



O N E

HOW TO TEACH



How do you teach well? How do you create a thinking community that's focused on inquiry, powered by curiosity, and cradled with caring? How do you instruct children and young adults with impact, respect, and grace? What classroom experiences best help young people to understand and remember valuable information, concepts, and procedures? As a grown-up, a subject-matter expert, and a veteran learner, what roles should you take in relationship to students? Exactly what do we mean when we give that highest of compliments, "good teacher"?

Three factors determine how any of us go about teaching:

1. our personality, background, tastes, and attitudes;
2. our own experiences as a student in school; and
3. what we learn as a student of teaching.

The first influence we can't change—and we wouldn't want to. Teaching is a deeply personal trade, and many different personalities—performer, introvert, coach, scholar—can make effective educators. Next, our experience in school, for sixteen or more years, fills our heads with models, assumptions, scripts, and stereotypes out of which we build, mostly unconsciously, a model of teaching that's comfortable for us.

The third, and often weakest, influence on how we teach is our conscious study of the craft, including ideas and practices that don't immediately feel natu-

ral to our personal styles, or that haven't been repeatedly demonstrated to us during our own schooling. This book focuses—of necessity—on this latter domain: What can we learn when we study teaching carefully? How can our repertoire grow when we don't just re-create, but question our experience as kids in school? And what unfamiliar classroom styles can we actually grow into, if we stretch our personalities beyond the everyday comfort zone?

The best teachers are not the ones trying to channel a favorite teacher from their school days or build a classroom solely around their personal enthusiasms, as productive as those strategies can be. Having thousands of lesson plans in your head doesn't make you a master teacher, either, though it is a common side effect of excellent teaching. Nor do the really top teachers study state curriculum standards as they drive to school each day, stopping at every red light to review a few more benchmarks, targets, or outcomes. No, what truly accomplished teachers possess is a small repertoire of powerful structures that help them organize subject matter, time, space, materials, students, and themselves to make learning happen. These few “methods that matter” are recurrent, complex, and generative. Some very accomplished teachers may not even be fully aware that they own and use these patterns.

These key structures, these building blocks of good instruction, can be named in many ways, but based on our research and observation, we use these seven descriptors:

- reading-as-thinking
- representing-to-learn
- small-group activities
- classroom workshop
- authentic experiences
- reflective assessment
- integrative units

Some of these terms are self-explanatory, while others may sound more obscure. Our job is to explain them as this book unfolds.

Defining Best Practice Teaching

There are many names for good teaching. Some are descriptive: exemplary, state-of-the-art, research-based, proficient, standards-based. Others bear a heavier conceptual load: instructional efficacy, teaching for engagement, and the like. We prefer the label *Best Practice*, partly because it is a well-understood term in other

professions, and partly because it is clearly defined with reference to specific documents, research, and standards. Or it *was* well-defined, until “terminology drift,” the bane of our professional language, set in.

Today the term *Best Practice* has entered the daily vocabulary of teachers, administrators, board members, policy makers, education reporters, and everyday citizens. This once-venerable phrase, borrowed from medicine, law, and architecture, was meant to clarify what we mean by good teaching. Now there’s more cloudiness than clarity, as promiscuous and nonspecific use of the term proliferates. School district mission statements and curriculum guides trumpet their institutional allegiance to Best Practice. Blue-ribbon committees bestow golden apples on teachers who manifest Best Practice. Conference programs glibly promise their attendees templates for Best Practice classrooms, and slap the slogan on the free tote bags, ballpoints, and key chains. Aspiring politicians pledge to bring Best Practices to the schools of their districts, should they be elected. The U.S. Department of Education scatters the term *Best Practice* through its Web pages, grant applications, and brochures, even though it actively opposes the same practices in other venues.

The one common feature of all these utterances is that hardly anyone who uses the term *Best Practice* knows what it means. These days, it’s simply what you are supposed to embrace, a phrase that vaguely substitutes for “good,” “with-it,” “mainstream.” Best Practice has become a generic, ceremonial seal of approval, a fuzzy pledge of okayness, a genuflection to whatever everyone else is doing or claims to be doing. Sometimes it seems as though Best Practice is about to take the place of the term *quality education*, a blessing that of course everyone wants for their children, but that has no shared definition whatsoever.

We think the term *Best Practice* does mean something, something very concrete and particular, and something well worth defending. It is not at all vague. Genuine Best Practice embraces certain educational ideas and activities while clearly ruling others out. It has a deep basis in research, in the study of child development and learning, in the history and philosophy of American (and world) education. Best Practice, under other, older names, has a long and distinguished pedigree and is manifested through a limited and distinctive set of classroom practices.

So what do we mean by Best Practice teaching? The definition, as well as the theoretical and research base, for today’s best educational practices can be found in the standards documents published by the nation’s mainline professional associations, subject-matter organizations, research centers, and curriculum groups, including:

American Association for the Advancement of Science
International Reading Association
National Board for Professional Teaching Standards

Center for Civic Education
Consortium of National Arts Organizations
Geography Education Standards Project
National Council of Teachers of English
National Council for Education and the Economy
National Council of Teachers of Mathematics
National Association for the Education of Young Children
Joint Committee on National Health Education Standards
National Research Council
National Center for History in the Schools

In spite of their diverse subject specialties and discipline loyalties, groups as disparate as the National Council of Teachers of Mathematics and the International Reading Association have endorsed a very similar model of teaching and learning. In their various reports, all these organizations call for classrooms that are

- student-centered
- experiential
- reflective
- authentic
- holistic
- social
- collaborative
- democratic
- cognitive
- developmental
- constructivist
- challenging.

Since these diverse groups affirmed these shared principles, it was not surprising that their official recommendations looked so much alike.

