Assessments for Minimum Proficiency Levels a and b (AMPL-ab)





Acknowledgments

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The UIS and ACER thank the Lesotho Examinations Council, as well as schools, principals, teachers, and students that participated in the implementation of the project. As part of Sustainable Development Goal (SDG) 4, Indicator 4.1.1 aims to measure the "proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex." To meet this goal, UIS has coordinated efforts to establish common reading and mathematics scales for all three points of Indicator 4.1.1, building on existing cross-national and national assessments. As a result of these efforts, two important points of consensus have been reached: the definition of the Minimum Proficiency Level (MPL) and the Global Proficiency Framework (GPF).

The overarching objective of the AMPLab project is to measure and analyze the performance of students at the end of lower and upper primary using an assessment that aligns with the GPF. This will:

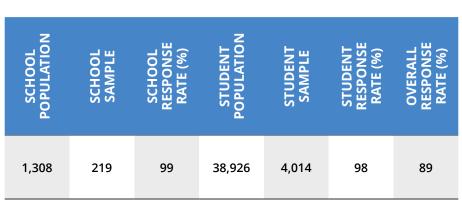
- enable the collection of more informative data about where students are performing in terms of the MPLs at the end of lower and upper primary in reading and mathematics,
- produce baseline measures to set targets and compare learning gains/losses over time
- facilitate reporting on SDG 4.1.1
- aid the tracking of learning progress over time
- complement tools that had been already developed in 2021 in the Monitoring the Impacts on Learning Outcomes (MILO) study.

The results of this study can be found in the International Report (UIS, 2023). This document provides a summary of the results for Lesotho.



Introduction

In Lesotho AMPL-a and AMPL-b were administered to a representative sample of students in Grade 7, which is the final grade of primary school in Lesotho. The Lesotho sample and response rate can be seen Table 1.





Response rates refer to weighted data of sampled and substitute schools.

PERFORMANCE DISTRIBUTION CHARTS

For each country, the distribution of students' mathematics and reading performance is displayed in a 'performance distribution chart'.

The 2 dashed vertical lines in these charts indicate the approximate locations of the MPLa and MPLb benchmarks – providing information about the approximate proportion of students achieving above MPLa and below MPLb (ie., between MPLs).

The vertical axis of these plots indicates the 'density' of student proficiency. The entire shaded area is equal to a total probability of 1. The shaded area sectioned by the MPL vertical lines gives the proportion of the students above and below each benchmark. In Lesotho, almost a fifth of Grade 7 students reached or exceeded MPLb for mathematics, and just over a tenth did so in reading. A greater proportion of girls achieved MLPb in reading than boys, with a 2.7 percentage point gap. Similarly, 4.7 percentage points more girls achieved MPLb in mathematics. The proficiency differences between girls and boys are statistically significant.

Over 80% of Grade 7 students achieved MPLa in mathematics. A greater proportion of girls achieved MLPa in mathematics than boys, with a 6.1 percentage point gap. A lower proportion of students achieved MPLa in reading (62.1 %), with 9.7 percentage points more girls achieving MPLa than boys. These results can be seen in Table 2.

	PERCENT REACHING OR EXCEEDING MPLA (LOWER PRIMARY)			PERCENT REACHING OR EXCEEDING MPLB (END OF PRIMARY)		
Domain	All students	Girls	Boys	All students	Girls	Boys
Mathematics	83.9	86.6	80.5	19.7	21.8	17.1
Reading	62.1	66.5	56.7	10.8	12.0	9.4

TABLE 2: Proportion of Grade 7 students in Lesotho reaching or exceeding MPLa and MPLb in mathematics and reading

Only figures shaded in purple are relevant for reporting against the associated SDG.

A fuller picture of student proficiency in Lesotho can be provided by breaking down these figures according to the proportion of students below MPLa, between MPLa and 'b' and above MPLb. This is illustrated in Figure 1 and Figure 2. Amongst Grade 7 students 16.1% were below MPLa in mathematics; and more than double that proportion of students (37.9%) performed below MPLa in reading. Just over 64% of students achieved between MPLa and MPLb in mathematics, and a little more than half (51.3%) achieved that same benchmark in reading.

Figure 1 and Figure 2 also illustrate the distribution of mathematics and reading performance amongst Grade 7 students in Lesotho. There is a similar distribution in reading and mathematics. As expected, a small proportion of students performed considerably higher or lower, with most students clustering around the middle. However, the performance of students in reading is clustered around the mean to a greater extent than mathematics.

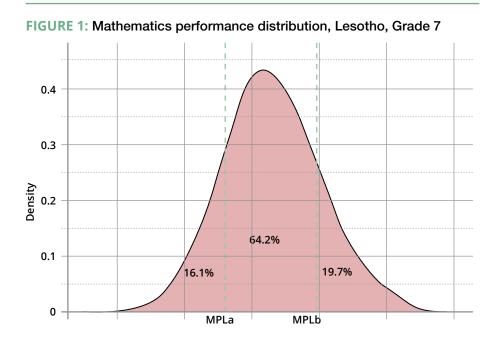
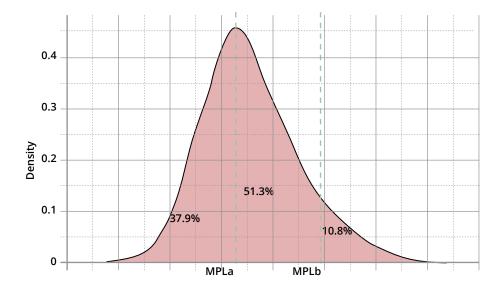


FIGURE 2: Reading performance distribution, Lesotho, Grade 7



The AMPL-ab results for Lesotho can be better understood by recognising the contexts associated with student learning. Effect sizes are used to indicate the strength of a relationship between a contextual indicator and performance. **Figure 3** shows that in Lesotho, 'parental literacy' had a strong effect on mathematics and reading proficiency. Additionally, 'wealth', 'parental education', 'family support' and 'nutrition' all had a strong effect on reading proficiency and a moderate effect on mathematics proficiency. 'Parental education' had a moderate effect on both mathematics and reading proficiency. Meanwhile, English being the main language spoken at home, appears to have an inverse effect on mathematics and reading proficiency. This is counter-intuitive but the fact that those speaking English at home represent only 6% of the population suggests a more detailed examination is needed of the context of these learners.

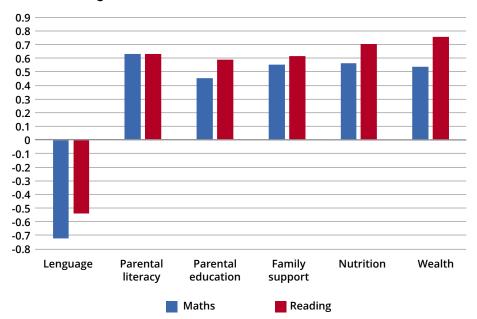


FIGURE 3: Effect sizes of select contextual factors on mathematics and reading outcomes - Lesotho

* Language: Students who spoke the assessment language (i.e. English) at home, compared to those who did not speak the assessment language at home.

References

- ACER. (2022). Minimum Proficiency Levels: Described, unpacked and illustrated. https://research.acer.edu. au/monitoring_learning/63/
- UIS. (2023). Assessments for Minimum Proficiency Levels 'a' and 'b' (AMPL-ab): International Report.

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