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## Renewing Our Schools *An emerging Consensus*

This is an agitating, painful, and exciting time for America's schools. Since the mid-1980s, we have been enjoying and enduring the most intense period of educational reform in this century. Everyone has gotten into the act: politicians, parents, teachers, taxpayers, teacher educators, social critics, journalists, and researchers—all are passionately involved in school renewal. Education-oriented cover stories, blue-ribbon commissions, government reports, exposes, recommendations, talk shows, documentaries, conferences, jokes, gossip, and legislation abound. Indeed, we are writing this book during the reign of yet another "Education President," in a state with a self-declared "Education Governor," and in a city in the middle of the most visible school decentralization experiment in American history. For the moment, at least, education is the issue of the day.

This universal worry about the health of the public schools was deliciously portrayed in a *New Yorker* cartoon. A horrifying, ten-story-tall reptile, presumably from outer space, rampages through a downtown square as crowds of citizens run for their life in every direction. One man at the head of the fleeing crowd turns to a fellow runner and comments: "Just when city-wide reading scores were edging up!"

While all the heartfelt public concern about education is certainly useful, very little of this sudden interest has been admiring, pleasant, or even civil. Our national reappraisal of education began with widespread anger and worry about low test scores and the perceived slippage in American Workers' global competitiveness. Indeed, the education crisis of the 1990s may have been fueled as much by the Hondas cruising America's highways as by the downhill ride of Scholastic Aptitude Test (SAT) scores. Much of the contemporary school reform movement's energy has been spent on blaming and finger-pointing: responsibility for our nation's educational disappointments has been enthusiastically and variously apportioned among TV, video games, single-parent families, ill-trained teachers, urban gangs, bad textbooks, sexual permissiveness, drugs, schools of education, and dozens of other causes.

Undeniably, the current debate about schools has included plenty of nonconstructive turmoil and rancor. Still, on balance, those of us who work in schools must welcome the scrutiny and even the fractiousness. After all, it is a rare and overdue moment when education leaps to the top of the national agenda—and it is during unstable periods like this one that true change often begins. So no matter what misgivings we might have about the current era of school reform, one thing is sure; today, millions of Americans are thinking hard and talking urgently about their school. And that is welcome.

## **What About Learning and Teaching?**

But one topic is too often missing from this loud, ongoing conversation: **what** shall we teach and **how**? At first, it seems unlikely that amid all this furor the substance of education could somehow be overlooked, but the record of the reform era so far sadly bears this out. Except for the standards documents we'll soon be describing, most official discourse has concerned the organizational features of schooling and "accountability" for its outcomes, rather than its content and procedures. From the trend-setting *A Nation at Risk* onward, most major reports, commission papers, books, and state and local reform efforts have focused on the logistics of schooling rather than its content and process: the central concerns have been the length of the school day and year, the credentials and pay of teachers, the roles and duties of principals, the financing of schools and of school reform, forging connections to the worlds of work and higher education, articulating educational policy with national defense, and, above all, the testing and measurement of school "products." Indeed, the federal government's touted "Goals 2000" reform package challenges nothing in the traditional ingredients or processes of schooling, and promises only one direct governmental action in the name of educational renewal: a set of national examinations at fourth and eighth grades.

Writing in *Educational Leadership*, our colleague James Beane addressed the peculiar imbalance in contemporary school reform debates. "It seems that no matter how radical restructuring talk may otherwise be, it almost never touches upon the curriculum itself. Much of what passes for restructuring is, in a sense, new bottles for old wine that has not gotten better with age. How is it that we can claim to speak of school reform without addressing the centerpiece of schools, the curriculum?" (1991). With the exception of a few school leaders like Beane and the commercial purveyors of "cultural literacy" (Bennett 1993; Hirsch 1996), surprisingly few reformers have paid serious attention to the **content** of schooling. What should schools teach? What should be the curriculum? What subject matter should children encounter and when? If our schools indeed have failed as utterly as so many blue-ribbon commissions claim, then immediate changes in the curriculum would seem advisable.

Similarly, the methods of teaching have been thoroughly ignored in the current debate. Except for TheodoreSizer and Deborah Meier, few prominent reformers have focused systematically on teaching **processes**—the nature of the interactions between kids and teachers in school. Again, if our educational system truly has collapsed, then the careful critique and revision of instructional methods would seem an urgent priority. We should be figuring out how to rearrange the basic ingredients of school—time and space and books and ideas and people—to maximize student learning. Instead, the topic of teaching methods is not just ignored, it is often explicitly ridiculed by the accountability reformers as a time-wasting distraction best left to the pea-brained teacher educators in their despised colleges of education.