Most of the standards documents called for similar shifts in the ways classrooms were organized and run. They called for a rebalancing of the ingredients of schooling—students, time, space, materials, experiences, and assistance. Some of the key changes suggested that Best Practice teaching means

LESS

whole-class-directed instruction, e.g., lecturing;
student passivity: sitting, listening, receiving, and absorbing information;
prizing and rewarding of silence in the classroom;

classroom time devoted to fill-in-the-blank worksheets, dittos, workbooks, and other “seatwork”;
student time spent reading textbooks and basal readers;
time spent thinly “covering” large amounts of material in every subject area;
rote memorization of facts and details;
stress on competition and grades;
tracking or leveling students into “ability groups”;
use of pull-out special programs;
use of and reliance on standardized tests.

MORE

experiential, inductive, hands-on learning;
active learning in the classroom, with all the attendant noise and movement of students doing, talking, and collaborating;
emphasis on higher-order thinking; learning a field’s key concepts and principles;
penetrating study of fewer topics, so that students internalize the field’s way of inquiry;
time devoted to reading whole, original, real books and nonfiction materials;
responsibility transferred to students for their work: goal setting, record keeping, monitoring, evaluation;
choice for students—picking their own books, writing topics, team partners, research projects;
enacting and modeling of the principles of democracy in school;
attention to varying cognitive and affective styles of individual students;
cooperative, collaborative activity; developing the classroom as an interdependent community;
heterogeneously grouped classrooms where individual needs are met through individualized activities, not segregation of bodies;
delivery of special help to students in regular classrooms;
varied and cooperative roles for teachers, parents, and administrators;
reliance on teachers’ descriptive evaluation of student growth, including qualitative/anecdotal observations (Zemelman, Daniels, and Hyde 1998).

Now, if you’re feeling provoked, please keep in mind that this list says “more” not “all,” and “less” not “none.” The standards don’t repudiate traditional schooling; they simply call for a rebalancing between the predominant teacher-directed activities and other structures that give students more responsibility and challenge.

In the various standards reports, the general instructional advice was backed up with scores, and often hundreds, of specific recommendations concerning dif-

ferent bodies of content and grade levels. But behind the details lay a consistent and surprising commitment to the shared, underlying principles. The National Council of Teachers of Mathematics led the way, describing math as a special kind of thinking instead of a body of content; calling for the integration of more writing, talking, and artwork into math; and arguing for the importance of estimation and real-world problem solving. The American Association for the Advancement of Science forswore the ancient tradition of curriculum coverage, arguing instead that students should delve more deeply into a smaller number of topics. Though highly politicized and subject to demagogic attack, even the social studies standards called for students to *do* history, to take multiple perspectives, and not merely absorb the official ingredients of cultural literacy.

However bold the standards projects sometimes seemed, most of these principles and recommendations were nothing particularly new. As one of our longtime teacher-reformer friends sighed when we put this list of principles on an overhead projector at a recent workshop, “Well, duuhhhh!” At least some educators have been calling for American schooling to be more experiential, reflective, and democratic throughout the whole history of this country and back through the ages. John Dewey would have recognized and embraced these principles, though he might have asked someone to explain constructivism to him. The legacy reaches back thousands of years and across the world, to figures like Marcus Fabius Quintilianus, Johann Pestalozzi, Friedrich Wilhelm Froebel, Maria Montessori, Jean Piaget, John Dewey, Eric Ericson, Carl Rogers, Elizabeth Harrison, and, more recently, figures like Jonathan Kozol, James Beane, Paolo Friere, Deborah Meier, Maxine Greene, and Howard Gardner. In other words, today’s Best Practice teachers are heirs to what is commonly called the *student-centered* or *progressive* paradigm of teaching.

There are other paradigms of teaching, of course, each with its own pantheon of thinkers and lines of research. Some of these other paradigms are contrary or even hostile toward the progressive model. In fact, there’s a highly acrimonious clash of educational paradigms happening right now in our country. But here’s the important thing: the progressive paradigm, the student-centered, Best Practice model, is the one endorsed by our contemporary professional standards documents. That is, the authoritative national professional standards, the ones developed by our colleagues in each of the subject-matter fields, say: teach the student-centered way, extend the progressive tradition.

What Does It Look Like?

So we have a firm definition of Best Practice: there’s a set of clear and interlocking principles, some relative valuations of different classroom activities, and, within par-

ticular subject areas, scores of authoritative recommendations guided by these ideas and values. But these are mostly abstractions. What does this look like in practice, in real life, with real kids? How can a teacher—or a whole school—grow toward, enact, and live out the meaning of Best Practice in real, workaday classrooms?

Let's take a tour of Waters School in the spring. Your guide is Pete Leki, a naturalist, teacher, and parent who, along with principal Tomas Revollo, has led Waters's transformation from an ordinary K-8 school in Chicago to something very different and special.



Waters School: Where Fresh Ideas Flow

PETE LEKI

The field house is low and blue. Blue from the sky of the mural that wraps around its weathered siding. There are elephants and butterflies standing in jungles of green plantlike things. Mr. Javier supervised this beautiful mural. I pleaded for prairies and buffalo. But the kids painted a fantasy landscape from some primeval *Star Trek* set. Now I like it a lot.

From inside there comes a sound like a semi truckload of ice chests being dumped down three flights of stairs. It is Ms. Z's drumming class. Kids are whaling away at inverted five-gallon plastic buckets, bungeed to milk crates. Ms. V, the art teacher, is standing before me with her mouth moving. She motions with her head to come with her to the art side of the building, insulated behind two doors, where we can talk.

Ms. V says, "Hey, Mr. W says he wants to do butterflies in science, so I told him I'd talk to you about how we could pull in the garden and Mighty Acorns work."

"Yes, I had heard that," I tell her. "I just forgot." I forget about a lot of things on my list. Usually I can't even find the list. "OK. Butterflies fit into a bigger picture. We have lots of butterflies that evolved here in our region over millennia. Many have developed close relationships with larval host plants and adult nectar preferences."

"I know that!" says Ms. V. "I'm a country girl. So Mr. W and I got a list of natives, and some reading materials for the kids, and I asked Ms. T [the computer teacher] to help the kids access color photos and information about the ones the kids picked out. Each child got one. So what else do you think they should learn?"

