Primary Education Management and Test Scores in Madagascar

Researchers:

Paul Glewwe

Cornelia Jesse

Gerard Lassibille

W. H. Eugenie MAIGA

Trang Nguyen

Jee-Peng Tan

Sector(s): Education

Fieldwork: Aide et Action

Location: Rural Madagascar

Sample: 3,774 primary schools in 30 public school districts

Target group: Primary schools Teachers

Outcome of interest: Student learning

Intervention type: Training Community monitoring

AEA RCT registration number: AEARCTR-0001763

Research Papers: The impacts of school management reforms in Madagascar: do the impacts vary by ..., Managing for results in primary education in Madagascar: evaluating the impact ...

Notes: This is a further analysis, by J-PAL affiliate Paul Glewwe and Eugenie Maiga, of a randomized evaluation conducted by Gérard Lassibille and co-authors.

Partner organization(s): Agence Française de Développement (AFD), Government of Madagascar Ministry of Education, World Bank, Global Partnership for Education (GPE)

Successful efforts to expand access to education in low- and middle-income countries have not always translated into actual improvements in skills and learning for students. Researchers analyzed outcomes from a previously conducted randomized evaluation to assess the impact of large primary school management reforms in Madagascar on student test scores, and if impacts varied by type of teacher. Results show that the management reforms did not have any impact on student test scores, regardless of teacher type.

Policy issue

Successful efforts to expand access to education in low- and middle-income countries (LMICs) have not always translated into actual improvements in skills and learning for students. Around the world in LMICs, student participation in school has historically been low. More recently, LMICs have made a big push to improve student enrollment and participation rates, now reaching near universal access to primary education.[1] However, the quality of education has been poor, and learning levels in many places have remained low. Recently, there have been debates around how contract teachers, school management, and community

involvement can impact student learning.

Many LMICs have recently hired a large number of contract or temporary teachers, who have less training and are paid lower salaries than regular, civil service teachers but may be motivated to work harder in order to have their contracts renewed. Can promoting local accountability through reforming management practices at a district, subdistrict, and/or school-level be a useful means of improving student test scores, and how, if at all, does this differ by the type of teacher affected?

Context of the evaluation

There are several types of primary school teachers in Madagascar, including regular (civil service) teachers, contract teachers, and student-teachers. Regular civil servant teachers are paid on a 12-month basis by the Ministry of Education, their employment is stable, and they generally have many years of experience. Contract teachers are paid less than regular civil servant teachers but are often more qualified than regular teachers, as determined by the number of teachers with a high school diploma. Finally, recent graduates and student teachers have either recently graduated from or are currently undergoing pedagogical teacher training.

Prior to the study, Madagascar had been attempting to rapidly increase primary school enrollment by hiring a large number of new teachers, primarily contract teachers. Enrollment increased, with a gross primary enrollment rate of 123.4 percent in 2005, meaning that more people were enrolled in primary school than there were primary school-aged children. However, learning levels remained relatively low, with only 63 percent of grade 5 children passing the primary-cycle exam, an assessment of the minimum level language and math knowledge presumed at this grade. Additionally, district and subdistrict administrators faced infrequent performance reviews, with limited threats of penalties or firing.[2]

In September 2005, the Ministry of Education in Madagascar, with assistance from the World Bank, introduced the *Amélioration de la Gestion de l'Education à Madagascar* (AGEMAD) program across some primary schools in the country. The program provided methods and materials that were designed to help streamline district-, subdistrict-, and school-level administration with management tools to improve educational outcomes such as student learning and test scores.



