From what schools teach to how they allocate time and people, their design should emerge from local priorities and build on what we know about student learning. Drawing from their common principles, Essential schools are posing the most fundamental questions about how schools should look.

“IT WAS EASY,” Einstein is said to have quipped when explaining how he came up with his theory of relativity. “All I had to do was ignore certain basic axioms.”

When it comes to public education, his tactic may merit a closer look; for perhaps never in this century have such volatile energies converged on the subject of how schools ought to work.

Whether the subject is charter schools or the Colorado shootings, district take-overs or “reconstituted” schools, workplace learning or Web-based courses—the public discourse has dramatically shifted in just the last several years.

And for the first time since compulsory public education began in this country, it includes not just educational “experts” and school boards but parents and teachers, legislators and mayors, universities and businesses.

Around the nation, more people are asking whether schools as most now look—large, anonymous places that shuttle students through a fragmented day and test them with impersonal zeal—are designed to best yield the engaged and thoughtful citizens the next century requires.

The Federal government has allocated over $150 million to the search for “Comprehensive School Reform” designs aimed at boosting student achievement in poor and low-performing schools.

For many who have seen reform waves come and go, that push recalls the “school improvement” wave of Cold War days, when the government funded massive curriculum development projects that still gather dust on the shelves of teachers who largely ignored them.

But these days, the conversation focuses not just on textbooks but on all the structures and systems that make up a school’s “design”—curriculum and instruction, standards and assessments; the allocation of resources from people to money and time; the roles of adults and students; the schedule and calendar; the opportunities available for learning; even the architecture of the school itself.

Why is this discourse roiling the public waters just now, when for much of this century Americans have largely accepted and perpetuated standard-issue designs for our elementary and secondary schools? In part, it arises from critical research over the past 20 years, questioning whether those designs serve children well enough in these changing times, and what it would take to change them.

In part, it comes from a social and economic climate in which the boundaries are steadily blurring between public and private functions. Entrepreneurs start public charter schools these days; corporations sponsor public schools. Tax credits or publicly funded vouchers are taking poor children out of fail-
ing schools. Home schooling has increased exponentially. The Internet and the media teach young people much of what they know. And the people once regarded as experts in schooling—from big-city school boards to teacher education colleges—are finding themselves blamed, scorned, or replaced.

Organic, Ongoing Design
But in its search for answers—whether through staffing or schedules, curriculum or budgets—the conversation about school design can turn facile and prescriptive. And, as many Essential school practitioners have pointed out, any effort to supply models for school reform runs the risk of missing some crucial lessons history and research have to tell.

For one thing, school designs grow organically from their local contexts, born of and nurtured by a community's increasing understanding of its particular conditions and its willingness to address them. In fact, the successful outcomes of school change efforts have far less to do with design "inputs" than with the internal dynamics of the school community, Paul Berman and Milbrey McLaughlin concluded in their massive 1977 national study for the Rand Corporation. No matter how coherent any particular design might seem from the policy level, Ontario educator Michael Fullan observes, it will feel fragmented to teachers in schools until they can create their own knowledge of what to do rather than adopting that of "experts."

In addition, school design entails an ongoing inquiry process, as a community introduces its strategy for improving problems, inquires into and analyzes its results, revises its actions, and continues the cycle. Especially as communities rapidly change their makeup, school designs must continually adapt to suit the current circumstances.

Finally, any school design serves a particular society's purposes, including maintaining the existing balance of political, economic, and social power—on both local and national levels. Any sustained investigation of how schools work, the Coalition asserts, must include a hard look at the issues of democracy and equity a particular design raises. For examples, many conventions of schooling, from tracking to testing, operate as sorting and selecting devices that deny a high-quality education to students not privileged by their color or economic class.

Principles Generate Designs
What does all this mean in the practical world of schools? Can a school join the Coalition hoping to find clear guidance about which structural and design elements will best support student learning? It can, both from CES principles themselves and in the professional development that flows from those principles, Coalition practitioners assert. "If a school starts by exploring how the Ten Common Principles might play out in its own context, ideas about design will emerge," observes Jan Reeder, who co-directs the CES Northwest Center in Tacoma, Washington.