"Maybe . . . life history. Larval plant and adult nectar preferences. Then we compile the list and let the kids match it against the plant list we have for our gar-

den. We could see which plant families we are lacking and which we might be able to get. You know checkerspot butterflies need turtleheads. And monarch caterpillars like all the *Asclepias*. And . . .”

“And what I’d like to do is get them working on some real detailed paintings of their choice butterfly and use that time to talk about symmetry and the basics of butterfly anatomy. Maybe we could laminate and post them around the garden near their butterfly’s favorite plants.”

“Well, you know, Mr. W was wondering what to plant in their classroom plot. I have a whole tray of butterfly weed seedlings that need transplanting. And some dill. And rattlesnake master. Their whole plot could be used to raise unrepresented host species.”

“Which would increase plant biodiversity?”

“Which would increase butterfly biodiversity.”

“They could lead groups from other classrooms around the garden to tell them about interdependency and stuff.”

“Uh-oh, quick. Hide. Here come Ms. Z—she’s gonna want to do a butterfly opera or something. . . .”

So goes life in the little, run-down field house at Waters School, where the art, music, and ecology teachers are headquartered, here at the entrance to the grand garden area, watched over by four ancient bur oak sentinels. We meet every Wednesday to discuss how we can integrate our specialties into the teaching goals of our classroom colleagues in the big building across the playground.

Integration has become so much the normal thing in our school that it seems there are nonstop performances, field trips, culminating activities, and meetings, meetings, meetings. Ms. Z and Ms. V have pioneered a great new idea: Down with big, schoolwide, auditorium assemblies! Up with repeated, smaller touring performances. No mikes, no echoes. I recently heard Ms. G’s second-grade class put on a first-rate show in the classroom, for parents, about the water cycle. Beautiful costumes; well-spoken, easy-to-hear lines; funny songs and movement; and time for comments and questions. A real, human-dimension performance that they took up and down the second-floor hall. By the end of that day those kids knew their water cycle, and kids in their audiences did, too.

Ms. Z; Ms. V; Ms. R, the librarian; and Ms. T, the computer teacher, are always finding ways to work their way into our ecology strand, a program that stretches from pre-K through eighth grade. Ms. Z heard that we had taken our third graders on their first of nine Mighty Acorns journeys to Sauganash Prairie Grove, in the Cook County Forest Preserves. On that fine fall morning their first task was to familiarize themselves with the thirty-five-acre site and the five distinct ecosystems that I tell them exist there: slough, floodplain woods, oak

woods, oak savanna, and wet prairie. They have maps and journals and are supposed to visit each place and sketch something from each one to remember it by. At a pre-trip workshop they were given a custom-written (by me) nonfiction piece to read and paste into their journal, that describes the history of the land, pre- and post-settlement, and that gives the basic vocabulary that they should start to use.

Well, Ms. Z hears about all this vocabulary and decides that she has to have them write songs about their new discoveries, to a rhumba rhythm no less:

We went to the savanna
But we didn't see no bananas
We saw squirrels everywhere
But we didn't see no bears

Chorus:

The grassy prairie had beautiful flowers
The wetland slough had frogs and fish
The oak woodland had rabbits and deer
The savanna had bur oak trees

In the floodplain woods
A big maple tree stood
We saw mushrooms there
And some pieces of rabbit hair

In the oak woodlands
There were some Joe Pye weeds
We saw some poison ivy
And alien invader species

We went to the slough
And we saw something new
Arrow leaf and duckweed, too
And the big turkey vulture flew

Fuimos a la pradera
Y las flores alcanzaban a la cadera
Habia plantas con los espinas
Y vimos venados en todas esquinas

The kids sing these silly songs on the bus to and from the preserve, reading from their journals, verse after endless verse. The science words enter deep cran- nies of the mind and reemerge during journal freewrites in the woods. The trusty journal follows them throughout their Mighty Acorn experience, packed with reading materials about history and invasive species and biodiversity and steward- ship responsibilities. For us, drawing and writing are very similar activities and we expect our students to draw what they can't write and write what they can't draw. We expect their journals to look like da Vinci sketch/field notebooks. Sometimes they approach that.

There is no ecology class at Waters. Instead, we strive to integrate all subjects and all teaching staff. Ms. V uses her art time to teach kids how to sketch the iden- tifying features of European buckthorn, an aggressive alien species invading our oak woodlands. Ms. W uses math time to teach the tabulation, averaging, graph- ing, and percentages kids need to complete our fifth-grade Mighty Acorns winter survey of woody plants. Ms. H uses her science class to prepare for flower studies in the spring woods. PE time is used to run school-yard simulations of habitat loss and predator prey games. The scheduling and planning of this cooperative work happens on Wednesday mornings, which have been freed by the school adminis- tration for integration meetings. It also goes on in hallways, stairwells, in parking lots, and no doubt in coffee shops and bars. It's very athletic—dancelike—in the flexibility that is needed to make it work.

The Waters ecology strand, which began in 1994 with a third-through-fifth- grade Mighty Acorn exploration of our homeland natural areas, has expanded over the years. Its main features are repeated visits to natural areas to explore, study, and care for them. Over the years other natural areas were added, so that starting in 2003–2004 the strand was extended from pre-K through eighth grade. Now it looks like this:

Grade	Natural Area	Partner Organization
pre-K through first	Waters School Garden	School staff, Chicago Botanic Gardens
second	Chicago River riverbank between Berteau and Montrose	Friends of the Chicago River
third through fifth	Sauganash Prairie Grove	Cook County Forest Preserves
sixth	Chicago River at Ronan Park	Friends of the Chicago River
seventh	Montrose Point, Lake Michigan	Friends of the Parks, Nature Along the Lake
eighth	Waters School Garden	School staff, Chicago Botanic Gardens

All these site visits to natural areas are preceded with readings, from the simplest picture books in pre-K to quite involved descriptions of the Great Lakes watershed, geology, and human water uses in seventh grade. All students come to the sites armed with some prior knowledge and their journal and pencil. All classes are broken up into small subunits for the explorations. I don't want to lead a class like a herd of straggling buffalo through a natural area or like tourists through a museum. I don't want to have to shout to a line of thirty kids, "Look. That's a flicker on that red oak. That's a FLICKER ON . . . THAT WAS A FLICK . . ." I couldn't stand it.

