answers (see Brown and Campione 1994; Marshall 1992). As their practice changed, these teachers continued to struggle with questions that included the following: How can we help students understand concepts such as the connectedness of their environment? How can we facilitate classroom discourse to match changing conceptions of student learning?

A second dilemma that teachers face is finding a balance in how active they should be in guiding students. Bill and Patricia struggled with the degree to which they should relinquish their authority and control over instructional issues. They were constantly renegotiating their own stances. The constant and fluid nature of teacher decision making posed dilemmas about when to step in and be more directive during instruction, when to act gently as a guide, and when to step out and let student learning take its own course. The teachers we studied described how difficult it was sometimes not to step in when they thought students should take a different course of action, but they believed that allowing students to make decisions for themselves and accept the consequences were part of the learning process. These teachers constantly had to ask themselves a key question: How do we walk the fine line between providing guidance and dictating the outcome?

Dealing with the predictability and unpredictability of student learning is a third dilemma that teachers face. The prior experiences of these teachers were based on knowing lesson objectives, controlling the lesson pacing, and predetermining lesson outcomes. Embracing the unpredictable nature of learning-centered instruction was no small task. When they negotiated the content and process of lessons with students and valued student ownership of ideas, teachers gave up predictability of lesson outcomes. Although they recognized that the processes and products

students were creating would be diverse and unpredictable, they continually asked themselves the following questions: By what standards should student learning and the products of it be evaluated? Who should assess it and how?

For other teachers interested in learning-centered classrooms, at different grade levels and in diverse contexts, we can anticipate additional dilemmas. Patricia worked in a self-contained elementary classroom, and Bill shared his middle school students with a partner teacher. Bill's partner was less innovative but supportive of the changes Bill was trying to make. In departmentalized middle or high school settings, where students navigate between different classrooms, creating coherent norms, expectations, and demands from one classroom to another, reconceptualizing management along the lines discussed here might present significant challenges and require teacher collaboration. Research on management in high schools that is grounded in learning theory has yet to be conducted.

Despite the difficulties, secondary teachers should consider making changes because student–context mismatches appear to increase in the upper grades. Studies of adolescent development suggest that as students get older, they desire greater control of their own educational experiences. Paradoxically, however, they may experience a more controlling environment as they make the transition from elementary to middle school (Eccles and others 1991). Teachers, especially in middle and high schools, face a very difficult dilemma: How do we provide our students with an age-appropriate balance of autonomy and control?

Student diversity poses another challenge and dilemma. Research on teaching indicates that the kinds of practices we have described are effective with diverse students (Cohen, McLaughlin, and Talbert 1993; Tharp and others 2000). We conducted our case studies of classroom management in diverse classrooms. More empirical research is needed, however, to determine how learning, teaching, and classroom management interact in classrooms with diverse teachers as well as different mixes of students.

In principle, however, if we want all students to embrace diversity, they must know how to work with different types of people and to participate in a variety of contexts. These will inevitably include some contexts that are initially comfortable and others that become familiar in school. A classroom that affords a variety of roles for students and allows for different ways of doing things involves some degree of "culture switching" for all students (Tharp and others 2000). The diverse activity settings of learning-centered classrooms challenge all students to expand their repertories for accomplishing work and relating to others. Teachers might ask themselves this question: Do I manage my classroom in a way that prepares my students to live in a diverse world?

Although research indicates that learning-centered management strategies have positive effects on student motivation, learning, and performance, parents and teachers in the United States tend to believe that controlling, teacher-directed strategies are more effective. These inaccurate but deeply held beliefs persist even when adults are provided with disconfirming evidence. Teachers who are more controlling are perceived as more effective, and they receive higher ratings despite their students' lower performance (Boggiano and Katz 1991). Thus, another dilemma arises for extended school communities, including teachers, students, administrators, and parents interested in establishing learning-centered classrooms: Is there a match or a mismatch of perceptions about best practice and actual evidence of learning?

Several teachers with whom we worked were less successful in creating learning-centered environments. They were unsure about how to manage the complexity of simultaneous and varied learning opportunities in their classrooms. They had a tendency to exert authoritarian control when things went awry or situations became too ambiguous. "Back in your seat!" was how one teacher responded on such occasions. This teacher had few opportunities in her daily work life to reflect with her colleagues on changing images of learning and how these might be realized in classrooms.