This neglect of what and how we teach has predictable results: nothing changes. After nearly ten years of zealous "reform," students are still sitting in pretty much the same classrooms with the same teachers, divided into the same instructional groups, doing the same activities, working through the same textbooks and worksheets, and getting pretty much the same scores on the many new standardized test that are the only tangible legacy of a decade's exhortation. In a backhanded and ironic way, the

mainstream school reform movement actually has ended up **endorsing** old modes of schooling. The accountability enthusiasts have never really questioned the basic day-to-day process and content of American education; instead, they simply assume that if the same activities are conducted within an enhanced framework—with more time, more teachers, more tests—then student achievement and outcomes will improve. In this version of reform, you simply do the same things harder, longer, and stronger. Now, this can be a perfectly fine approach to change if what you already are doing works well and merely requires intensification. Unfortunately, we are coming to understand that the basic things we do in American school—what we teach and how—**don't** work: we don't empower kids, don't nurture literacy, don't produce efficient workers, don't raise responsible citizens, don't create a functional democracy. If we really want to change student achievement in American school, we must act directly on teaching and learning. More of the same is not the answer.

## **Real Reform**

While legislatures, blue-ribbon panels, and media sages have tinkered with the logistics of education, another quieter school reform movement has been growing. Our national curriculum research centers, a dozen subject-matter professional associations, many capable individual researchers, and thousands of on-the-line classroom teachers have been struggling to determine “what works” in the different school subjects and to clearly define “best educational practice” in each teaching field. These groups and individuals share a curriculum-driven view of education: they assume that if American schools are to be genuinely reformed, we must begin with a solid definition of the content of the curriculum and the classroom activities through which students may most effectively engage that content. Unlike the better publicized (and often more official) reformers, they do not see the failure of American schools as an administrative breakdown, but rather as a failure of what we teach and how.

The decade of tumultuous national debate, although it certainly hasn't concentrated enough on instruction and curriculum, has nevertheless prodded further research in these areas. All the people in this alternate, uncoordinated reform movement—teachers, instructional researchers, professional associations, subject-area leaders—have been rethinking the substance, content, processes, methods, and dynamics of schooling. As a result, in virtually every school subject, we now have recent summary reports, meta-analyses of instructional recommendations. Some of these reports were produced with funding from the U.S. Department of Education, while others were independent and self-financed. Taken together, this family of authoritative documents provides a strong consensus definition of Best Practice, of state-of-the-art teaching in every critical field.

One might expect that when experts and practitioners from such disparate fields as art, science, mathematics, reading, writing, and social science sit down to define their own field's Best Practice, the results would be some very different visions of the ideal classroom, contradictory ways of organizing subject matter, and divergent models of what good teachers do. But, in fact, such polarities do **not** characterize these reports. Whether the recommendations come from the National Council of Teachers of Mathematics (NCTM), the Center for the Study of Reading, the National Writing Project,

the National Council for the Social Studies, the American Association for the Advancement of Science (AAAS), the National Council of Teachers of English (NCTE), the National Association for the Education of Young Children, or the International Reading Association (IRA), the fundamental insights into teaching and learning are remarkably congruent. Indeed, on many key issues, the recommendations from these diverse organizations are unanimous. Following is a list of these common conclusions, features that begin to define a coherent paradigm of learning and teaching across the whole curriculum.

### **Common Recommendations of National Curriculum Reports**

- LESS whole-class, teacher-directed instruction (e.g., lecturing)
- LESS student passivity: sitting, listening, receiving, and absorbing information
- LESS presentational, one-way transmission of information from teacher to student
- LESS prizing and rewarding of silence in the classroom
- LESS classroom time devoted to fill-in-the-blank worksheets, dittos, workbooks, and other “seatwork”
- LESS student time spent reading textbooks and basal readers
- LESS attempt by teachers to thinly “cover” large amounts of material in every subject area
- LESS rote memorization of facts and details
- LESS emphasis on the competition and grades in school
- LESS tracking or leveling students into “ability groups”
- LESS use of pull-out special programs
- LESS use of and reliance on standardized tests
  
- MORE experiential, inductive, hand-on learning
- MORE active learning in the classroom, with all the attendant noise and movement of students doing, talking, and collaborating
- MORE diverse roles for teachers, including coaching, demonstrating, and modeling
- MORE emphasis on higher-order thinking; learning a field’s key concepts and principles
- MORE deep study of a smaller number of topics, so that students internalize the field’s way of inquiry
- MORE reading of real texts: whole books, primary sources, and nonfiction materials
- MORE responsibility transferred to students for their work: goal setting, record keeping, monitoring, sharing, exhibiting, and evaluating
- MORE choice for students (e.g., choosing their own books, writing topics, team partners, and research projects)
- MORE enacting and modeling of the principles of democracy in school
- MORE attention to affective needs and the varying cognitive styles of individual students
- MORE cooperative, collaborative activity; developing the classroom as an interdependent community

