



A regular series of notes highlighting recent lessons emerging from the operational and analytical program of the World Bank's Latin America and Caribbean Region.

## Prova Brasil

### Building a framework to promote measurable progress in learning outcomes

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Building on two decades of education reform, Brazil's Ministry of Education (MEC) implemented a key instrument for measuring education quality in 2005, when it first administered Prova Brasil, a nationwide test of proficiency in math and Portuguese for students in grades 4 and 8. Prova Brasil, which will be administered to primary students every three years, is the country's first census-level assessment of student learning, and forms the cornerstone of a drive to improve basic education quality and establish a results framework for measuring learning outcomes. As a policy measure aimed at improving accountability, the results for each school are provided to the school community in easy to understand comparative charts and tables, which are also available for consultation on the internet at <http://provabrasil.inep.gov.br/>. The idea of providing a "report card" on the performance of a public service to citizens is widely considered an effective means of stimulating accountability, especially where there are multiple tiers of government as in a federal country such as Brazil.

Prova Brasil establishes an important baseline for measuring learning results, but its implementation has created an urgent new challenge: how can Brazil use the test results and related report cards to actually improve the quality of educational services? The fact that some school districts produce better test results than other districts with similar resources and socio-economic characteristics shows that it is possible to achieve superior educational results even where resources are constrained. This raises a practical challenge. How can municipal governments, with their varying levels of capacity, identify and implement initiatives that have been shown to enhance results? And how can the federal government

provide support to municipal governments across a territory covering half a continent and marked by one of the widest income gaps in the world?

The Prova Brasil study, developed by the World Bank in close partnership with Brazil's Education Ministry (MEC) and the National Institute for Educational Research (INEP), sought to find practical solutions to these challenges. Its immediate aim was to identify municipalities with the best learning outcomes and determine which of their policies and practices might be contributing to the good results. Using quantitative and qualitative techniques, we first developed a benchmarking system to identify the outperformers and then conducted in-depth interviews with municipal education officials to determine what the outperformers were doing right. The methodology is described in more detail below.

#### Building a results framework around Prova Brasil

Quality and learning outcomes have moved to the center of Brazil's education reform agenda following a successful push to broaden enrollment in the 1990s. Starting with the 1988 Constitution, Brazil progressively decentralized funding for basic education – which includes the pre-school, primary and secondary levels – and devolved greater responsibility for managing basic education to state and municipal governments. These efforts aimed to promote greater responsiveness to local conditions and greater accountability to local citizens. In 1996, Brazil established FUNDEF, a fund that distributes primary education spending resources to state and municipal governments based on the number of enrolled students, ensuring a minimum level of spending per student nationwide. In 2007, FUNDEF was expanded to FUNDEB,

which distributes resources for primary education and also pre-school and secondary education. Enrollment in primary education expanded throughout the most of the FUNDEF implementation period, but the quality of education as measured by student achievement on standardized tests has not kept pace. The per capita method of financing employed by FUNDEF provides an incentive for enrolling students, but the problem of making the teaching and learning process more effective is not easily resolved by such a formulaic solution. The task of constructing a results framework around test scores requires a number of elements – using report cards to promote accountability has already been mentioned. Another element, which was central to the Prova Brasil study reported in this note, is the use of information from municipalities that perform better than expected.

The results of this study, and also another study carried out by the Ministry of Education in partnership with UNICEF (the Aprova Brasil study), provided insights into good practices that fed into a highly important education sector initiative called *Compromisso Todos pela Educação* in 2006. The *Compromisso* initiative calls on government, schools and civil society to work together to enhance the quality of learning as measured by the IDEB – the Basic Education Development Index – a measure that combines test scores and student retention. As part of the *Compromisso* initiative, representatives of the different levels of government involved in delivering pre-school, primary and secondary education services would join with civil society representatives in signing a contract with the Ministry of Education. MEC, in turn, would channel amounts exceeding R\$1 billion per year to municipalities to help them achieve specific improvements in their IDEB levels. The contract will establish a series of actions called the Plan for Coordinated Action, or PAR, an acronym that means ‘partner’ in Portuguese. But again, exactly which actions will help a municipality improve education quality? There is no single study that could answer this question for a complex system like education, but the Prova Brasil study provides an interesting and useful avenue of approach to the problem.