So on all of our field trips our students are in small exploratory groups of five to eight, led by a volunteer parent or community member. The Mighty Acorns are encouraged to develop *wood craft*: a way of behaving in the woods that is respectful of the place and its creatures, and mindful of each thing done. "Noise scares away animals. And screams tell me that someone is hurt and needs help right away. Don't do that. Be silent in the woods, like a fox," I tell them. When groups come upon each other in the woods they are taught to freeze, hide, or turn away. We explain that these are wild places, not parks. They are homes to animals and plants that are rare, precious and can be dangerous. The very reiteration of these warnings helps students to feel the faith and confidence we have in them. The small groups help the experience to be more intimate, with more surprises. Our students have, over the past ten years, single-handedly controlled the invasion of garlic mustard in our floodplain woods. They have read about it in the classroom. They have drawn it in art. And in the woods they learn quickly to identify the weed, to avoid stinging nettles, and to avoid stomping and uprooting green dragon and trillium and wild ginger. Last year they carried out 480 pounds of garlic mustard and its seed, and composted it at the school. They do important work, highly valued by the professional staff of the Forest Preserves.

None of this would be possible without a corps of volunteers who feel comfortable leading groups of students in this way. During the last school year, forty-eight volunteers were honored for their work. We have veteran leaders and newcomers. All are invited for coffee and a briefing in the field house before every trip. We explain the trip goals and activities. Group leaders, or guides, as they are called, are encouraged to step up to the job of teacher, building group cooperation, making sure tasks are accomplished, and modeling for the students their own curiosity, their eagerness to draw and write and learn from the place. This job is very different from the typical chaperone tasks allocated to parents during most trips. At Waters our cadre of parents comes directly from our use for the past thirteen years of the Parent Project, a workshop approach to bringing parents into the vision of progressive education (Vopat 1994) that is enshrined in the School Improvement

Plan. In the Parent Project, participants do the same stuff that their kids are doing in the classroom: literature circles, group work, journal writing, publishing, site-based exploration, integration of the subject areas. These parents also find their way onto the Local School Council, helping to strengthen the political will to recognize and support the good work going on in our classrooms.

Partner organizations like Friends of the Chicago River, the Cook County Forest Preserves, the Botanic Gardens, and others often help us financially by paying for buses, but also provide a source for top-notch scientific expertise and a chance for our kids to see possible future job opportunities for themselves.

Journals are the main way that I am able to know what students are learning. In addition to freewriting and drawing in natural areas, students are asked to synthesize what they have read, been told, and experienced in a post-trip journaling session. I try to look through each child's journal and respond to their writing with a note of my own. Occasionally a student's journal is an awful mess, where I can't even tell which side is up. This gives me an opportunity to confer with the child and talk with the classroom teacher about what extra help the student might need.

One time I sat with a fourth-grade boy on the stairway outside his class and questioned him about the largely blank page where he was supposed to have responded to the pre-trip lesson I had given his class. There was almost nothing. "So, don't you know why we are going to find buckthorn in the woods?" He looked blankly. "You don't remember the pictures I drew on the board about the way buckthorn shades out other plants?" He shook his head slowly. "Well, no wonder you didn't write anything. Listen, Jorge, the reason that I want you to write, to tell me the story, is so that I can see if you understand what I was teaching. If you don't know, it means that I didn't do a good job teaching."

He brightened up. "No, Mr. Lucky, you did a good job."

I laughed. "But the way that I know that I did a good job is if you can explain it back to me. Tell me what you do remember." So we sat and pieced together the story of the invasion of buckthorn into the millennia-old rich woodlands of Illinois, the loss of biodiversity, the sad poorness of the lost community. "Do you think you can finish?"

"Yes, Mr. Lucky, I can finish it." And he did.

I give quizzes, too. I like these quizzes because if you don't "pass" you get to take it again. And if you still don't pass you get to have a conference with me. Two good things come from this. By the end, all the students can answer the questions and have some basic grasp of the subject matter and vocabulary. And I get an opportunity to spend extra time with the most needy kids. Often, I will ask them the question that they got wrong, and they will tell me the correct answer. There may be reading problems there, or other cognitive or learning style problems. In the end they all pass, as I expected from the beginning they would.

My job can be a real delight because I get to spend this extra time with these students. And I get to lead them in learning in wild places, in small groups. Positions like mine are not common. My work is funded piecemeal through grants captured by our school principal, Tomas Revollo, or myself. This is a pain in the neck. But the payback is extraordinary in other ways. At our recent Spring Garden Day 150 kids, teachers, and parents showed up in the freezing, pouring rain to haul compost, weed, till the classroom's raised beds, and cover them with mulch to await the spring planting. Eighth graders dug through gravel and mud to create a new, 2,000-square-foot crescent flower bed that will surround their graduation gift to the school: an outdoor classroom made out of nine electrical spool tables and thirty-six tree-stump seats. A place wrapped in the arms of the garden where a whole class can do its business under the brilliant sky. Where staff can take lunch, or families can picnic after hours.

Everyone worked very hard. Under the dripping eaves of the field house, parents cooked quesadillas over the grill and served them with mounds of refried beans and pico de gallo salsa, chased with lemonade. The place smelled of tortillas and rain. And when we called a halt to the freezing work and gathered to thank everyone, to share some words and song, I couldn't help but think that this is a very special kind of learning. And a very beautiful place. On any particular day there may be catastrophes going on, cops in the office, problems. We, for sure, fall short in many ways. Writing an account like this maybe encourages a little extra glow. But we are trying.



Thanks, Pete.