- MORE heterogeneously grouped classrooms where individual needs are met through inherently individualized activities, not segregation of bodies
- MORE delivery of special help to students in regular classrooms
- MORE varied and cooperative roles for teachers, parents, and administrators
- MORE reliance on teachers' descriptive evaluations of student growth, including observational/anecdotal records, conference notes, and performance assessment rubrics\*

The latent agreement on these principles is so strong in the different subject fields that it seems fair to call it an **unrecognized consensus**. Although school people are often portrayed as lost and fragmented, the fact is that a remarkably consistent, harmonious vision of "best educational practice" already exists. But this emergent consensus hasn't yet been widely recognized across subject boundaries. The coherence of this vision, the remarkable overlap across fields, may be quite striking, but so far most people in government, the media, and even the educational system haven't quite grasped its significance and potential transforming power.

Admittedly, this emerging consensus is not perfectly symmetrical across the different school subjects; some fields are ahead of others. Reading and writing are probably the most advanced fields in implementing Best Practice instruction, although they were among the slowest to prepare and publish official standards. The Writing-Across-the-Curriculum and Whole Language movements, which have been solidly in place for decades, have been leading the way for practitioners and researchers alike. Although no comparably broad instructional movements yet exist in mathematics, math leaders have made a tremendous contribution with the series of NCTM standards documents published since 1987. These frameworks and guidelines have shown other fields how learning goals for children can be described in Best Practice terms—progressive, developmentally appropriate, research-based, and eminently teachable. Science educators, on the other hand, have a decades-long tradition of supporting progressive, hands-on, student-centered instruction, but less success with implementation in schools. This relative lack of impact undoubtedly reflects the low priority given to science at all levels of American education: science often gets pushed to the bottom of the curricular agenda, while worries about reading, writing, and math gobble up time, attention, funding, and the energy for staff development and curriculum reform.

- AAAS 1989 and 1993; Anderson et al. 1985; Bybee et al. 1989 and 1991; Center for Civic Education 1994; Consortium of National Arts Organizations 1994; Crafton 1996; Geography Education Standards Project 1994; Harste 1989; Hillocks 1986; IRA and NCTE 1996; Joint Schools 1994; National Research Council 1996; NCTM 1989, 1991, and 1995; National Council for the Social Studies 1994; Saunders and Gilliard 1995; Sierra-Perry 1996; Smagorinsky 1996; Wilhelm 1996

The social sciences have been especially uneven in embracing progressive practices and disseminating them throughout the profession. At first, this seems surprising, because subjects like history, civics, and geography appear to cry out for collaborative, experiential, student-centered, cognitive approaches—key structures in the emerging Best Practice paradigm. But, as we discuss further in Chapter 6, social studies education has been dragged down by its political baggage. Because this is the one school subject with the explicit duty to inculcate patriotic values and transmit “necessary” cultural information, it becomes a battleground on which partisans take nonnegotiable stands. The first draft of the national history standards, by some accounts a balanced but warts-and-all version of U.S. and world history, was voted down by the U.S. Senate after a furious media campaign waged by right-wing commentators.

For several years, the vociferous and virulent attacks of high-profile critics like E.D. Hirsch and William Bennett intimidated social studies teachers and silenced discussion. For some reason, educators rarely pointed out the obvious conflict of interest: Bennett and Hirsch, far from being judicious observers of the educational scene, are both tireless commercial vendors, marketing millions of dollars worth of “cultural literacy” products (i.e., *What Every Second-grader Should Know*, *The Book of Virtues*) to American schools and parents. Finally, after years on the defensive, the National Council for the Social Studies in 1994 issued a set of documents that, along with the revised history and geography standards, staked out a solid progressive position for social science education, despite the continuing fulminations of royalty-rich pundits.

## **Principles of Best Practice Learning**

As the More/Less chart suggests, there is more afoot here than the congruence of certain teaching recommendations from the traditionally separate fields of the American school curriculum. A more general, progressive educational paradigm is emerging across content boundaries and grade levels. This coherent philosophy and spirit is reaching across the curriculum and up through the grades. Whether it is called Best Practice, or Whole Language, or integrated learning, or interdisciplinary studies, by some other name, or by no name at all, this movement is broad and deep and enduring. It is strongly backed by educational research, draws on sound learning theory, and, under other names, has been tested and refined over many years.

What is the nature of this new/old curriculum? What assumptions and theories about learning inform this approach? What is the underlying educational philosophy of this re-emergent paradigm? If we study the More/Less chart more systematically, we can identify thirteen interlocking principles, assumptions, or theories that model of education.