### **Methodology & approach**

We began the study by carrying out a regression analysis of the Prova Brasil test scores, aggregated to the level of municipalities. Following an Analysis of Variance (ANOVA) on the test score data, it was determined that the analysis should be carried out separately for each of the five geographic regions in Brazil –

North, North-East, Center-West, South, and South-East. The explanatory variables used in the regression analysis were a series of variables that related to the socio-economic context of the students taking the test, including variables such as the education level of the mother and the number of books at home. The series also included measures of economic development, equity and poverty levels in the municipality. Unlike in conventional studies of this nature, we were not much interested in the values of the coefficients on specific variables in the regression equation, their statistical significance and so on. Rather, the regressions were used as an interim step to derive the variable of interest – the residual from the regression for each municipality. Once the residuals were known, municipalities were grouped according to whether they outperformed, underperformed or fell close to the regression line.

We purposively selected a sample of 40 municipalities from the three classified groupings for the qualitative phase of research. The objective was to have a broad national representation without laying any claim on statistical representativeness. We selected States from each of the five regions in Brazil: North (Pará); North-East (Bahia, Pernambuco and Maranhão); South-East (São Paulo, Rio de Janeiro and Minas Gerais); South (Santa Catarina and Rio Grande do Sul) and Center-West (Goiás). It was precisely the question of how one municipality produces better results than other municipalities with similar resources that was of primary interest in this study – the regression approach allowed us to control for the resource variables, allowing an identification of the outlier municipalities through the analysis of residuals. Those municipalities that achieved superior results with the same available resources were the “positive deviants.” Identifying the good practices developed by the positive deviants within a defined population is useful because such home-grown practices are: a) uniquely adapted to local culture and conditions and therefore likely to be more appropriate and more easily disseminated and adopted than imported solutions, and b) already proven to work in the local environment.

Turning to the selection of municipalities within states, we chose two “outperforming” municipalities from each state and two “control group” municipalities – one underperformer and one average performer. We used control groups to be certain that the practices identified among the outperformers were not also being employed by the control groups. And we included underperformers as a control group to allow for the possibility that “nega-

tive” practices were weighing down the underperformers and average performers –converse to our assumption that good practices were elevating the outperformers.

### **Good practices: A variety of creative approaches**

The aim of this study has been to promote discussion rather than to provide definitive solutions. Beyond the limited set of specific practices observed and reported upon in course of this small study, a wide variety of good practices are being implemented in Brazilian school districts, day after day, as teachers, principals, education officials and parents each make their indispensable contributions to student learning. The reason one municipality achieves better test scores than another is almost certainly due to a concurrence of good practices and the interaction among them, or to a particular confluence of local characteristics and events whose effects continue to accumulate over time. Therefore, the description of good practices in this brief policy note should not be taken as the single best recipe for achieving good test results. Quite to the contrary, it is the aim of this study to demonstrate that there are many possible routes to success.

***Vision & Leadership.*** The presence of a Municipal Education Secretary with vision and leadership had a significant positive influence on student performance – the literature abounds with findings about the importance of the leadership of school principals, and it is interesting that a similar story might hold true for municipal education secretaries. The most successful secretaries (see Box 1) set an explicit objective and had the necessary leadership skills to help the system achieve that stated objective. Previous professional experience – specifically as a school principal – was a common characteristic of many successful secretaries. That experience, and the ability to confront difficult situations, had a positive impact on their performance at the head of the municipal education secretariat.

***Strong core municipal education team.*** Beyond having a motivated leader with appropriate experience and education, another factor linked to good results for school districts was a strong municipal education cabinet, or core team. In the majority of cases examined, the teams were small, composed of professors working in the district, qualified to offer training to school management teams and professors. In a number of instances, where the Secretary herself may not have been an exemplary leader, the quality of the core team filled a vital role, but in some cases both favorable factors were at work.

### **Box 1 - Success Stories - Vision and Leadership**

The municipal education secretary of Novo Hamburgo in the southern state of Rio Grande do Sul had four years of teaching experience and 14 years as the principal of a school – one that she herself had helped to build. Her impact as a leader in the community where she was a school principal for all those years is worthy of notice, but even that achievement pales in comparison to what she has done since taking on the role of Municipal Education Secretary. Her first act as Secretary was to take a small opinion poll. She surveyed employees, school principals and teachers, asking them what they thought about the state of the education sector. She obtained priceless information, not only information about the problems faced by the school district she now led, but also suggestions and proposals from the people under her guidance. “A leader who likes to listen,” capable of taking in all the information and transforming it into a set of directives for an education sector reform policy, duly discussed by all parties interested in becoming more deeply involved in instruction and learning. Once initiated, the education reform process did in fact lead to changes in school leadership for some schools. But because all parties had been given the chance to express their views, the changes enjoyed broad support. The hardships faced in making these changes, the help received from parents and the lessons learned in solving problems and overcoming obstacles were crucial to the formation of the Secretary’s vision in terms of management, pedagogy and education policy.

