



Ecole maternelle in Paris: Classes in language, logic, and social skills get 2- to 5-year-old children off on the right foot

WHY AKIO AND YVES BEAT OUT JOHNNY

Other countries have clear teaching goals backed by tough tests

Tucked away behind Taipei's central train station, 200 18-year-olds at the Scholar Cram School furiously scribble notes as a math instructor imparts tips for dividing large numbers. Although August vacation is in full swing, these Taiwanese students haven't a moment to waste. Their college entrance exam is next June, and competition is acute: Fewer than half will pass. Most will study six nine-hour days per week for 11 months at Scholar or one of hundreds of private cram centers like it. Many endured the same drill during junior high—to qualify for the best high schools. "I don't think I slept more than four or five hours a night all year," says Iris Tu, a recent grad.

If the regimen seems excessive, the lesson is instructive for those who despair of American public education: There's no substitute for hard work, driven by rigorous demands and backstopped by real career consequences. No system offers a perfect model. But a *BUSINESS WEEK* survey of some of the world's best reveals a

delicate mix of ingredients worth considering. "The lessons are obvious, but [Americans] don't follow them very often," says Chester E. Finn Jr., a partner in the Edison Project, a Nashville-based group developing a network of private schools. "Preparing kids for exams is the major task of most other school systems. Only in the U.S. is 'teaching for the test' considered a sin."

Most respected systems set high hurdles through national or state exams, then work backwards to build detailed curricula for achieving them. While standard U.S. tests seek to measure aptitude, kids from Japan to Germany to France are held responsible for what they actually learn in class. "The more the curriculum demands, the more kids learn," says Neville Postlethwaite, a professor of comparative education at the University of Hamburg.

For instance, passing the typical world history college entrance exam in Japan requires recalling issues as precise as the

events surrounding British-French trade frictions in the 18th century. To prepare students, the national curriculum sets a rigid schedule of required competencies in every subject at every level. Fifth-graders do multiplication and division of negative fractions—something many U.S. kids don't come across until three years later.

CONFUCIUS SAYS. Central control of the syllabus does little good, however, unless policymakers know what they want the system to produce. The Netherlands, which depends heavily on foreign trade, makes foreign languages and math compulsory—starting in primary school. Hungary's national priority in technology provides specialized science teachers starting in the fourth grade and a full math and science diet through grade 12.

Knowing what to teach doesn't mean much, however, unless all children have an equal opportunity to learn. Assuming the key to equality starts early, France's public *écoles maternelles* (preschools) are attended by virtually all 4- and 5-year-olds. They may be the closest thing yet to the Bush Administration's goal of making sure every child starts school ready to learn. State-selected teachers, who are held to the same high qualifications as those in higher grades, follow a detailed curriculum in basic language, logic, and social skills.

Still, France's Socialist government recognized 10 years ago that a fair start doesn't equalize certain economic and cultural disadvantages. So the state funnels



Cover Story

further resources for supplemental classes into priority zones, encompassing 10% of all schools. Unlike the U.S. Chapter One program, which singles out individuals for special help, "France's geographical focus is a more comprehensive effort to change schools, not just kids," says Charles Glenn, professor of education policy at Boston University. At Clemenceau junior high in Paris' Goutte d'Or priority district, where 90% of the students are children of Arab or African immigrants, the rate of those advancing to *lycée* (academic high school) has climbed to 65% in recent years, past the 55% national norm. Given an equal chance, says principal Liliane Boursin, "all students can succeed—and we treat them that way."

That tenet is the backbone of Asian education as well. In Japan, Korea, and Tai-

ty of Michigan professor and co-author of *The Learning Gap*, a comparison between Asian and U.S. classroom practices. In elementary and junior high schools, Japanese instructors use a greater variety of teaching methods and ask more questions of all students, keeping them involved. "Asian teachers have an absolutely compelling vitality and coherence to the information they present," Stevenson says. That partly stems from having a generous 40% of the workday free to prepare for classes. U.S. teachers are lucky to get one full hour a day free.