Sounds like a great school, doesn't it? Kind of makes you want to find your own woods to steward. But did you also notice that these teachers are using the seven fundamental Best Practice structures, over and over again? At Waters, students range far beyond the textbook: *reading thoughtfully and strategically* about stacks of challenging nonfiction material, studying big ideas from butterflies to biodiversity. Teachers coach kids to think carefully as they read, giving them tools like journals and sketchbooks, and hold one-to-one conferences to make sure kids understand and remember. As they work, students *represent their learning* in a multitude of genres: constant writing and drawing, songs on the bus, rhumba rhymes, bucket drumming, murals, traveling classroom performances, and more. The work of the ecology strand is deeply *authentic*: kids are engaged with real ecosystems, living things, the powers of nature—and real problems, too, since each of these wild places is in some way endangered and in need of stewardship.

Classes often shift into *workshop* mode, where kids don't just hear about subjects, they *do* them. With adults serving as coaches and mentors, kids pull weeds,

collect specimens, replant with native species, create their own classroom gardens, choose and conduct their own inquiries. To unleash the social power of learning, students are organized into various well-structured *small groups*—in the woods, in the garden, and in the classroom. Doing important work with a team of friends leverages knowledge, makes the work light, and unleashes the joy of communal effort. All along the way, students and teachers regularly take time for *reflective assessment*, talking and writing about progress, problems, and achievements, and setting new goals. Sure, there are quizzes and requirements, but everything leads back to conversations like Pete’s one-to-one conference with Jorge. At Waters, assessment is caring adults asking kids, “Where are you in this work? What’s the next step for you? And how can I help?” And finally, of course, the whole nine-year ecology experience is one big *integrative inquiry*, something that pulls together all the school’s efforts, and provides students with coherence and meaning throughout their school life. Just imagine: in ten or twenty or thirty years, what do you think these children will remember from their elementary school days? It’s our guess that Waters alumni will include a large number of passionate and environmentally aware citizens, along with a host of lifelong readers, fearless artists, and careful thinkers.

Waters’ K–8 urban ecology program shows Best Practice teaching at its most comprehensive. Because the teachers have internalized and mastered seven fundamental ways of organizing instruction, they consistently create genuine student-centered experiences, follow the recommendations of the national curriculum standards, and enact the principles of progressive education. With those big ideas in mind, with the repertoire they possess, these teachers don’t have to sort through thousands of state standards to create powerful lessons every day.

But the commitment is also very official. If you look at the cover of Waters’s School Improvement Plan, a document that guides the program, budget, and staffing all year long, it says, “Waters: A Best Practice School.” For ten years, Principal Revollo and the teachers have stuck with their commitment to Best Practice pedagogy in spite of districtwide pressures for more traditional teaching. Over that time, the school’s standardized test scores have risen significantly in reading, math, science, and social studies. With a population of mostly poor and Hispanic kids, including many newly arrived immigrants, other schools might have played it safe with textbooks, worksheets, and seatwork. But the people at Waters would never settle for education as usual. They want their school to be as vibrant, beautiful, creative, and multidimensional as the community around it. As a result of this professional wisdom and courage, Waters has become one of the showplace schools in Chicago’s seven-hundred-building district.



In the chapters to come, we will explain each of the seven Methods That Matter in detail, showing the history and development of each, acknowledging the teachers and authors who developed strong and replicable versions of them. And most important, we'll share several examples of each structure, written by teachers who have implemented them in real, diverse classrooms around the country.

These seven structures or patterns are applicable to all grade levels and subject areas, from early childhood through college. Waters happens to be a K–8 school, but we can take you to high schools with equally exciting programs—indeed, we'll do that many times in the pages of this book. The seven structures act as templates that allow teachers to organize the ingredients of schooling: students, time, space, materials, experiences, and assistance. We sometimes call these structures the *fundamental, recurrent activities*. By this we mean that once teachers have mastered their management and students have internalized their norms, these seven structures become the palette from which teachers and kids together can paint rich, vibrant cycles of learning during which these key activities alternate, interweave, and are cycled through the curriculum for days, weeks, or years.

These activities are processes, not bodies of knowledge. They are broad generic strategies or, simply, *teaching methods*. Today, the term *methods* is often scoffed at by school critics like E. D. Hirsch (1996) as irrelevant education-school fluff. But the fact is that the way we teach school subjects is tremendously important to whether and how much students learn. These seven structures work. They are validated by decades of practitioner reports, documented in educational literature and research, and richly supported by the principles of group dynamics, the field of study that describes the ways groups of people can be organized to maximize their efforts. To be concerned with pedagogy is not, as Hirsch accuses, to be “anti-knowledge” or “anti-fact.” On the contrary, giving serious attention to the structures and processes of learning reflects a deep respect for the importance of facts and knowledge. We don't want to raise yet another generation of Americans who laugh proudly, “I forgot everything they taught me in school.” We experiment with methodology because we want students to embrace, internalize, and recall far more of the curriculum than has traditionally been the case.

Though they are process-oriented and adaptable to all disciplines, these structures are also highly *rigorous*, specific, and tightly organized. They require considerable teacher skill to implement properly. Far from being loosey-goosey or touchy-feely (it's interesting to note how often progressive practices are demeaned by cutesy epithets), these structures demand more management from teachers and more discipline among students than traditional presentational methods. They require that both teachers and students play a much wider range of roles throughout the school day, shift smoothly among them, and manage and monitor their own work across many dimensions. In short: It's not just sit-'n'-git anymore.

These structures are *recurrent*. They are not one-shot lesson plans that get used up, but can be used over and over, phasing in and out of the schedule throughout a school year, and from year to year as teachers orchestrate a healthful balance of activities. Before they can be put into the rotation, of course, every structure requires that teachers invest time in preparing students. But once oriented, kids can operate within and use the structure throughout a year and throughout their school lives, with periodic refreshers and updates.