The experiences of the less successful teachers bring into focus dilemmas not only for these individuals but also for the schools and school systems in which their classrooms are embedded. For such teachers to become more successful, schools must become learning organizations that support the continued growth and learning of all their members—especially teachers. Schools—or more likely in secondary schools, departments—that are continually learning become strong professional communities and offer opportunities for teachers to refine and improve their teaching practice throughout their work lives (McLaughlin and Talbert 2001). Thus, our final dilemma is for administrators and policymakers as well as for teachers: How can teachers be supported in their efforts to learn so they can improve instruction and classroom management?

Conclusion

As our conceptions of learning change, so must our understanding of how to manage learning. We have described

our experiences with teachers who are trying to create more learning-centered environments, and we recognize that our understanding is evolving. By comparing management in different settings and suggesting possible conceptual benchmarks for management in learning-centered classrooms, we hope to support teachers in their work.

In learning-centered classrooms, teaching and classroom management are intentionally integrated and work together to support student learning. Teachers have thought deeply about their goals for all students. They have high standards for student learning and achievement in academic subjects, and they take seriously their roles in the social and moral development of their students. Their classrooms have the look and the feel of a learning community in which all members actively participate. Teachers in these classrooms are engaged in continuous professional learning and improvement.

As they work to improve their practice, teachers often rely solely on personal experience because they do not have opportunities to engage in conversations with colleagues or to access and utilize external resources, including the kind of research that motivated Bill and Patricia to think about change. Personal experiences cannot be teachers' only tools to address the demands and tensions they are confronted with daily. To be learners themselves, teachers need opportunities to immerse themselves in the types of experiences they desire for students: "to build, to analyze, to solve, to cooperate—in short, to try out the kinds of activities they might extend to their students" (Smith 1996, p. 690). They need occasions to read professional literature, access research theory, study exemplars of best practice, engage in reflective discussion with peers, and make sense of complex classroom events. Otherwise, the potential for developing better strategies for working with students is limited.

References

Baker, E. L. 2003. *Multiple Measures: Toward Tiered Systems.* CSE Report 607. Los Angeles: University of California, Los Angeles (UCLA), National Center for Research on Evaluation, Standards, and Student Testing.

Bass, K. M., and R. Glaser. 2004. *Developing Assessments to Inform Teaching and Learning.* CSE Report 628. Los Angeles: UCLA National Center for Research on Evaluation, Standards, and Student Testing.

Battistich, V. 1995. "Schools as Communities, Poverty Levels of Student Populations, and Students' Attitudes, Motives and Performance: A Multilevel Analysis." *American Educational Research Journal* 32(3): 627–58.

Black, P. 1998. *Testing: Friend or Foe? Theory and Practice of Assessment and Testing.* London: Falmer.

Black, P., and D. Wiliam. 1998. "Inside the Black Box: Raising Standards through Classroom Assessment." *Phi Delta Kappan* 80(2): 139–48.

Black, P., C. Harrison, C. Lee, B. Marshall, and D. Wiliam. 2002. *Working inside the Black Box: Assessment for Learning in the Classroom.* London: Department of Education and Professional Studies, Kings College.

Bloome, D., P. Puro, and E. Theodorou. 1989. "Procedural Display and Classroom Lessons." *Curriculum Inquiry* 19(3): 265–91.

Boggiano, A., and P. Katz. 1991. "Maladaptive Achievement Patterns in Students: The Role of Teachers' Controlling Strategies." *Journal of Social Issues* 47(4): 35–51.

Bossert, S. 1979. *Tasks and Social Relationships in the Classroom: A Study of Instructional Organization and its Consequences.* New York: Cambridge University Press.

Bransford, J. D., A. L. Brown, and R. R. Cocking. 1999. *How People Learn: Brain, Mind, Experience, and School.* Washington, DC: National Academy Press.

Brophy, J. E., and T. L. Good. 1986. "Teacher Behavior and Student Achievement." In *The Handbook for Research on Teaching,* ed. M. C. Wittrock, 328–75. New York: Macmillan.

Brown, A. L., and J. C. Campione. 1994. "Guided Discovery in a Community of Learners." In *Classroom Lessons: Integrating Cognitive Theory and Classroom Practice,* ed. K. McGilly, 229–71. Cambridge, MA: MIT Press.

Bruer, J. T. 1993. *Schools for Thought: A Science of Learning in the Classroom.* Cambridge, MA: MIT Press.

Cohen, D. K., M. W. McLaughlin, and J. E. Talbert, eds. 1993. *Teaching for Understanding.* San Francisco: Jossey-Bass.

Cohen, E. G. 1994. "Restructuring the Classroom: Conditions for Productive Small Groups." *Review of Educational Research* 64(1): 1–35.

