



Photo by Brian Snelson.

Cuban students cross Plaza Vieja in Havana.

## EDUCATION

# Cuba's Academic Advantage

by Martin Carnoy

**W**hen the United Nations Educational, Scientific and Cultural Organization (UNESCO) gave math and language tests in 1997 to third and fourth graders in 13 Latin American countries, researchers were only mildly surprised to find that pupils in Cuba's lowest income schools outperformed most upper middle class students in the rest of the region. These test data confirmed years of anecdotal evidence that Cuba's primary schools are by far the best in the region and may be better than schools in neighboring Florida.

Four years ago, I and two of my doctoral students at Stanford, Amber Gove and Jeffery Marshall, set out on an ambitious research project to discover why Cuban elementary schoolers are so successful. We analyzed the UNESCO data econometrically for seven Latin American countries focusing on the impact of family, schooling and social capital variables

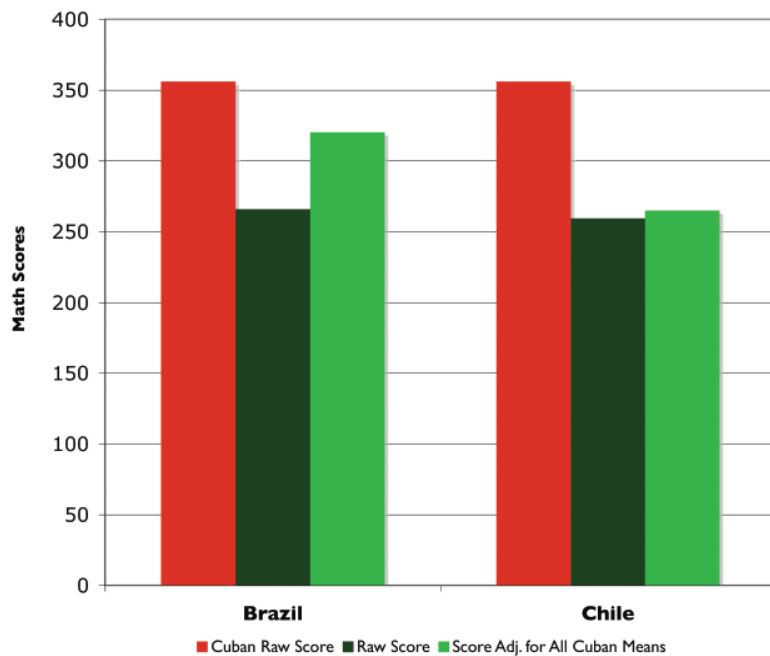
on student performance. We then focused on three of those countries — Cuba, Brazil and Chile. We filmed more than 30 third grade math lessons, about ten in each country. We also interviewed teachers, principals and ministry officials, and we visited university teacher training programs.

We found that Cuban children excel academically for fairly straightforward reasons: they attend schools intensely focused on instruction, staffed by well-trained, regularly supervised teachers in a social environment that is dedicated to high achievement for all. The Cuban system combines quality teaching, high academic expectations and a tightly controlled school management hierarchy with well-defined goals and responsibilities — a combination that distinguishes Cuban education from other systems in Latin America.

Cuban children grow up in a society that is strictly controlled but supports children's health and learning.



**Cuban and Country Third and Fourth Grade Raw Mathematics Scores and Scores Estimated Using Cuban Family, School, and Social Context Characteristics**



Graph courtesy of Martin Canoy

Comparing mathematics scores for Cuban students (red) with raw scores (dark green) and scores adjusted for various social context factors (light green) in Brazil and Chile.

Compared to other Latin American countries, students report little student-to-student violence in Cuban schools. The government guarantees employment to adults, provides reasonably good health care to all, enforces child labor laws so that children find it difficult to seek work outside the home and makes parents accountable for their children's well-being. Even children from disadvantaged families are provided good nutrition, attend school regularly and do their homework. If students' families are not being sufficiently supportive academically, school authorities make home visits to assess the home environment.