These structures are *overlapping*. Authentic experiences will be at the core of any well-designed integrative unit or small-group project. Representing-to-learn happens across all the other structures as students plan inquiries, keep notes, record findings, initiate and answer correspondence, and share their learnings. Reflective assessment is also braided through all the other structures, as evaluation becomes an integral part of instruction. The teacher-student conferences held during a workshop session will be both a form of assessment and a part of instruction, while the peer conferences that are a regular feature of such workshops are an important kind of collaborative small group. Indeed, most broad classroom projects will embody many of these structures at once. For the purposes of this book, we have needed to separate the seven structures, highlighting their individual ingredients and features. But back in any real classroom, teachers will reassemble them into unique hybrids and seamless combinations.

These structures are also *conceptually asymmetrical*. That is, the list of seven structures isn't quite apples and apples. There are valuable representing-to-learn activities that take no more than a few minutes of class time, while a typical integrative unit will probably occupy whole days or weeks. Some structures, like reading and writing workshops, have clear-cut, codified pedagogies already in print, while others, like centers or learning stations, have a much sparser professional literature littered with misleading corruptions. Some of the structures are clearly stepwise pedagogies, while others, most notably authentic experiences, aren't methods at all, but rather types (or even locations) of experience. We have tried to probe and resolve these discrepancies, but every time we attempt to delete one element or combine it with another, something urgently important is lost. We appear to need all seven ingredients in order to describe the Best Practice paradigm.

Sadly, as these activities have increasingly become recognized, adopted, and applied across the country, they have also been opened to more misunderstanding and misapplication. At worst, the methods become platitudes, undergoing the same degenerative process that afflicts the term *Best Practice* itself. We recently saw booklets full of "best practice worksheets" prominently for sale at the International Reading Association's annual conference. *Classroom workshop* offers another cautionary example. In the early 1980s, this highly structured method of literacy instruction was described by such authors as Donald Graves (1983), Lucy

Calkins (1986), and Nancie Atwell (1998). They outlined a very complex but nontraditional approach to developing children's reading and writing—a holistic, developmental process featuring student choice of books and writing topics, strong teacher modeling, extended student practice, guided peer feedback, and a portfolio assessment system.

Within a few years' time, however, the term *workshop* had drifted away from the careful and narrow definition of its inventors, until by the late 1990s almost any activity involving student reading or writing, including methods totally contradictory to the original model, were being blithely labeled *workshop*. Some of this deterioration was caused by textbook publishers who willfully appropriated and corrupted the term, but the rest owes to teachers' characteristic failure to defend our own professional culture.

Which is to say that, in order to work properly, the seven structures must be implemented roughly the way they were designed. While adapting and personalizing are necessary elements of good teaching, a reasonable degree of adherence to the original model is also required. Assigning writing activities that mostly involve copying or regurgitating correct answers, conducting conferences where students have no voice, designing collaborative activities that are really just competitive memorization games, or implementing integrative units in which students have no interest—these are not Best Practices, whatever they are named.

Common Features of All Seven Methods

Within all seven of these classroom structures, and across them as a set, several important values are threaded. On the surface, these structures are simply organized delivery systems that allow students to engage important curricular content and academic skills. But at a deeper level, they also work to develop the rich, supportive psychological and intellectual climate that young learners need and deserve. Among the vital ingredients of this “Best Practice climate” are choice, responsibility, expression, community, diversity, and technology.

Choice

Student ownership and initiation of learning have always been tenets of progressive education. In recent years, Deborah Meier (2003), Pedro Noguera (2004), William Glasser (1986), Alfie Kohn (1995), and others have made critiques that are both familiar and irrefutable. The thirteen years of submission and passivity customarily provided to young people by American schools is an exceedingly poor preparation for resourceful, self-initiating problem solvers, not to mention free

and critical citizens. Indeed, the bland but unrelenting authoritarianism of American schools discourages and alienates so many children as it unwittingly channels them toward long-abolished assembly-line jobs and a mentality to match. If we really want to raise the kind of young people we claim to treasure, we have to start inviting them, from preschool onward, to make meaningful decisions and choices, living with all the consequences that choice entails.

Each of the seven key activities inherently gives students a real voice and some meaningful choices. In workshop, students choose, from an approved range of options, what to write, read, or investigate. As a part of reflective assessment, teachers help students write and talk about their learning, set academic goals, reflect on their progress, review their own work and records. As they *represent* their learning through writing or art, students are often invited to decide for themselves what mode, style, genre, or medium of expression will best show their thinking.

Responsibility

The other side of the coin of choice is *responsibility*. If we are to restructure big parts of the school day for students to make decisions about their learning, select and explore alternatives, and pursue some of their own interests and goals, then we have to hold them accountable for finishing the jobs they start, monitoring their own performance, submitting their learnings to public exhibition, critically appraising their own work or artifacts, and making even better choices the next time, as their understanding of the process of inquiry grows.

These seven key structures invite just such responsibility. In the workshop, students have regular conferences with the teacher to review progress, assess work samples, and set goals. In well-structured *integrative units* or *small-group* investigations, students must select topics, find resources, identify targets, build schedules, make contributions to the wider group, create required tangible products, and regularly report to the teacher as they proceed. In reflective assessment, we ask students to set academic goals, save their work in folders, track and discuss their progress, keep their own records, and join with the teacher in creating reports for parents and other interested audiences.

Expression

In her remarkable 1969 book, *Young Lives at Stake*, the English educator Charity James passionately reminded teachers of a simple fact about human beings: people need to make stuff. It comes with our genes. We are driven to shape and decorate and act upon our environment, whether that means painting the walls of our caves, grinding grain into flour, spinning stories around the fire, forging tools, or

creating performances with our violins. Expression, in all of its manifold forms, is a key to learning and thinking. And yet, more than ever today, the expressive arts are being marginalized in public education, systematically pushed out of school schedules, curriculum, and budgets. In spite of their manifest capacity to captivate children and ignite the curriculum, the arts have become a bystander in the current school reform movement.