"The common principle that a school must know every student well, for instance," she says, "virtually requires a structure in which adults can work with small numbers of students over an extended time period." Research solidly supports that principle, she notes; yet a school might devise any number of effective ways to carry it out.

For ideas, schools can now also look to a set of CES "benchmarks" developed since 1998 by a working group of the Coalition's National Congress. Still in the pilot stage, the benchmarks have already proved useful as exemplars for Essential schools interested in charting their progress along a set of "indicators." (See sidebar, pages 4 and 5.)

Certain of the Coalition's eight Organizational Principles also offer useful design guidance. For instance, a school committed to documenting and demonstrating the work of students, or to collaboration and critical friendship among its faculty members, must design ways for this to happen into its daily routine. Or a school that regards the family as fundamental to its work may require pre-enrollment family interviews, schedule home visits by teachers, or build parent-student-teacher conferences into its calendar.

Even with principles to call on, designing or redesigning an organization requires substantial effort and expertise. New schools as well as redesigning schools are increasingly turning to regional CES centers and the national office for coaching in this complex process.

The national office is developing a series of professional institutes to...
help school teams think through and plan for effective school designs with Coalition principles in mind.

And it is redesigning one of CES’s most long-standing processes, “the Trek,” which coaches school-based teams in such work. (See sidebar, page 8.) Trek participants learn a set of skills and tools in strategic planning, managing organizational change, and incorporating inquiry into practice, all aimed at improving student achievement. They work out ways to achieve the key elements of an Essential school in ways that respect and respond to its local context. They develop strategies through which to engage their community in the redesign of its schools. Working in cross-school and school teams, they pay visits to other schools to observe, study, and offer feedback on their practices.

Exemplars of Design

Many Essential schools, in fact, have turned for useful models to other schools whose structures and priorities have paid off in increased student learning. (See sidebar, page 6.)

“To me, a design is on paper—for a model, you look at the living thing,” says Deborah Meier, who started the most well known of these, Central Park East Secondary School in New York City, and currently heads the new Mission Hill elementary school in Boston. Dozens of small schools in New York City and elsewhere have since adopted Central Park East’s stripped-down interdisciplinary schedule, advisory system, and performance-based graduation requirements.

So many schools have inquired about the distinctive design of the Met school in Providence, Rhode Island that the school now conducts “design studios” in which teams make guided cross-site visits to facilitate the rethinking of their structures and practices.

In the wake of recent shootings at large schools in middle-class communities, suburban schools around the country are investigating Coalition-style advisory systems, aimed at creating a climate in which students can form stronger bonds with adults who model inquiry and respect.

And New York City’s experiment with breaking down a large urban high school into several autonomous smaller schools has proved so successful that variations on it are in the works from Philadelphia to the West Coast.

But “simply importing practices that work well in one place doesn’t necessarily lead to greater student learning,” Meier warns. “Each local school has to think through the principles of what it wants to see in students, and then let the practices emerge from those principles.”

Some Elements Are Essential

That reliance on principles partly explains why—however different they may look on the surface—the most successful Essential schools rely on a few key elements that help increase achievement for all students, not just the privileged few.

These factors—from reducing the student-teacher ratio to requiring exhibitions of student mastery—derive from such a formidable research base that the Coalition national staff has come to consider them as “non-negotiables.” Though

continued on page 7

HORACE 3 June 1999
How Does an Essential School Design Play Out the Common Principles?

A working group of the CES National Congress, made up of representatives from schools and Centers, has since 1998 collaborated on drafting a set of specific descriptions (or “indicators”) into “benchmarks” that outline what the work of the Coalition “looks like.” A number of Centers and schools are currently pilot testing the benchmarks to help focus school practices on improving student achievement; they will be revised accordingly.

These benchmarks are organized in two sets, either of which can help a school assess its own practices. One set takes each Common Principle in turn and describes how it looks when applied in five interconnected categories: Student Achievement, Classroom Practice, Organizational Practice, Community Connections, and Leadership. (The visual depiction below indicates how each of these coexists in its support of the central goal, student achievement.)