The stereotype of rote memorization and creativity-numbing drills associated with Asian teaching, Stevenson says, is mainly perpetuated by high schools and the private cram courses. But in lower grades it's much different. Science teach-

chemical producer Ciba-Geigy Ltd. The systems work partly because of corporate dedication to training the next generation of labor. In Germany, industry's tab for high school vocational training represents 30% of total spending on education.

AUTHORITY FIGURES. As in Asia, reverence for teaching lies at the core of the Germanic systems. In Germany, teachers win civil service status guaranteeing job tenure and such benefits as low-interest mortgages. In Switzerland, voters in some counties actually elect instructors to their jobs. "It all generates strong respect around the teacher as authority," says Norberto Bottani, a comparative education expert at the Organization for Economic Cooperation & Development in Paris.

One clear lesson in studying educational policies around the world is that no single

magic key unlocks excellence. Koreans, who score high on international math and science tests, average among the biggest class sizes in the world (49 in the eighth grade), while Hungarians, also high scorers, have one of the shortest school years (177 days). Nor does throwing money at the problem do the trick. The U.S. spends 7.5% of its gross national product on education—second-highest of 20 countries in a recent assessment by the Princeton (N.J.)-based Educational Testing Service (ETS)—but scored near the bottom in three of four tests.

Still, there is hope in that some of the most revered educational systems—Japan, Germany, South Korea, and the Netherlands—rebuild their postwar systems from scratch in decades. One modern example may be in the making in England and Wales. After decades of aimless experimentation, the government four years ago began a pincerlike movement on

education. It set up a national testing regimen based on the country's first national curriculum, emphasizing English, math, and science. And it began letting each school, rather than district bureaucrats, direct its own budget to the specific needs of its students.

It's too soon for results, but the formula seems to nail the basics on the head. "Substantial improvement doesn't happen until you tackle the big questions: What do you want students to learn, and how can you make sure everyone has an opportunity?" says Gregory R. Anrig, ETS president. That's an exercise worth studying.

By Jonathan B. Levine in Paris, with Rebecca MacKinnon in Taipei, Igor Reichlin in Bonn, and bureau reports

For a BUSINESS WEEK/Harris Poll on how Americans feel about their schools, see page 85.



SOME LESSONS FROM ABROAD

BRITAIN

National curriculum and testing for England and Wales. Each school can direct its own budget to specific needs of students

GERMANY

Corporate dedication to training the next generation of labor, through extensive funding of vocational apprenticeships for 70% of students

FRANCE

Public preschools serve 85% of three-year-olds, 100% of five-year-olds. State-funded supplemental classes for schools in impoverished districts

JAPAN

Well-paid teachers spend 40% of school day in preparing lessons that encompass a variety of teaching methods to keep students involved

DATA: BW

wan, belief in every child's ability to learn is rooted in ancient Confucian tradition that assumes anyone can rise to a position of power if he or she studies hard enough. Consequently, a student's success reflects equally on parents' efforts to support scholarship. Japanese *kyoiku mamas* (education mothers) assiduously invest several hours each night helping their kids with homework. By contrast, "in America, we figure a kid either has it or he doesn't" at an early age, then channel the child into fast or slow learning groups, says William Loxley, executive director of the Hague-based International Association for Evaluation of Educational Achievement. "It becomes a self-fulfilling prophecy."

What's more, the Asian can-do attitude leads to vastly more effective teaching styles, says Harold Stevenson, a Universi-

ty of Michigan professor and co-author of *The Learning Gap*, a comparison between Asian and U.S. classroom practices. In elementary and junior high schools, Japanese instructors use a greater variety of teaching methods and ask more questions of all students, keeping them involved.

At the same time, most successful systems recognize different competencies by the time students reach high school—and steer them into appropriate learning tracks. While many U.S. educators abhor such "tracking" as a matter of political principle, company-supported vocational and technical training forms the heart of high school programs in Germany and Switzerland. Starting at age 15, 70% of these nations' students begin three-year apprenticeships, some of which are nearly as prestigious as the academic *gymnasium*. Waiting lists stretch out for years at Swiss toolmaker Sulzer Brothers Ltd. and