Thus, as you look into the structure of the seven key activities featured here, you see that each one carries many opportunities for students to find a wide range of *expression* for their ideas and feelings. Amid all these activities, kids make real stuff—artwork, writing, stories, performances, exhibitions, posters, research reports, semester goals, book reviews, sculptures, and bar graphs. And they don't just create these products in solitude for their own satisfaction, but for interaction with real audiences of peers, teachers, families, and communities—people with whom these products and performances can be shared, discussed, and used.

Harvey: My two children have had an extraordinary education at the Baker Demonstration School at National-Louis University. For years I have tried to explain to curious teachers what makes Baker different and special. Although the school is equipped with all the usual progressive declarations and pedigrees, something beyond the letter of the official mission statement always seemed to be going on. Finally, after we'd had children in the school for almost ten years, it dawned on my wife (who later explained it to me) that, along with all the other things that Baker teachers so consciously and carefully do, there is also a deep, abiding focus on children's *expression*.

Though Baker is not officially an arts-centered school, the teachers are attuned and committed to nurturing children's expression in every possible medium: writing, singing, storytelling, painting, hypermedia, dance, dialogue journaling, drama, poetry, fashion design, conversation, or photography. You can always pick out a Baker student because they are much more likely than "normal" kids to suddenly burst into song, dance, writing, or to drag you over to the computer to see their portfolio. They expect you to pay attention and take them seriously. And you always know a Baker teacher, because when a kid starts to express, they drop everything and attend. They stop and they listen and they smile and you can see their wheels start to turn as they think, "Wow. This is interesting. I wonder where this came from. How can I sustain this? Where does it fit in? What might be this kid's next step?"

How powerful and formative to have your early, tentative expressions met with this kind of fascinated and respectful response from the adults at your school—not just from doting parents at home. It implies that you are a part of the human conversation and are expected to have something unique and worthwhile to contribute.

It invites you to express more, to attend to others' expressions, to learn how grown-ups shape and hone and improve their own expressions. It affirms that your personal search through the different media and art forms is part of a serious lifelong quest to know more and communicate better. All children deserve to meet this kind of response in school, to have their expressions cherished.

Community

Traditional schooling, with its silent and solitary seatwork, tracking and ability grouping, and competitive grading, is highly individualistic. In its most toxic forms, education becomes a zero-sum game that pits students against each other. Classmates become enemies. The implicit motto is: I cannot win unless others lose. In this setting, the idea of classroom community is anathema; indeed, if students come together at all as a group, they are more likely to coalesce against a teacher than to join with him as a community of learners.

On the other hand, the seven structures we focus on here are social and cooperative by nature. As part of their inherent design, they contribute to building community. They invite the expression of the individual, yet they also offer ways for students to connect, to team, to collaborate. These structures tend to create a group esprit, the sense that there is a commonality of interest and purpose, that we are *in this thing together*. Looked at in terms of group dynamics theory, these activities invite students to participate in the development of classroom expectations and norms, to develop widely dispersed friendship patterns, to shoulder some leadership and responsibility, to communicate with others through a broad array of communication channels, and to negotiate and resolve conflicts.

Diversity

Pundits often speak—sometimes with alarm—about the tremendous range of students arriving in today's classrooms. This is supposed to be new? Diversity isn't just a modern phenomenon; America has been a nation of immigrants, a symphony of languages, a host of religions, and a tangle of social classes for centuries, not just the past couple of years. Student diversity used to be viewed as a problem to be solved: students of supposedly varying abilities were segregated by tracking. Minority, Special Education, or ELL students were shunted off to separate rooms and programs. Then the teacher aimed instruction at “the middle” of the remaining class. The result was that many kids were left behind academically and disrespected as people.

Now smart schools see differences as assets in the classroom, not as troubles to divest. Not only are we more accepting of ethnic, racial, and religious diversity,

but we are recognizing that all students are distinctive and different in a variety of ways. For just one example, Howard Gardner's work on multiple intelligences has shown us that there are "many kinds of smart" among human beings, not one unitary trait called "intelligence" (1983). We recognize that each of us has learning styles and habits of mind that hold great influence over how we learn—and that also, if properly tapped, offer a rich sharing of talents, views, and voices.

All seven Best Practice structures open the door to a decentralized classroom where learners of all talents, personalities, learning styles, cultural backgrounds, races, and languages can find meaningful opportunities to explore and excel. Teachers who have mastered these methods have ways to differentiate instruction, create flexible grouping patterns, make accommodations in lessons, address language differences, find "just-right" materials. They know to teach to varied learning styles, create appropriate assessment tools, and develop genuine choices for students.

Technology

Today's technology offers some powerful tools with potential school applications. But there's nothing automatically "Best Practice" about using any electronic device in the classroom. A video camera can be an adjunct to excellent teaching or a total waste of time. Kids can use a graphing calculator for open-ended explorations of mathematical concepts—or merely to finish the odd-numbered problems at the end of the chapter. Some schools are filled with shiny new computers running nothing but mundane drill programs—a \$3,000 delivery system for flash cards! As our friend and computer consultant Jeff Flynn says, "You shouldn't be asking, 'Can we do it on a computer?' But, 'Is a computer the right tool for the job?' And, 'Is the job worth doing?'"

We believe that technology can leverage some of our very best teaching if we use it wisely. Once a student has done algebra problems on a Web-based "balance beam" program, he can understand equations at a bone-deep level. When a child publishes a poem on the Internet and gets responses from kids all around the country, writing can take on a whole new level of seriousness. When a teenager is offered choices of media through which to "show what you know," instead of just passing a Scantron test, not only is school more engaging, but the student is building valuable real-life skills.

In each of the seven methods that matter, technology can play a supporting or a lead role, as you'll discover in the stories from our thirty-four teacher colleagues. You'll also notice that all these Best Practice teachers are technologically literate themselves. They use the Web in school assignments, have their own classroom and/or personal Web sites, are in touch with students, families, and colleagues by

e-mail. They can support their students' inquiry and authoring in a wide range of media. But don't get intimidated. You don't have to be a wirehead or a geek; you just need to demonstrate and coach skillful and critical technology use for your students. The saving grace for the technophobic educator is that you will always have several kids in any class who will be pleased to teach you how to run any machine or software.