The second set, alternatively, takes each of those five categories in turn and describes how the Ten Common Principles show up in its particular context. The draft that follows in these two pages illustrates this approach, using “Organizational Practice” as an example:

ORGANIZATIONAL PRACTICE BENCHMARK

Putting the Ten Common Principles into practice requires that schools orient their organizational structures and practices—such as schedule, professional development, decision-making, and teacher collaboration—to directly support powerful teaching and learning. CES provides an explicit framework for coherent whole school change and the development of the school as a reflective learning organization focused on supporting improvement student achievement. CES schools will show evidence of:

Common Principle 1: The school should focus on helping children learn to use their minds well.
   a. Professional development and support system that are framed around intellectual rigor and habits of the mind (see Student Achievement, Principle 1)
   b. A learning community of stakeholders, spokespeople and publications that articulate the philosophical foundation of the school (i.e. what “habits of mind” are, how the school addresses emotional and social components, what high levels of learning for all students means)
   c. School and community resources that are available and well integrated (that is, libraries, technologies, support programs) to support intellectual purposes

Common Principle 2: The school’s goals should be simple: that each student master a limited number of essential skills and areas of knowledge.
   a. An academic program that is designed to support cross disciplinary work and traditional academic departmentalization is limited
   b. Forums that encourage discussions of “less is more” and professional development opportunities help teachers design curriculum effectively
   c. Programs and field trips (i.e. community service, work study, internships) that connect “inside-school” learning to the community and “real world”

Common Principle 3: The school’s goals should apply to all students.
   a. The collection, disaggregation (i.e. by race, ethnicity, gender, disability), and analysis of student data by individual teachers and the school so that patterns related to student achievement (i.e. school placement, test scores, course selection, post graduate plans) can emerge
   b. A challenging curriculum and promotion/graduation standards that apply to all students—no tracking
   c. School activities and resources (financial and human) that are allocated in ways that give all students access to the most effective teaching and learning.
In Answer, Member Schools Are Developing Benchmark Descriptions

Common Principle 4: Teaching and learning should be personalized to the maximum feasible extent.
   a. A schedule that supports small learning communities by reducing student-teacher ratio (80:1, 20:1)
   b. Schedules and programs that are organized to accommodate personalized learning (i.e. advisors, school within a school, and house system)
   c. Professional development and support system encourage personalization through the provision of information about expert/outsiders and community resources

Common Principle 5: The governing practical metaphor of the school should be student-as-worker, teacher-as-coach.
   a. Professional development opportunities and support systems that encourage authentic teaching and learning
   b. A schedule and organization that allow for time during the school day to pursue authentic teaching and learning

Common Principle 6: The diploma should be awarded upon demonstration of mastery of the central skills and knowledge of the school’s program.
   a. Professional development, support systems and time that are provided for teachers to discuss student work and develop consistent assessments
   b. Transcripts that reflect the experiences, skills, and competencies students have accomplished
   c. Promotion and graduation requirements that use demonstrations of mastery rather than time spent in class as criteria

Common Principle 7: The tone of the school should stress unanxious expectation, trust, and decency.
   a. Whole-school meetings that are convened to include student voices
   b. Governance systems that enable all stakeholders (teachers, students, parents, community, and administrators) to have input into planning and assessing of school programs (vision/goal setting process, data review, student exhibitions)
   c. A learning environment that is both hospitable and authentic

Common Principle 8: The principal and teachers should perceive themselves as generalists first and specialists second.
   a. Curricular goals and outcomes, schedules, teaching load, and programs that provide teachers with time to meet and collaborate during the school day
   b. Professional development, support systems, and incentives (i.e. sabbaticals, grants, enrichment activities, study groups) that help teachers make a paradigm shift regarding their thinking about their profession, learning how to work collaboratively, and expanding their curriculum content base
   c. Expectations of teachers that are realistic and reasonable

Common Principle 9: Teacher loads should be 80 or fewer pupils [at the secondary level; 20:1 at elementary level], and per-pupil cost should not exceed traditional school costs by more than 10 percent.
   a. Professional development and support system resources that are CES related
   b. Teaching loads for teachers that are 80:1 (secondary school) or 20:1 (elementary school) through creative scheduling and innovative use of people/resources
   c. Budget and resource allocation decisions are made at the school site by a broad range of stakeholders

