



DATA MUST SPEAK

Academic performance of primary school girls

Research on positive deviant schools to improve learning in Madagascar

Key findings



Unlike in many other African countries, there is near parity between girls and boys in Madagascar. Promotion rates are fairly similar for both genders, with girls achieving rates around two percentage points higher than boys. A similar trend can be observed in the Certificate of Primary Education (CEPE) results.



According to the results of econometric models using school data derived from the Education Management Information System (EMIS), **the statistical correlations between different school characteristics and promotion rates are overall similar for girls and boys.**



Female-led schools achieve better promotion rates on average, as do schools with higher percentages of female teachers. However, this difference is only observed in promotion rates for girls, suggesting that they may benefit more than boys from the presence of a female head or female teachers. It is important to study the mechanisms and behavioural factors underpinning these findings to understand which specific practices explain these differences.

Context

In Madagascar, the Ministry of Education has set ambitious goals to improve access to and quality of education, as well as school management and governance, as part of the Education Sector Plan 2018–2022. Nevertheless, significant challenges remain. The primary school completion rate, which measures the percentage of students who complete primary school, was slightly above 50 per cent in 2020.¹ More than 80 per cent of students assessed in a representative sample of primary schools had not mastered minimum reading skills in 2019.² However, some schools perform better than others, even in disadvantaged areas. By identifying these positive deviant schools and the good practices that make them successful, important lessons can be learned to improve the quality of education in Madagascar.



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Research on positive deviant schools

Against this background, the **Data Must Speak (DMS) research on positive deviant schools** explores local solutions for improving the quality of education in Madagascar. The first stage of the research was to conduct a statistical analysis using EMIS data and CEPE test scores to identify factors influencing school performance. The analysis presented in this brief summarizes the key findings on girls' academic performance.³

Research findings

There is near parity between girls and boys in Madagascar. The promotion rate for girls is very close to that of boys in public primary schools (see **Figure 1**). The promotion rate for girls in the first year of primary school (T1) is 54 per cent, while the rate for boys is 52 per cent. This gap in favour of girls is observed in all primary school years (T1 to T4).

When the CEPE results are analysed, a similar gap between girls and boys can be noted, with girls performing slightly better. Between 2018 and 2021, the CEPE pass rates achieved by girls were about three percentage points higher than those achieved by boys. The average grades achieved and the rates of admission to the first year of secondary school were very similar for both genders.

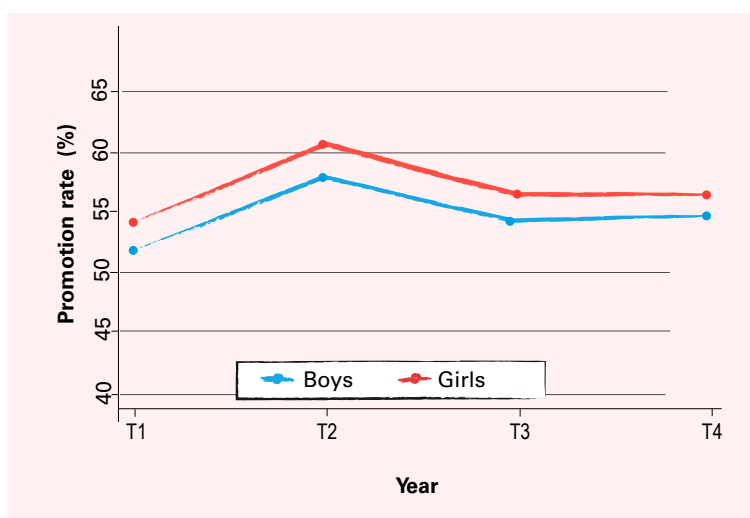
Although the correlations between different school characteristics and promotion rates are similar for girls and boys, a few exceptions stand out. All other things being equal, attending a rural school negatively affects the promotion rate of girls, but not of boys. The promotion rate for girls decreases more sharply than for boys in mixed-grade classes. Conversely, there is a stronger positive correlation between preschool attendance and promotion rates for girls than for boys.

¹ United Nations Educational, Scientific and Cultural Organization (UNESCO) statistics.

² Programme for the Analysis of Education Systems (PASEC) of the Conference of Ministers of Education of French-speaking Countries, 2019.

³ This analysis has limitations, since the available data only partially explain student performance. The results obtained can thus be used to identify correlations between the variables and their statistical significance, but not necessarily causal relationships.