**STUDENT-CENTERED.** The best starting point for schooling is young people’s real interests; all across the curriculum, investigating students’ own questions should always take precedence over studying arbitrarily and distantly selected “content.”

**EXPERIENTIAL.** Active, hands-on, concrete experience is the most powerful and natural form of learning. Students should be immersed in the most direct possible experience of the content of every subject.

**HOLISTIC.** Children learn best when they encounter whole ideas, events, and materials in purposeful contexts, not by studying subparts isolated from actual use.

**AUTHENTIC.** Real, rich, complex ideas and materials are at the heart of the curriculum. Lessons or textbooks that water-down, control, or oversimplify content ultimately disempower students.

**EXPRESSIVE.** To fully engage ideas, construct meaning, and remember information, students must regularly employ the whole range of communicative media—speech, writing, drawing, poetry, dance, drama, music, movement, and visual arts.

**REFLECTIVE.** Balancing the immersion in experience and expression must be opportunities for learners to reflect, debrief, abstract from their experiences what they have felt and thought and learned.

**SOCIAL.** Learning is always socially constructed and often interactional; teachers need to create classroom interactions that “scaffold” learning.

**COLLABORATIVE.** Cooperative learning activities tap the social power of learning better than competitive and individualistic approaches.

**DEMOCRATIC.** The classroom is a model community; students learn what they live as citizens of the school.

**COGNITIVE.** The most powerful learning comes when children develop true understanding of concepts through higher-order thinking associated with various fields of inquiry and through self monitoring of their thinking.

**DEVELOPMENTAL.** Children grow through a series of definable but not rigid stages, and schooling should fit its activities to the developmental level of students.

**CONSTRUCTIVIST.** Children do not just receive content; in a very real sense, they re-create and reinvent every cognitive system they encounter, including language, literacy, and mathematics.

**CHALLENGING.** Students learn best when faced with genuine challenges, choices, and responsibility in their own learning.

The remainder of this book, as it discusses each subject in the school curriculum, spells out what these key principles really mean in practice. However, to explain why these ideas are so important, we'll elaborate briefly on them now.

***Schooling should be STUDENT-CENTERED, taking its cues from young people's interests, concerns, and questions.*** Making school student-centered involves building on the natural curiosity children bring to school and asking kids what they want to learn. Teachers help students list their own questions, puzzles, and goals, and then structure for them widening circles of experience and investigation of those topics. Teachers infuse into such kid-driven curriculum all the skills, knowledge, and concepts that society mandates, though always in original sequences and combinations. But student-centered schooling does not mean passive teachers who respond only to students' explicit cues. Teachers also draw on their deep understanding of children's developmentally characteristic needs and enthusiasms to design experiences that lead students into areas they might not choose, but that they will enjoy and engage in deeply. Teachers also bring their own interests and enthusiasms into the classroom to share, at an age-appropriate level, demonstrating how a learner gets involved with ideas. Thus, student-centered education begins by cordially inviting children's whole, real lives into the classroom; it solicits and listens to their questions; and it provides a balance between activities that follow children's lead and ones that lead the children.

***As often as possible, school should stress learning that is EXPERIENTIAL.*** Children learn most powerfully from doing, not just hearing about, any subject. This simple psychological fact has different implications in different subjects. In writing and reading, it means that students grow more by composing and reading whole, real texts, rather than doing worksheets and exercises. With mathematics, it means working with objects—sorting, counting, and building patterns of number and shape; and carrying out real-world projects that involve collecting data, estimating, calculating, drawing conclusions, and making decisions. In science, it means conducting experiments and taking field trips to investigate natural settings, pollution problems, and labs at nearby factories, universities, or hospitals. For social studies, students can conduct opinion surveys, prepare group reports that teach the rest of the class, and role-play famous events, conflicts, and political debates. In all school subjects, the key is to help students think more deeply, to discover the detailed implications of ideas through direct or simulated immersion in them.

***Learning in all subjects needs to be HOLISTIC.*** In the traditional American curriculum, information and ideas are presented to children in small "building blocks." While the teacher may find these subparts meaningful and may know they add up to an eventual understanding of a subject, their purpose and significance aren't always apparent to the children. This part-to-whole approach undercuts motivation for learning because children don't perceive why they are doing the work. It also deprives children of an essential condition for learning—encountering material in its full, lifelike context. When the "big picture" is put off until later, later often never comes. We know that children do, in fact, need to acquire skills and abilities that are parts of a larger whole—skills such as spelling and multiplying and evaluating good evidence for written arguments. But

holistic learning means that children gain these abilities most effectively by going from whole-to-part, when kids read whole books, write whole stories, and carry out whole investigation of natural phenomena. Brief lessons on the use of quotation marks are learned fastest and remembered longest when the class writes scripts for plays they've decided to stage. And, meanwhile, the focus on a rich whole text or inquiry ensures that children are simultaneously making far more mental connections—albeit often unconscious ones—than the teacher ever has time to directly teach within the one or two or three “skills” that she covers.