Researchers, in collaboration with the Ministry of Education in Madagascar, ran a randomized experiment in 3,774 primary schools in 30 public school districts. Photo: Artush | Shutterstock.com

Details of the intervention

Researchers analyzed the results of a previously conducted randomized evaluation (Lassibille et al., 2010) that was conducted with the Ministry of Education in Madagascar and the World Bank. Researchers randomly introduced the AGEMAD program across 3,774 primary schools in thirty public school districts, selected for their similarity and ease of access

The AGEMAD program consisted of three distinct interventions, which each provided methods and materials that were designed to help various employees of the Ministry of Education improve their management, and, ultimately, improve educational outcomes such as student learning and test scores. The interventions were as follows:

- *District-level intervention:* District heads and other administrators received operational tools and training that included forms for supervision visits to schools, procurement of pedagogical supplies, and a teacher transfer master sheet.
- *Subdistrict-level intervention:* In some subdistricts that also received the district-level intervention, the subdistrict head was trained and provided with tools to supervise school visits, as well as information on the performance and resource-level at each school.
- *School-level intervention:* In some schools that also received the district- and subdistrict-level interventions, teachers received educational and administrative tools, including lesson planning forms, records of student attendance and learning, and reports to parents and school directors. School directors were also provided with attendance, student performance, and community meeting tools. Additionally, school meetings were held to discuss school report cards and

encourage community involvement in monitoring school quality.

- *Comparison group:* Schools in the comparison group did not receive any of the interventions at the district-, subdistrict-, or school-level.

Intervention By Group:

Group	Number of districts	Number of subdistricts	Number of schools	Description of intervention
Comparison	15	207	1721	No intervention
District-level intervention	15	170	1314	District-level intervention
Subdistrict-level intervention	15	89	436	District and subdistrict-level intervention
School-level intervention	15	89	303	District, subdistrict, and school-level intervention

To analyze the impact of the management reforms on student learning outcomes based on teacher type, researchers averaged student test scores in French, Malagasy, and mathematics that were given to third-grade students in 2005/06 and fourth-grade students in 2006/07. The same tests were administered to teachers in 2005/06 and 2006/07, to verify whether those who were supposed to grade the students' tests knew enough to do so. Researchers also gathered basic information about the teachers, including whether they were contractual or civil servant teachers, their age, their years of experience, whether they have a high school diploma, and if they have formal pedagogical training.

Results and policy lessons

Results indicate that the management reforms had little to no impact on students' average test scores, regardless of type of teacher.

Management, attendance, and grade repetition: Lassibille and coauthors in their 2010 study found that the district- and subdistrict-level interventions had minimal effects on the administrators' behaviors or the outcomes of the schools and students under their responsibility. However, when reinforced by the school-level intervention, teacher behavior improved, student attendance increased, and grade repetition decreased.

Test scores: Lassibille and co-authors in their 2010 study found that test scores increased in the short-run, though most gains were lost by the end of the evaluation period. In this analysis, after the first five months of the program, none of the three interventions had an impact on students' average test scores. Two years after program implementation, none of the programs had any impact on student test scores, regardless of the type of teacher students had.

Relative impact of intervention type: Researchers found that the school-level intervention seemed to have larger impacts on test scores after the first five months relative to the district and subdistrict-level interventions, but the relative gains in learning faded by the end of year two.

Researchers note that these results do not necessarily indicate the AGEMAD program was ineffective. Two years may have been too short for these management interventions to have effects on student performance. It is also possible that the study's design was inadequate to detect smaller changes in test scores. More research is needed to understand if and how management reforms impact student performance in the shorter- and longer-term.

Lassibille, GÌ©rard, Jee-Peng Tan, Cornelia Jesse, and Trang Van Nguyen. 2010. "Managing for Results in Primary Education in Madagascar: Evaluating the Impact of Selected Workflow Interventions." The World Bank Economic Review 24(2):303-29. Glewwe, Paul, and Eugenie Maiga. 2011. "The Impacts of School Management Reforms in Madagascar: Do the Impacts Vary by Teacher Type?" Journal of Development Effectiveness 3(4): 435-89.

1. World Bank. February 2020. "School enrollment, primary (% net)." https://data.worldbank.org/indicator/SE.PRM.NENR
2. Lassibille, Gérard, Jee-Peng Tan, Cornelia Jesse, and Trang Van Nguyen. 2010. "Managing for Results in Primary Education in Madagascar: Evaluating the Impact of Selected Workflow Interventions." The World Bank Economic Review 24(2):303-29.