Figure 1: Primary school promotion rates by grade and gender (averages from 2017/18 to 2019/20)

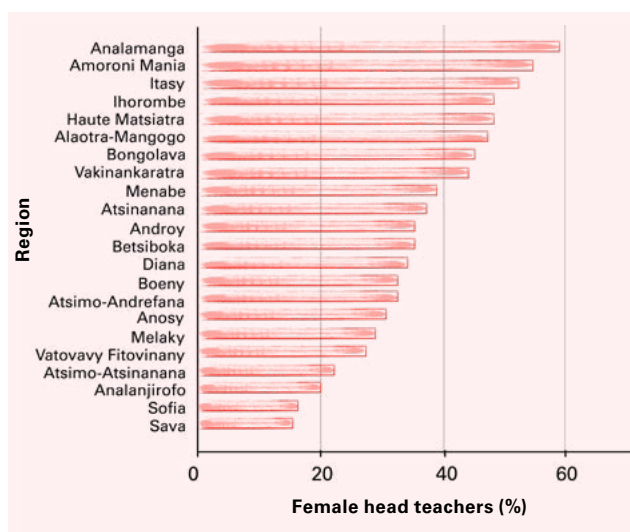


Source: Calculations based on EMIS data.

On average, 35 per cent of primary schools in Madagascar are led by women, a higher percentage than in any other African countries for which data are available.⁴ These schools perform better on average, as do schools with a higher proportion of female teachers (women make up an average of 41 per cent of the teaching staff). Girls who attend a female-led school have a 0.5 percentage point higher promotion rate. Similarly, a 20 per cent increase in the share of female teachers is associated with a 0.2 percentage point increase in the promotion rate for girls. These differences are not seen among boys.

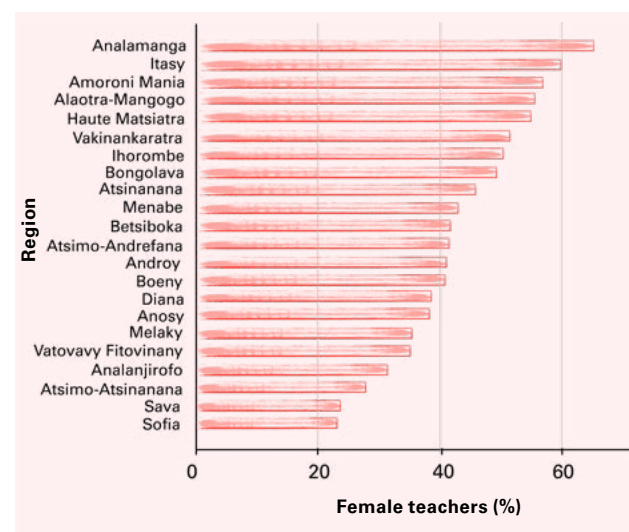
The proportion of women in the school workforce varies considerably between regions. The percentage of female head teachers ranges from 16 per cent in Sava to 60 per cent in Analamanga (**Figure 2**), while the percentage of female teachers ranges from 24 per cent in Sofia to 66 per cent in Analamanga (**Figure 3**).

Figure 2: Proportion of female head teachers by region (averages from 2017/18 to 2020/21)



Source: Calculations based on EMIS data.

Figure 3: Proportion of female teachers by region (averages from 2017/18 to 2020/21)



Source: Calculations based on EMIS data.

⁴ UNICEF, *Increasing Women's Representation in School Leadership*, 2022.

Education policy areas for further exploration



Continue this research to explain why girls appear to do better on average in female-led and female-staffed schools.⁵

It is important to understand the specific practices and behaviours that head teachers and teachers put in place that may explain these discrepancies.



Analyse existing policies to promote the recruitment of qualified female staff, particularly in rural areas. While women account for an average of 34 per cent of head teachers in rural areas, this rises to over 50 per cent in urban areas. Similarly, the proportion of female teachers averages 40 per cent in rural areas, compared with 63 per cent in urban areas. It is also important to explore the extent to which these disparities between urban and rural areas can be explained by differences in potential candidates' qualifications.

About the Data Must Speak research on positive deviant schools

The DMS research on positive deviant schools in Madagascar was developed jointly by the Ministry of National Education of Madagascar, local partners, UNICEF Madagascar, and UNICEF Innocenti – Global Office of Research and Foresight. This global research is being implemented in 14 countries in Africa, Asia and Latin America. It is co-funded by the Jacobs Foundation, the *Knowledge and Innovation Exchange* (KIX) programme of the Global Partnership for Education/International Development Research Centre, the Hewlett Foundation, the Norwegian Agency for Development Cooperation (NORAD), the Schools2030 programme (led by the Aga Khan Foundation) and UNICEF's Thematic Fund for Education.

Series of thematic briefs

This brief is the first in a series of documents produced as part of the DMS research in Madagascar. It focuses on the academic performance of girls in primary school and aims to inform policy dialogue in Madagascar and other relevant countries. To access the full research documents, including the report analysing the factors influencing school performance in Madagascar and the tables illustrating the results described above, please see [here](#).

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