Common Principle 10: The school should demonstrate non-discriminatory and inclusive policies, practices, and pedagogies.
   a. Policies that encourage stakeholders to communicate with, participate in, and provide leadership for the school through outreach and solicitation
   b. Opportunities for all stakeholders to voice their opinion on a wide variety of school matters with input to the superintendent and his/her staff
   c. Collegial relationships among all areas—teaching, administration, clerical, maintenance, and community

Diversity
   a. A district office that provides diversity training for school staff, parents and students
   b. A district personnel office that seeks diverse administrative and teaching staff
   c. School policies that clearly describe appropriate and inappropriate behavior and conduct and state consequences for inappropriate conduct

Equity
   a. Goals that are explicitly related to equity—human and financial resource allocations which address long-standing inequities with traditionally under-served populations
   b. School policies that promote equitable learning (i.e. active heterogeneous grouping; no tracking or leveling, academic supports and acknowledgments of diverse learners and styles, high expectations for all students, class enrollments reflect diversity of student population)
   c. A data collection and analysis system is used to inform decisions regarding student achievement and success of all students (i.e. rates of disciplinary actions, graduation and drop out rates, representation of ethnic groups in high and low achievement levels, AP enrollments)
Thinking Out of the Box: Design Elements from Essential Schools

The Essential school designs that follow represent just a few of the wide array that characterizes the Coalition. For more examples, visit the CES Web site (www.essentialschools.org) or call the national office (510-433-1451) or a regional CES Center.

**Breaking large schools into several small schools.**

Two formerly enormous city high schools, reborn as the Julia Richman and James Monroe Educational Complexes, now house a number of new schools affiliated with the Center for Collaborative Education (New York City's CES Center). In Manhattan, Julia Richman comprises a K-8 elementary school and early childhood program (Ella Baker); a high school serving English language learners (Manhattan International); and two other small high schools (Urban Academy and Vanguard).

The schools share resources, including a library and an infant day care center for student parents, and provide continuity for families from pre-K through high school. The redesign of the large building also prompted startups of four more small high schools nearby, including Landmark High School and the Coalition School for Social Change. In the Bronx, James Monroe houses the Bronx Coalition Community School for Technology, the New School for Arts and Sciences, a K-8 school, and two other small high schools. With a higher percentage of poor students than the rest of the city, the small schools have a higher graduation rate, proving the investment in small schools to be cost-efficient despite a somewhat higher cost per pupil. Information: www.essentialschools.org.

**Using teaching teams that share a small group of students, or keeping students with the same teacher for several years.**

Many Essential elementary schools have begun “looping” to keep teachers with their classes for long enough to know them well, and the practice is spreading to the upper grades. In Philadelphia, students at the Academy for the Middle Years (AMY-Northwest) remain from sixth grade through eighth grade with the same five-teacher team, which has broad flexibility in using time and creating group rosters. Information: (215) 248-6664. At Walden III in Richie, Wisconsin, students stay in the same mixed-grade advisory group throughout their high school years. Before graduation, they present juried portfolios in core areas. Information: (414) 635-5860.

**Grouping students in multi-age, heterogeneous ways.**

At San Francisco Community School, students spend two quarters of each year in core academic groups combining grades 1-2, 3-4, 5-6, and 7-8; the other two quarters they choose a sustained interdisciplinary project open to students from three grade levels. Seventh grade reading scores have skyrocketed. Information: (415) 699-4738. Harmony School in Bloomington, Indiana divides its 125 students into four ungraded divisions: early childhood, elementary, middle, and high school; they move up by exhibitions of the skills, knowledge, attitudes, and habits required by each division. As well as working with teachers in core interdisciplinary academic groupings, students of all ages mix in elective classes emphasizing exploration, creation, and recreation. Information: (812) 334-8349.

**Changing the academic calendar or the length or timing of the school day.**

At the Boston Evening Academy, 150 students ages 15 through 26 work toward a high school diploma on the campus of a college-level technical institute. During the days they work in supported positions in the community, classes take place four days a week from 4:30 to 8:30 p.m., with child care provided. Information: (617) 635-6789. Though Metro High School in Cedar Rapids, Iowa enrolls up to 800 students a year, only about 300 attend at any time because students attend only half-days, four days a week. Students choose whether to attend morning or afternoon based on space availability in the school, their personal schedules (many work or have children), or their personal habits. On Fridays the staff meets to discuss student problems, needs, and successes and to carry out team planning, committee work, professional development, and visits to students' homes and workplaces. Information: (319) 398-2193.