***Learning activities need to be AUTHENTIC.*** There is a natural tendency in schools to offer children simplified materials and activities so they are not overwhelmed with complexity. But too often we underestimate children and oversimplify things, creating materials or situations that are so synthetic as to be unlikelike—and, ironically, educationally worthless. The most notorious examples of this, of course, are the linguistically deprived stories appearing in many basal reading texts. We now understand that children routinely handle phenomenal complexity in their own daily lives—indeed, kids' learning of the thousands of abstract rules underlying spoken language is proof of their ability to sort out the complex tangle of data the real world inevitably presents. What does authenticity mean in the curriculum? In reading, it means that the rich, artful, and complex vocabulary of Grimm's fairy tales is far more educational than dumbed-down “decodable” versions in trendy commercial reading programs. In math, it means the children might investigate ways of dividing a pizza or a cake, rather than working the odd-numbered fractions problems at the end of the chapter. Authenticity also means that children are reading and writing and calculating and investigating for purposes that they have chosen, not just because the teacher gave an assignment or because a task appears in a textbook. Yes, teachers can and should sometimes give assignments that a whole class can work on, to share and compare the resulting ideas they've generated. But if teachers don't also take steps to turn schoolwork into something the children truly own, then the results will be mechanical, more an exercise in dutifully following directions than in real valuing of thought and knowledge.

***Students need to learn and practice many forms of EXPRESSION to deeply engage ideas.*** Traditional school has been reception-based; that is, students are supposed to sit quietly and listen while the teacher talks, presents, tells, shows, and explains—supposedly “filling the up” with the curriculum. We now understand that learning doesn't work this way and we recognize the sad irony of schools in which teachers are the ones doing all the expressing. To understand, own, and remember ideas, students need not just to receive, but also to express them. Expressing ideas can mean something as simple as talking in pairs and informal peer groups, all the way to preparing and presenting a formal, public report or artifact that embodies the concepts under study. When a learner can successfully translate an idea from one medium to another—for example, expressing the sixth amendment to the U.S. Constitution in a dramatic skit or a sonnet—we realize that she possesses the information in a solid and flexible way. And aside from the cognitive benefits of an expression-rich instruction, we acknowledge that expression is energizing and that many children love to perform. Indeed, it is a natural human tendency to find a friendly audience and exercise your strongest medium of

expression. For all these reasons, a progressive curriculum stresses exhibitions and performances, inviting students to express ideas through the widest possible array of media.

***Effective learning is balanced with opportunities for REFLECTION.*** Too often, school is a process of stimulus-response. The work cycle is: “Do it, turn it in, get your grade, forget it, and move on.” But learning is greatly strengthened when children have time to look back on what they’ve learned, to digest and debrief, to recognize broader principles, to appreciate their accomplishments and understand how they overcame obstacle. Of course, it is hard to think reflectively in the middle of doing an experiment or revising a draft, but afterwards students can review what happened and apply what they learned to future efforts. Do children need to be introduced to this reflective process? No—we can find evidence of it in their play and family interactions all the time. But kids need **time** set aside for reflection, and they need to become consciously aware of its power and their ability to use it. Adding reflective thinking to school learning is one of the simplest of all instructional innovations. Although there are other more elegant approaches, many teachers have found that the simple addition of a student learning log for each subject, with time set aside each day for responding to well-structured teacher “prompts,” builds reflection into the day and moves students to a new level of thinking.

***Teachers should tap into the primal power of SOCIAL relations to promote learning.*** Much research has shown how social interactions in the family and community support early language learning. This occurs unconsciously and naturally in families and in groups of children playing together. Such spontaneous social helping is often called “scaffolding” because, just as a temporary scaffold allows bricklayers to construct a wall that finally stands on its own, these interactions support young language-builders along the way, but ultimately leave the child independent. Children are far from passive in this scaffolding process. They learn not only by imitating grownup behavior, but by taking an active part, constructing and testing hypotheses, and initiating action themselves. Babies learn language swiftly and effectively without being directly “taught” because they are learning words and structures that help them get their needs met in their families. Following this model, schools can reverse their old counterproductive patterns of isolation and silence, tapping the power of social interaction to promote learning.