***Results focus with quality education as a central objective.*** In the best performing municipalities, the vision of a quality education went well beyond learning “output” as measured by Prova Brasil and similar standardized tests (see Box 2). Education was conceptualized more broadly as something essential to the development of responsible and engaged citizens, capable of breaking the vicious circle of poverty and social inequality. These municipalities had moved beyond the stage where priority was given to strictly physical inputs, such as providing school space, as central determinants of school quality. Even when schools with somewhat precarious infrastructure were identified, this was not the central issue in dialogue with education secretaries.

***Direct supervision & support for schools.*** Supervision is generally associated with two functions: pedagogical and administrative support. In the majority of the “good” school districts, pedagogical support was permanent, meaning that supervisors were in school on a fixed basis,

## Box 2 - Success Stories - Results focus with quality education as a central objective.

The municipal education secretary of Timbó, in the southern state of Santa Catarina, describes a high quality education as “an education that guarantees, not just access to school, but access, permanence and learning for all students, regardless of whether the school is rural or urban.... It’s education for everyone, under equal conditions.” In the municipality of Balneário Camboriú, also in Santa Catarina, education is defined clearly in Article 16 of the municipal plan: “Education should be understood as a process institutionalized in family life, in the exercise of social relations, at work, in training and research institutions, in entrepreneurship, in civil society organizations and in cultural displays; it should be founded on the principles of liberty of cultural and territorial pursuits and in the notion of human solidarity, having as its aim the full development of all citizens in the areas of ethics, citizenship and professional qualification.”

rather than merely visiting the school occasionally - allowing time and space to design strategies and solutions for those shortcomings identified. Beyond this, these municipalities tended to have continuous programs to monitor the performance of schools. This ensured that shortcomings were identified in time to be addressed, improving their performance.

**Active, well-trained teachers, committed to quality education.** The presence of solid compensation and career plans, with clear criteria for advancement, were identified in many “good” school districts (see Box 3). These plans, which placed greater value on the teaching professional, were shown to be important variables for the strong performance of students.

**Community engagement.** Various levels of engagement were observed between municipal education secretariats, communities and schools. These ranged from direct citizen access to the secretary – and in some cases the mayor – through the existence of formally-established councils with sectoral representation. Community engagement programs in a municipality – or even in just a few schools – not only developed student abilities but also established or strengthened links school-community links, fortifying the idea of a educational partnership.

**Importance of Pre-School Education.** Public investment in pre-school education appears highly likely to exert a positive influence on student performance. The cognitive

abilities of children are formed early, and studies show that students enrolled from pre-school perform better than students who enroll at the primary school level.

## **Adequate use of municipal, state and federal programs.**

In some cases, these programs are developed in partnership with private sector and civil society organizations. Adequate use means that the programs should be oriented toward attending the specific needs of the school district or the community as a whole.

## Box 3 - Success Stories - Active, well-trained teachers, committed to quality education

The focus of education policy in Gandú, in the state of Bahia, is teacher training. To finance teacher training, the municipal education council uses its own resources as well as funds transferred from the federal and state governments. Biweekly planning of all activities is essential for the ongoing process of teacher training just as it is for regular school activities. For these reasons, the secretariat was able to employ a unique and integrated group of programs that is helping to refine learning. In the municipality of Tramandaí, in the state of Rio Grande do Sul, we observed a strong example of a teacher career plan with an institutionalized evaluation process. Municipal teachers working 30 hours a week (24 hours in the classroom and six preparing classes) are eligible to receive a base monthly salary of R\$1,600, well above the median for Brazil. Tramandaí is one of the two municipalities offering teachers the highest salaries in the coastal region of Rio Grande do Sul.

## Final Considerations

This study should provide useful insights for policymakers from all levels of government, civil society and the education community as a whole – including professors, school principals, teachers and students – who are attempting to improve their results. These insights are invaluable when we consider the crucial role of education in breaking the vicious circle of poverty and social inequality and for providing instruments for the development of citizens, an effort that ultimately supports the growth of Brazil.

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