*Harvey
and
Marilyn:*

Can we speak frankly? The two of us have been teachers (and now professors) since the 1960s. We have spent a huge chunk of our professional lives in libraries, among librarians, whom we adore. We have read hundreds of dusty volumes in the stacks, copied important passages by hand, and waited in line to read (but never to check out) the precious back issues of key journals. We typed our dissertations on manual typewriters (with one carbon-paper copy). We used reel-to-reel audiotape for our interviews, and filmed classroom vignettes on three-quarter-inch black-and-white videotape, using cameras the size of a compact car. We "edited" by splicing segments together with Scotch tape. We published our early research on a medium called microfiche, which no one, to our knowledge, has ever looked at.

While writing this chapter, Harvey called up Marilyn and asked, "When was the last time you set foot in a library?" We don't want to shock you with her actual answer, but let's just say library-visits-per-week are down—way down—for both of us. Even as academic researchers and writers, we can find almost anything we need on-line, immediately. What an amazing change. It stuns us how the whole process of knowledge storage (and creation) has changed in the past few years of our lifetimes. The kids we are teaching are growing up with all this, of course, and if there are any libraries left when they get to be our age, they're going to look very different.

But Can I Still Teach? Time Sharing in Best Practice Schools

How much of the time do we actually use these Best Practice methods? All day, every day? Once a week, for an hour? What's the balance?

The seven Methods That Matter do not take up the whole day. But in genuinely progressive schools and classrooms, these seven featured activities provide structure for *the majority of the school day, week, or year*—more than half (and maybe more like three-fourths) of the time kids spend in school. After all, these structures allow students rich exploration and active practice in subject areas, in a

context of teacher guidance and peer interaction, with plenty of coaching and feedback.

Still, the big seven structures are not the only activities that need to occur during a school day, year, or in a student's career. Obviously, there are some ingredients on the "less" list that still have merit and value. There remains a significant place for traditional, teacher-directed, presentational activities. For example, reading good literature aloud to children is one teacher performance that should never be curtailed; kids of all ages should have continuous opportunities to hear the sounds of great literature. And hey, a little lecturing is OK, in brief and memorable bursts, especially for older kids. A whole class can sometimes read the same book together, and be guided by the teacher in interpreting the text. Memorizing some dates, state capitals, poems, or math facts might not be such a bad idea, either. And teachers should definitely make sure that primary children know the sounds that letters make, so that they can decode and comprehend text. These traditional school activities aren't wrong—they've just been vastly overemphasized, and need to be put back into reasonable balance with all the other ways of spending children's precious school time.

The problem has been that these old teacher-centered activities have gobbled up whole days, whole years, so that kids never got a chance to digest, consolidate, and most important to *use* the ideas that teachers presented. Kids don't get enough practice moving concepts from the pale and passive world of something that was mentioned into the robust world of personal application. After all, every contemporary learning theory—behaviorist, cognitive, information processing—has one common feature in its paradigm of learning: for human beings to assimilate information they must somehow *act on it*.

But acting on information takes time and support, and that's exactly where the seven key structures come in. They help to rebalance the school schedule, providing large, well-structured periods of time during which students can act upon the ideas and information that teachers have presented in their now more proportionate fraction of the school day. The Best Practice structures help us create a new mix of presentation, demonstration, practice, application, coaching, and reflection that is far more likely to help students remember what they read, hear what their teachers say, understand ideas that are discussed, grasp concepts that are introduced, master skills that are modeled, care about the process, and value their place in it.

Still, we must be careful not to let the old teacher-centered fox back into the henhouse. Ancient pedagogical habits die hard, and teachers probably wouldn't have originally chosen this vocation if we didn't crave the spotlight on some deep psychological level. The hunger to "really teach something" has probably derailed more student-centered innovations than administrative timidity and textbook company co-option combined.

Luckily, there are ways to strike and defend a balance. Many of the Best Practice structures can be infused with small doses of traditional, teacher-directed activities. A great example of this blending is mini-lessons in reading-writing workshops, an idea now well-developed in the professional literature (see Daniels and Steineke 2004; Calkins 1986, 2000; Harwayne 1992; Atwell 1998; Fletcher and Portalupi 1998; Hindley 1996) whereby the teacher designs short, pointed, and well-timed presentations and embeds them in the context of a long chunk of student practice time. This kind of teacher-directed lesson offers the greatest possibility that the information will actually transfer into the work of students, since it can be applied and practiced promptly.

There's one other category of time expenditure in school that's separate, not exactly a method or a structure, but rather a diffuse pursuit using many structures: community building and maintenance. Even though, as we've argued, the seven Best Practice structures do inherently nourish relationships and groups, some of this development often needs to occur separately. Depending on the age of the students and the goals of the teacher, such community building may involve periodic and structured class meetings, acquaintance-building activities, conflict resolution or mediation programs, advisory periods, and the like. Some systemic reform efforts, like the Comer Project, make individual and group relationships an especially significant part of the school calendar. "The Responsive Classroom" is another model of school-as-community development built around carefully structured and thoughtful daily class meetings. At the high school we helped to start in Chicago, the faculty gives big chunks of time to special group-building activities early in the year, commits two-and-one-half hours per week all year to an advisory period, and runs an active peer mediation program to deal with problems that arise (Hoverstein, Doda, and Lounsbury 1998; Daniels, Bizar, and Zemelman 2001). Happily there has been a recent burst of research and writing on the topic of community-building in the classroom, with an especially valuable contribution from Nancy Steineke (2002).



Now we turn to describing the methods themselves. The next seven chapters explain how each of these big teaching ideas works across the curriculum, from kindergarten through high school. For each structure, the two of us will first lay the groundwork and then turn the conversation over to several teacher-colleagues who'll tell you how it works in their own classrooms. That means you are about to hear from thirty-four colleagues, teachers who are creating powerful, memorable learning experiences for their students every day. These are the people who really know how to teach the Best Practice way.