***Some of the most efficient social learning activities are COLLABORATIVE.*** When we think of the social side of learning, we most readily envision group discussions, kids listening to one another’s work, carrying out projects and writing letters and stories **for** one another. Collaborative learning goes on to promote children’s learning **with** one another. Even in the workplace, we’re recognizing how much collaboration actually goes on in American life and how valuable group problem solving is, compared to perpetual competitiveness and isolation. Collaborative small-group activity has been shown to be an especially effective mode for school learning—and solid achievement gains have been documented across the curriculum by Johnson et al. (1991), Slavin et al. (1985), Sharan and Sharan (1992), and others.

Collaborative work allows learners to receive much more extensive feedback from fellow students that they can ever get from a single teacher who must spread his time among all students. Of course, group work requires training students and carefully designing meaningful, authentic activities—otherwise, the effort of the group can be inefficient and shallow. But cooperation does work very well when teachers employ the student training techniques that have been refined in recent years. It's worth the effort because habitual cooperation pays off both in time better used in the classroom and, later on, as a valuable skill in life.

***Classrooms can become more effective and productive when procedures are DEMOCRATIC.*** It is a classic bit of American hypocrisy that we claim to be a democracy and yet send out children off to profoundly authoritarian schools. But even if we don't choose to democratize schools as a matter of principle, there are instructional reasons for doing so. Certain essential democratic processes make learning more efficient, more widely spread throughout the classroom, and more likely to have lifelong effects. First and most important, children need to exercise choice—choice in books they read, topics they write about, and activities they focus on during some parts of the day. This means that teachers must help children learn how to make intelligent choices, not just arbitrary ones, or choices of avoidance. When children learn to make good choices, they are not only more committed to the work they do, they also acquire habits that make them lifelong readers, writers, and continuing learners of math, science, and social issues—and, not inconsequentially, active, critical, involved citizens.

But democracy is not just freedom to choose. In a genuinely democratic classroom, children learn to negotiate conflicts so they can work together more effectively and respect and appreciate one another's differences. They learn that they are part of a larger community, that they can gain from it, and that they must also sometimes give to it. They hear about differences in one another's cultures, religious, regional backgrounds, and personal beliefs. Too often, this valuing of community within difference is missing in both rich and poor neighborhoods, and its absence undercuts education in countless ways, leaving us with discipline problems, vandalism, hostility toward school, and low self-esteem among students. Democracy in the classroom is not just a frill or an isolated social studies unit, but an educational necessity.

***Powerful learning comes from COGNITIVE experiences.*** Many teachers have moved well beyond believing that memorized definitions constitute real understanding and are reorganizing their classrooms to facilitate higher-order, conceptual learning. Concepts are the abstract ideas that give special meaning to human experiences. Full comprehension and appreciation for concepts such as **tangent, democracy, metaphor, and photosynthesis** come from complex, varied experiences that gradually build deep understanding that is increasingly abstract, general, and powerful.

At the same time, **how** children think is intimately related to **what** they think. Teachers must help students develop the specific types of thinking that our civilization values, such as analytical reasoning, interpretation, metaphorical thinking, creative design, categorization, hypothesizing, drawing inferences, and synthesis. Students need to experience these kinds of thinking for themselves with appropriate modeling and facilitation from their teachers and others. When they do, language, thinking, and

conceptual understanding are intertwined as students construct ideas, systems, and processes for themselves.

Along with thinking and concepts is **metacognition**, the notion that children can become increasingly aware of their own thinking and concepts. When teachers end an activity with reflective debriefing and questions such as “What happened?” “What did you do?” and “How did you come to that conclusion?” students become conscious of their own cognitive processes and can better monitor their work and thinking. This mental self-awareness helps students develop more effective cognitive strategies for accomplishing tasks, making decisions, and reviewing their own work.

It’s no accident that in discussing many of these principles, we’ve used psycholinguistic examples of child language acquisition. Indeed, this magical and universal phenomenon has provided educators with one of our most important bodies of knowledge—and most generative of metaphors – about learning. Childhood language development is the most powerful, speedy, and complex learning any of us will ever do in our life. We learn to speak without being directly “taught” and without conscious intention to learn. It happens in the social setting of families and it becomes internalized through play and crib-talk. Once learned, oral language becomes the main tool for future learning and provides the base for reading and writing. Outer speech gradually becomes storable as inner thought.

Teachers now recognize that the cognitive lessons of language acquisition aren’t restricted to preschool children at home. The concept of scaffolding—the special kind of help provided by parents and siblings in a family—can be explicitly built into the structure of work in school. The ideas of hypothesis testing and temporary linguistic forms help us to respect and learn from rather than punish children’s errors in school. The natural instincts of parents to engage, support, enjoy, and extend their children’s utterances encourage us to rethink teacher feedback and evaluation practices. The fact that language is learned tacitly, during socializing and play, suggests that we make the classroom more playful and interactive. Perhaps above all, the fact that you learn to talk by talking implies that children should simply be allowed to talk far more than they currently do in school. The school norm of silent classrooms must be abolished; ironically, when teachers enforce the standard of silence, they are in a very real sense making learning illegal.