**Situating learning in the community.**

High school students come and go freely from School Without Walls in downtown Rochester, New York, on their way to classes at local colleges or the district’s multimedia studio, community service commitments, or internships. For two and a half hours in the morning, four days a week, they take year-long themed interdisciplinary classes. Afternoons, they disperse to hour-long academic courses. If a course they want doesn’t exist they can create it—via a written proposal, including learning goals and evaluation criteria—by finding someone in the community to teach them or by signing up at a local college. The school grants Carnegie credits quarter by quarter to keep closer tabs on performance; for graduation, students present a year-long Senior Project and performance tasks demonstrating mastery in academic areas. Information: (716) 546-6732. In Providence, Rhode Island, workplace “externships” form the heart of students’ experience at the Met school; up to nine teams of 100 students and five teachers arrange their time on a flexible and often individual basis to support those work experiences with academic coaching. Information: (401) 277-5046.

**Using technology to focus a school’s learning.**

Cutler Ridge Middle School in Miami, Florida organizes all decisions around connected “infrastructures”—they include professional growth; digital technology in support of research, data-driven decisionmaking, and action; and parental involvement—that make up a connected system of continuous growth. It summons all the school’s digital resources to support the school community’s “data-driven decisionmaking,” supplying teachers, students, and parents virtually instant reports on any question they choose to investigate, from traffic problems on dismissal to students’ understanding of fractions. Information: (305) 235-4761. Some CES schools have used “distance learning” to reduce elective course offerings, enabling small heterogeneous classes and lower teaching loads. Information: Distance Learning Resource Network (at WestEd in San Francisco), (800) 662-4160; on the Web at http://www.wested.org/tie/diru/
they rarely characterize United States schools, they do show up consistently in those of other countries known for high student achievement and teacher quality.

The use of time stands as a prime example of how school design affects learning results. Teachers in Japan spend only half their workday in class; during the rest, they work with colleagues on their own skills and lesson plans, or give individual help to students who need it. And the Japanese mathematics curriculum exemplifies the Coalition's "less is more" philosophy; students must learn in great depth roughly a third of the concepts that American students rush through in the quest for "coverage."

School calendars in other countries also reflect a balance that affords sensible periodic breaks yet gives teachers regular time to learn and plan together. Poor children experience far more summer "learning loss" than their privileged peers, research has shown, which makes the school calendar an equity issue as well as an indicator of teacher professionalism. In response, many urban and suburban schools in Los Angeles, Chicago, and Florida now operate on a year-round calendar, which also helps with overcrowding problems. (Various forms of this practice are well summarized on the Web at www.nayre.org.)

Many pioneering Essential schools have adopted interdisciplinary teamed instruction, which both decreases teachers' overall student load and helps learners cross arbitrary boundaries between subject areas. Where this technique was used, a 1994 study from the federally funded Appalachia Educational Laboratory found, student performance increased across the board. Students showed a better grasp of concepts and skills, more connections across disciplines, greater enthusiasm for learning, increased participation in and completion of learning activities, fewer discipline problems, and improved attendance, it concluded.

Reducing the student load also goes far toward increasing achievement. Schools where teachers taught fewer than 80 students showed significant gains on standardized test scores, grades, attendance, and other indicators of success, Craig Larson's 1998 study of 121 CES secondary schools found. And 1999 findings from the landmark Tennessee-based Project STAR (Student/Teacher Achievement Ratio) show that students who were in small K-3 classes outperformed students in larger classes all the way through high school—with particularly strong results among African-American students.

Solving Design Problems: The Cycle of Inquiry

The habit of inquiry is critical to school design teams as they analyze how various structures and practices affect student learning and school functioning. Whether in devising new designs or assessing current designs, they must:

- Identify a problem area to investigate. (For example, "Fifty percent of our high school students are reading below grade level.")
- Study the problem to determine its roots. (What experiences do these students encounter in school? Who teaches them, and how, and in what settings?)
- Develop strategies of instructional leadership to address the problem. (For example, "What would happen if we set out to match each student's reading material to that student's most pressing interest?")
- Collect and analyze data produced from trying the strategies.
- Retool the strategies to address the problem more effectively.