Danforth Working Group on Professionalism in Education. 1995. *Practical Professionalism: Support for Student Learning through Professional Development.* St. Louis, MO: Author.

Darling-Hammond, L. 1996. "The Quiet Revolution: Rethinking Teacher Development." *Phi Delta Kappan* 53(6): 4–10.

David, T. G. 1979. "Students' and Teachers' Reactions to Classroom Environments." Doctoral dissertation, Department of Education, University of Chicago, Chicago, Illinois.

Dewey, J. 1938. *Experience and Education.* New York: Macmillan.

Diaz, R. M., C. J. Neal, and M. Amaya-Williams. 1990. "The Social Origins of Self-Regulation." In *Vygotsky and Education,* ed. L. C. Moll, 127–54. New York: Cambridge University Press.

Eccles, J. S., C. M. Buchanan, C. Flanagan, A. Fuligni, C. Midgley, and D. Yee, 1991. "Control versus Autonomy during Early Adolescence." *Journal of Social Issues* 47(4): 53–68.

Emmer, E. T., C. M. Evertson, and L. M. Anderson. 1980. "Effective Classroom Management at the Beginning of the School Year." *The Elementary School Journal* 80: 219–31.

Evertson, C. M., and E. T. Emmer. 1982. "Effective Management at the Beginning of the School Year in Junior High Classes." *Journal of Educational Psychology* 74: 485–98.

Evertson, C. M., E. T. Emmer, J. P. Sanford, and B. S. Clements. 1983. "Improving Classroom Management: An Experiment in Elementary Classrooms." *The Elementary School Journal* 84: 173–88.

Evertson, C. M., and C. H. Randolph. 1999. "Perspectives on Classroom Management in Learning-Centered Classrooms." In *New Directions for Teaching Practice and Research,* ed. H. Waxman and H. Walberg, 249–68. Berkeley, CA: McCutchan.

Evertson, C., and C. Weinstein, eds. 2006. *Handbook of Classroom Management: Research, Practice, and Contemporary Issues.* Mahwah, NJ: Erlbaum.

Florio-Ruane, S. 1989. "Social Organization of Classes and Schools." In *Knowledge Base for the Beginning Teacher,* ed. M. C. Reynolds, 163–72. Oxford, UK: Pergamon.

Gallego, M., and M. Cole. 2001. "Classroom Cultures and Cultures in the Classroom." In *The Handbook of Research on Teaching,* 4th ed., ed. V. Richardson, 951–97. New York: Macmillan.

Goertz, M. E. 2001. "Standards-Based Accountability: Horse Trade or Horse Whip?" In *From the Capitol to the Classroom: Standards-Based Reform in the States,* ed. S. H. Fuhrman, 39–59. Chicago: University of Chicago Press.

Hamilton, S. F. 1983. "The Social Side of Schools: Ecological Studies of Classrooms and Schools." *The Elementary School Journal* 83(4): 313–34.

Hansen, J. 1987. *When Writers Read.* Portsmouth, NH: Heinemann.

Hansen, J. T. 2001. "Teaching as a Moral Activity." In *Handbook of Research on Teaching,* 4th ed., ed. V. Richardson, 826–57. New York: Macmillan.

Henderson, J. G. 2000. *Reflective Teaching: Professional Artistry through Inquiry,* 3rd ed. Englewood Cliffs, NJ: Prentice-Hall.

Herman, J. L. 2004. "The Effects of Testing on Instruction." In *Redesigning Accountability Systems for Education,* ed. S. H. Fuhrman and R. F. Elmore, 141–66. New York: Teachers College Press.

Hoy, A. W., and C. S. Weinstein. 2006. "Students' and Teachers' Knowledge and Beliefs about Classroom Management." In *Handbook of Classroom Management: Research, Practice, and Contemporary Issues,* ed. C. Evertson and C. Weinstein. Mahwah, NJ: Erlbaum.

Jackson, P. W. 1968. *Life in Classrooms.* New York: Teachers College Press.

Johnson, N. B. 1985. *Westhaven: Classroom Culture and Society in a Rural Elementary School.* Chapel Hill: University of North Carolina Press.

Lambert, N. M. 1995. "Seating Arrangements." In *International Encyclopedia of Teaching and Teacher Education,* ed. L. W. Anderson, 196–200. Cambridge, UK: Cambridge University Press.

Langer, J. 1999. *Beating the Odds: Teaching Middle and High School Students to Read and Write Well.* Albany, NY: National Research Center on English Learning and Achievement, SUNY.