***Children’s learning must be approached as DEVELOPMENTAL.*** This is one of the most carelessly used words in current educational parlance, enlisted in the support of all sorts of contradictory ideas. To us, *developmental* does not mean labeling or teaching students according their purported level on a fixed hierarchy of cognitive stages. Nor does it mean lockstep instruction according to some textbook company’s scope and sequence chart. Instead, *developmental* simply means age-appropriate; developmentally oriented teachers approach classroom groups and individual students with a respect for their emerging capabilities. Developmentalists recognize that kids grow in common patterns but at different rates that usually cannot be accelerated up by adult pressure or input. Developmentally oriented teachers know that variance in the school performance of different children often results from differences in their general growth. Such variations in the speed but not the direction or the ultimate degree of development should

not be grounds for splitting up groups, but rather are diversities to be welcomed and melded into the richness of a group.

In developmental schooling, we help children by recognizing and encouraging beginning steps when they occur—whether on schedule or not. We study the research on how children actually advance in math or spelling and build our programs around this knowledge, rather than marching through arbitrary word lists or problems each week. In complex areas like writing, we chart children’s progress in many ingredients of composing and understand how some abilities will appear to regress as children challenge themselves with other, more difficult rhetorical tasks. In math, along with review and exploration of this week’s topic, we include challenging, enjoyable activities that go beyond the textbook unit so that we find out what various kids are really ready for.

***Children’s learning always involves CONSTRUCTING ideas and systems.*** Studies of early language acquisition, science learning in school, reading processes, mathematical cognition, and many other areas show that human beings never just take in and memorize material. Even when staring at clouds or smoke or trash in an empty lot, we are constantly trying to find and organize meaning in what we see. In a very real sense, people always **reinvent** whatever they encounter, by constantly making and revising mental models of the world. Inventing and constructing are exactly how we learn complex systems like mathematics, language, anthropology, or anything else. For example, when two-year-olds invent and use words like *feets* or *goed*, words that they have never heard from anyone, they are demonstrating constructivism. Children don’t just imitate the language around them; they use it as a corpus of raw material from which to generate hypotheses, to reinvent the language itself. Along the way, they create original, temporary forms that serve until new hypotheses generate new structures. Kids don’t merely learn to speak; every one of them, in a profound sense, rebuilds his or her native language.

Constructivist teachers trust that all children can reinvent math, reading, and writing no matter how “disadvantaged” their backgrounds, and they are eager to tap into the thinking abilities children bring to school. They know that the keys are experience, immersion, and engagement in a safe, interactive community. Kids need much time to practice reading, writing, mathing, experimenting. They need encouragement to reflect, to share their emerging ideas and hypotheses with others, to have their errors and temporary understandings respected—and they need plenty of time. Constructivist teachers cheerfully accept that their most helpful role isn’t one of direct telling and teaching. Indeed, given the fundamentally internal nature of this deep learning, teachers can’t help by presenting rules, skills, or facts. Instead, they create a rich environment in which the children can gradually construct their own understandings. When teachers do create an appropriate, stimulating, healthy setting, children’s urge to make sense of their world propels their own learning.

***Following all these principles means that school is CHALLENGING.*** While some people think that experiential, collaborative, or self-chosen tasks are “easier” for students, teachers using state-of-the-art practices know that the opposite is true. “Letting” students choose their own topics for writing, for example, makes their task harder, not easier. If the teacher commands: “Imagine you are a butterfly. Write one paragraph with lots of

adjectives telling how it feels to land on a flower,” the author’s job is basically fill-in-the-blank. The really hard job for young writers is to find their own topics every day—pursuing the promising ones as far as they will go, discarding the clunkers promptly and starting over. When teachers steadily assign writing topics without ever asking students to develop their own subjects, as real writers do, they are establishing a pedagogical welfare system and lowering the standard of instruction.

Even with young children, Best Practice teachers are careful not to inculcate day long dependency on teacher instructions, directions, and decisions. They see their overriding long-term goal as nurturing children’s capacity to run their own brain, set up and conduct their own inquiries, keep track of and evaluate their own efforts. So they expect students to take considerable responsibility, establish learning goals, monitor their own learning, make sure they apply the abilities they’ve acquired, keep their own records, and elect new projects when they’re finished with something, rather than just fill in an extra ditto sheet. As the students in a classroom gradually assume more responsibilities, the teacher attends to the needs of individual children, provides a safe space for experimenting with newer and more difficult tasks, and adds challenges as kids are developmentally ready for them. In the rigorous classes where these approaches abound, kids love the challenge.