Assessing the Community's Needs

Because well designed schools respect and reflect the strengths of the communities they serve, CES believes, school design teams must research the answers to such questions as these:

- What priorities does the parent community have for this school?
- What are the community's demographic trends?
- What role might teachers' unions play in the school redesign?
- What other schools serve this community? Who would be drawn to a significantly redesigned school?
- What individual people, businesses, and community-based organizations might play partner roles?

Boldest Moves, Best Results

"Complex structures result in simple behaviors," Thomas Sergiovanni writes in his book Moral Leadership, "and simple structures result in complex behaviors." If schools intend to help all students learn at high levels, CES executive director Amy Gerstein argues, they must redesign their structures in dramatic ways, creating simple, flexible systems in which students and teachers can develop in complex ways.

"Conventional schools, which are designed to sort and select students, produce inequity," Gerstein declares. "We won't have high standards for all children until we have the courage—conceptually, culturally, and politically—to stop tinkering with these systems and reject their assumptions entirely."

In fact, the best results from Essential schools thus far have come from those that have most boldly challenged fundamental aspects of what Americans think of as school.
The School Design Puzzle: How CES Can Help

Schools seeking help with issues of school design can find help through the Coalition of Essential Schools in a variety of ways:

- The new CES School Benchmarks spell out detailed “indicators” for how the Ten Common Principles play out in school structures and practices. To obtain the latest working copy, contact JoAnne Dowd by e-mail at jdowd@essentialschools.org, or telephone 510-433-1451.

- The CES Web site (www.essentialschools.org) posts publications, discussion groups, and a “field book” of examples from Essential schools in action.

- Ten years of the CES journal Horace have been published as The Collected Horace in five spiral-bound volumes, arranged by theme for easy reference. Volume 3, titled School Structure and Design, includes issues on small schools; new schools; getting reform started; reform in elementary schools; “what works, what doesn’t”; heterogeneous grouping; school-to-work; advisory groups; schedules; school culture; student roles in reform; equity issues in school design; and research supporting Essential School ideas. To order Volume 3, send $60 plus $5 shipping to CES Publications, 564 Eddy Street, Suite 248, Providence RI 02903; MC and Visa orders phone 401-351-1233. The complete set of five volumes is $310 plus $20 shipping.

- School coaching by experienced consultants is available through both the CES national office and CES Regional Centers. For more information, telephone Joanne Dowd at 510-433-1451 or e-mail jdowd@essentialschools.org.

- The Trek, a year-long guided journey for school teams in the process of change, is offered by, among others, CES Regional Centers in Indiana (812-856-8216), Ohio (614-855-7331), Missouri (816-453-7733), Florida (954-382-6260), New Jersey (732-445-2071), and the San Francisco Bay Area (510-208-0160). For more information, contact the appropriate Center or JoAnne Dowd at the national CES office (510-433-1451; e-mail jdowd@essentialschools.org).

- School Design and Leadership Institutes in the summer and during the school year are sponsored by CES national offices (510-433-1451) and by the Michigan Regional Center (517-780-9814, e-mail bbleyaer@online.emich.edu).

Though such action takes both skill and political will, research makes plain that it pays off. “When the changes embodied in the Coalition’s … common principles are fully implemented both inside the classroom and in the school as a whole, the effects are consistent, beneficial, and significant,” concludes a 1996 report by Margaret MacMullen summarizing four major research efforts. “Such schools have increased student engagement in academic work and raised student achievement and parent, teacher, and student satisfaction; they have had a positive effect on student behavior and promoted equity in achievement among different groups of students.”

In this top-down era, the push is on to “replicate what works”; and the Coalition stands ready to help schools think through their design issues in numbers of ways. (See left.) Still, Ted Sizer emphasizes, Essential schools stand out from the current conventional wisdom “in our conviction that a school’s design must be rooted in its local culture to survive.” School by school, they are seeding the nation with bold examples of how and why that works.