Linn, R., E. Baker, and S. Dunbar. 1991. "Complex, Performance-Based Assessment: Expectations and Validation Criteria." *Educational Researcher* 20: 15–22.

Lotan, R. 2006. "Managing Groupwork." In *The Handbook of Classroom Management: Research, Practice, and Contemporary Issues,* ed. C. Evertson and C. Weinstein. Mahwah, NJ: Erlbaum.

Marshall, H. H. 1990. "Beyond the Workplace Metaphor: Toward Conceptualizing the Classroom as a Learning Setting." *Theory into Practice* 29: 94–101.

Marshall, H. H., ed. 1992. *Redefining Student Learning: Roots of Educational Change.* Norwood, NJ: Ablex.

McCaslin, M., and T. L. Good. 1992. "Compliant Cognition: The Misalliance of Management and Instructional Goals in Current School Reform." *Educational Researcher* 21(3): 4–17.

McLaughlin, M. W., and J. E. Talbert. 2001. *Professional Communities and the Work of High School Teaching.* Chicago: University of Chicago Press.

Mehan, H. 1979. *Learning Lessons: Social Organization in the Classroom.* Cambridge, MA: Harvard University Press.

Murphy, J. 1991. *Restructuring Schools: Capturing and Assessing the Phenomena.* New York: Teachers College Press.

Oser, F. K. 1994. "Moral Perspectives on Teaching." In *Review of Research in Education 20,* ed. L. Darling-Hammond, 57–127. Washington, DC: American Educational Research Association.

Pellegrino, J. W., N. Chudowsky, and R. Glaser. 2001. *Knowing what Students Know: The Science and Design of Educational Assessment.* Washington, DC: National Academy Press.

Piaget, J. 1971. *Biology and Knowledge: An Essay on the Relations between Organic Regulations and Cognitive Processes.* Chicago: University of Chicago Press.

Putnam, J., and J. B. Burke. 1992. *Organizing and Managing Classroom Learning Communities.* New York: McGraw-Hill.

Randolph, C. H., and C. M. Evertson. 1994. "Images of Management for Learner-Centered Classrooms." *Action in Teacher Education* 16(1): 55–63.

Randolph, C. H., and C. M. Evertson. 1995. "Managing for Learning: Rules, Roles, and Meanings in a Writing Class." *Journal of Classroom Interaction* 30(2): 17–25.

Resnick, L. B., and D. P. Resnick. 1991. "Assessing the Thinking Curriculum: New Tools for Education Reform." In *Future Assessment: Changing Views of Aptitude, Achievement and Instruction,* ed. B. R. Gifford and M. C. O'Connor, 37–75. Boston, MA: Academic Press.

Shavelson, R. J., and L. Towne. 2002. *Scientific Research in Education.* Washington, DC: National Academy Press.

Shepard, L. A. 2000. "The Role of Assessment in a Learning Culture." *Educational Researcher* 29(7): 4–14.

Shepard, L. A. 2001. "The Role of Classroom Assessment in Teaching and Learning." In *Handbook of Research on Teaching,* ed. V. Richardson, 1066–1101. Washington, DC: American Educational Research Association.

Short, K. G. 1998. "Creating a Community of Learners." In *Talking about Books,* ed. Kathy G. Short and Kathryn M. Pierce, 33–52. Portsmouth, NH: Heinemann.

Smith, M. A. 1996. "The National Writing Project after 22 Years." *Phi Delta Kappan* 77(10): 688–93.

Solomon, D., M. S. Watson, and V. A. Battistich. 2001. "Teaching and Schooling Effects on Moral/Prosocial Development." In *Handbook of Research on Teaching,* 4th ed., ed. V. Richardson, 566–603. New York: Macmillan.

Stiggins, R. J. 1994. *Student-Centered Classroom Assessment.* Upper Saddle River, NJ: Prentice-Hall.

Tharp, R. G., P. Estrada, S. S. Dalton, and L. A. Yamauchi. 2000. *Teaching Transformed: Achieving Excellence, Fairness, Inclusion, and Harmony.* Boulder, CO: Westview Press.

Watson, M., and L. Ecklen. 2003. *Learning to Trust.* San Francisco, CA: Jossey-Bass.

Wenger, E. 1999. *Communities of Practice: Learning, Meaning, and Identity.* New York: Cambridge University Press.

Wiggins, G. P. 1993. *Assessing Student Performance.* San Francisco, CA: Jossey-Bass.

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