## **So What’s New?**

This set of ideas will be entirely familiar to anyone who worked in American schools during the late 1960s and early 1970s, someone raised on the ideas of Carl Rogers, John Holt, Herbert Kohl, A.S. Neill, Neil Postman, and Charles Weingartner. But then this list doesn’t exactly hold any surprises for people who lived through the progressive era of the 1930s or who have studied the work of John Dewey. Yes, today’s “new” integrated and holistic educational paradigm can fairly be called a progressive resurgence. **Another** progressive resurgence.

While it is harmonious with and descended from past progressive eras, this new movement is not identical to the open classrooms of the 1960s or the Deweyian schools of the 1930s. Though still rooted in the characteristic view of children as fundamentally good, self-regulating, and trustworthy, today’s movement is driven by more than an optimistic conception of children’s nature. This time around, the philosophical orientation is better balanced with pedagogical pragmatism and insight about cognition. We are blending a positive view of children with our commitment to certain curriculum content and our improved understanding of how learning works. In the 1960s, many progressive innovations failed because they were backed with more passion than practical, well-thought-out procedures for implementing them. Now, a generation later, we return to the same basic ideas, with the same fundamental understanding of kids’ capabilities, but equipped with much better ideas about how adult helpers can make it work.

Yes, many of these ideas are old and familiar. And while this neo-progressive movement does indeed promise a revolution in education, it is the farthest thing from a fad. Although it has reemerged now partly as a result of contemporary forces, it also represents a much older, ongoing, and long-coming shift in the educational philosophy of this nation. This closely related set of ideas has been struggling for acceptance in

American Culture for many generations, appearing and reappearing in forms that too many educators and citizens have mistakenly taken for meaningless cyclical trends.

Now, near the turn of the century—indeed, the millennium—these ideas appear again, this time in a stronger, more coherent form. Perhaps the current cycle of progressive reform will have a more lasting influence on education in this culture than the innovations of the 1960s and 1970s, or even the era of John Dewey. While the authors of this book have no doubt that this cyclical tendency will continue on into future generations, we also believe in progress. With each cycle, some things change that never change back, and some cycles leave a stronger heritage than others. We believe that today's is potentially the most important, powerful, and enduring phase of progressive educational reform ever to occur in American schools.

**INDICATORS OF BEST PRACTICE**

*Note on the Arrows: In this chart, growth does not necessarily mean moving from one practice to another, discarding a previous instructional approach and replacing it forever. Instead, teachers add new alternatives to a widening repertoire of choices, allowing them to alternate among a richer array of activities, creating a richer and more complex balance (e.g., lecturing isn't discarded, but is done less as other, new choices become available).*

**Physical Facilities**

Setup for teacher-centered instruction (separate desks) → Student-centered arrangement (e.g., tables)  
 Rows of desks → Clusters → Centers (varied learning stations for writing, computers, math, etc.)  
 Bare, unadorned space → Commercial decorations → Student-made artwork/products/displays  
 Few materials → Textbooks and handouts → "Stuff" –books, materials, manipulatives, pets, etc.

**Classroom Climate/Management**

Management by punishments and rewards → Order maintained by engagement and community  
 Teacher creates and enforces rules → Students help set and enforce norms  
 Students are silent/motionless/passive/controlled → Purposeful talk, movement, and autonomy  
 Students in fixed groups based on "ability" → Flexible grouping based on tasks and choice  
 Rigid, unvarying schedule → Predictable but flexible time usage based on activities

**Student Voice and Involvement**

Balanced with teacher-chosen and teacher-directed activities:  
 → Students often select inquiry topics, books, writing topics, audiences, etc.  
 → Students maintain their own records, set own goals, self-assess  
 → Some themes/inquiries are built from students' own questions; "negotiated curriculum"  
 → Students assume responsibility, take roles in decisions making, help run classroom life

**Activities and Assignments**

Teacher presentation and transmission of material → Students actively experiencing concepts  
 Whole-class teaching → Centers and cooperative small groups → Wide variety of activities  
 Teacher in front, directing whole class → Teacher hard to find, working with groups  
 Uniform curriculum for all → Jigsawed curriculum; different topics by kids' needs or choices  
 Short-term lessons; one day at a time → Extended activities, multi-day, multi-step projects  
 Focus on memorization and recall → Focus on applying knowledge and problem solving  
 Short responses; fill-in-the-blank exercises → Complex responses, evaluations, writings, artworks  
 One-way assignments/lessons → Accommodation for multiple intelligences and cognitive styles