Strict government social controls are not compatible with individual adult liberties, but they do assure that lower-income children get what they need at home, live in low-crime environments, are able to study in classrooms with few student-initiated disturbances and attend schools that are more socially mixed. In Cuba, low-income children's rights are far better protected than in other Latin American countries; adults' rights and, to a much lesser extent, upper-middle class children's rights are reduced. Cuban students can learn more in these conditions than similar low-income children who have to work for wages and who sit in frequently disrupted classrooms in schools that are highly socially stratified.

Children in Cuba also attend schools with generally high quality teaching. They usually stay with the same primary school teacher for the first four years and spend most of the school day under that teacher's care. On average, we observed

that Cuban teachers seem to know more about the subject matter they are teaching and have a clearer idea of how to teach it effectively. Children with knowledgeable, pedagogically proficient teachers who care deeply about them are bound to learn more in school. And the reason Cuban schools are staffed with effective teachers, we discovered, is that teacher training programs focus heavily on teaching so that children learn. Then, when the young teachers start out in a school, they are closely mentored by the school's administration and other teachers, who have a clear idea of exactly what is good teaching and what is not.

These are all features of high quality education that could be adopted by any country in Latin America. Schools in the United States could also learn from the Cubans, especially when it comes to supporting schools with social programs, training teachers and

tightly monitoring every pupil's progress throughout elementary and middle school.

Our comparison of Cuba with Brazil and Chile reveals other lessons for good schooling. Brazil has a highly decentralized education system, where each state and municipality runs its own elementary schools. Schools have a lot of autonomy and teachers are trained in universities that decide how to best train their teachers, with very little control from state governments. Everyone — parents, teachers, administrators — has many choices, and teachers have the freedom to teach the way they want, with almost no supervision by principals. Sound familiar? It's like the U.S. system and almost every other system in the hemisphere, and like them, it works well for children from better educated families and not very well for almost everyone else. Although we extol local control, many school principals and communities do not have the resources or organizational skills to assure high quality education.

Chile has decentralized even farther, again with little success. Almost half of Chile's students go to private schools, most to private schools where students get vouchers equal to the amount spent on public school students. But like Brazilian students, Chileans don't perform nearly as well as Cubans. Our classroom videos and interviews showed why: when left to their own devices, schools, whether public or private, can't overcome low standards and expectations, inadequate teacher training and their pupils' social environment.

Much more than in Chile or Brazil, the third grade math

lessons we filmed in Cuba focused on problem solving and math strategies. Cuban teachers were much more likely to have students solve math problems from worksheets during class, then analyze their solutions in full class discussion. A much higher fraction of Cuban pupils in the classrooms we filmed, including classrooms in two distant rural schools, were fully involved and seemed to be “getting” the concepts being taught. The closest thing we found elsewhere to this type of teaching and level of student engagement was in a high cost Chilean private school.

Many analysts in the United States and at the World Bank and Inter-American Development Bank think that more decentralized systems with greater school autonomy, and, even better, vouchers, charter schools and other “privatized” alternatives to publicly managed schooling will make for great education. The Brazil-Chile-Cuba comparison suggests that they will not, because they fail to address the question of who will change the social environment in which children grow up, who will set and enforce high standards in the classroom and who will take responsibility for training the teachers to implement those high standards. Cuba’s success tells us that only when government takes these tasks seriously does every

child get a shot at good schooling.

Our comparison of Cuban with other Latin American countries’ primary schooling should also cause other nations in the region to consider carefully what it will take to transform their educational systems. Good teaching is fundamental to good education, but good teachers do not appear spontaneously. They must be trained, first in high quality teacher education programs that have clear objectives, then on the job by highly trained, experienced supervisors whom teachers trust and who know what good teaching is. Most Latin American countries have politically powerful teachers’ unions that will have to be included in any drive to upgrade the quality of teaching, and that will not be easy. Yet, anything short of taking on this reality will fail to make a serious dent in raising educational quality in the region.

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Empty desks at the Instituto Nacional de Chile.



Photo by Felipe I. Camus Dávila.