

## Students attitudes

Attitudes to school and to certain subjects can shape students' interactions as they progress through their education. For this reason, it was important to collect information about students' attitudes to learning. The PILNA programme took an approach that incorporated students' opinions to school overall and to each of the three cognitive domains covered by PILNA: reading, writing and numeracy.

Students were provided with a list of statements (such as "I enjoy going to school") and asked to rate how much they agreed with each statement. Students could respond with 'Agree a lot', 'Agree', 'Disagree', or 'Disagree a lot'. The statements covered:

- whether students enjoyed the activity;
- whether students did the activity in their own time;
- whether students thought it was important to be good at the activity;
- whether students found the activity easy; and
- whether students thought they did well in the activity.

Additionally, students were asked whether they thought it was important to go to school, if they felt safe at school, and if they felt like they belonged at school.

### Student attitudes to subjects and school

Most students in the region, both grade three and grade five, reported agreement with all the attitude statements ('Agree a lot' or 'Agree') about the cognitive domains and school. This shows overall positive attitudes to reading, writing, mathematics and school.

On average, more than 90% of students in Papua New Guinea reported that they enjoyed going to school (grade three, 91%; grade five, 94%) and felt that it was important to do so (grade three, 90%; grade five, 93%). Additionally, more than four out of five students reported that they felt safe at school (grade three, 85%; grade five, 89%) and safe travelling to school (grade three, 80%; grade five, 84%). Most grade three and grade five students in Papua New Guinea enjoy schooling, value schooling, and feel safe at school and travelling to school.

When it came to literacy, about nine out of ten students reported that they enjoyed reading (grade three, 89%; grade five, 94%) and writing (grade three, 91%; grade five, 93%). About four out of five students reported that they found reading easy (grade three, 76%; grade five, 83%) and found writing easy (grade three, 81%; grade five, 84%). Similar levels of agreement were seen between grade three and grade five students on all questions related to reading and writing.

There was, however, a noticeable difference in agreement at grade five for questions related to mathematics. At the grade five level, 73% of students agreed that they found mathematics easy, 76% agreed that they did mathematics in their own

time, and 73% agreed that they did well in mathematics. These values are lower than the results for reading and writing for both grade levels.

Interestingly, students at both grade levels still agreed, in similar proportions to reading and writing, that mathematics was important (grade three, 86%; grade five, 88%) and that they enjoyed mathematics (grade three, 91%; grade five, 89%).

The full breakdown of these results can be seen in Table STT1.7.

Table STT1.7

Percentage of students agreeing with statements reading, writing, mathematics and school

Statement	Grade 3	Grade 5
<b>Reading</b>		
Enjoy reading	89% (1.2)	94% (0.7)
Read in my own time	81% (1.9)	87% (1.1)
Think it is important to be a good reader	85% (1.4)	89% (1.0)
Find reading easy	76% (2.4)	83% (1.9)
Do well in reading	75% (2.5)	79% (1.8)
<b>Writing</b>		
Enjoy writing	91% (1.0)	93% (0.7)
Do writing in my own time	80% (1.8)	81% (1.5)
Think it is important to be a good writer	86% (1.5)	88% (1.2)
Find writing easy	81% (2.2)	84% (1.3)
Do well in writing	77% (2.3)	82% (1.3)
<b>Mathematics</b>		
Enjoy doing mathematics	91% (1.0)	89% (0.8)
Do mathematics in my own time	79% (1.8)	76% (1.7)
Think it is important to be good at mathematics	86% (1.4)	88% (1.2)
Find mathematics easy	74% (2.5)	73% (1.5)
Do well in mathematics	77% (2.1)	73% (1.6)
<b>School</b>		
Enjoy going to school	91% (1.1)	94% (0.7)
Think it is important to go to school	90% (1.1)	93% (0.8)
Think it is important to do well in school	89% (1.3)	91% (1.0)
Find school easy	82% (2.1)	86% (1.5)
Feel like I belong at this school	88% (1.3)	89% (0.9)
Feel safe at the school	85% (1.9)	89% (0.9)
Feel safe travelling to school	80% (2.2)	84% (1.2)

Percentage of students agreeing with statements about reading, writing, mathematics, and school, PNG, PILNA 2021

( ) Standard errors appear in parentheses.

## Student attitudes and student performance

Using the results above, regional scales for student attitudes on school, reading, writing, and numeracy were established. Higher scores on the scales indicated more positive attitudes to these areas. The scales were then compared to student performance in reading and numeracy. It should be noted that comparisons were not made to writing performance because the proficiency scale for writing performance has not yet been established.

The PILNA scales for attitudes to school, reading, writing, and numeracy all have an average of 200 and a standard deviation of 40. Most scores on these scales are expected to be within 40 points of 200 (160–240). The attitudes to reading, writing, and numeracy scales were all formed from the five questions students were asked in each area. The attitude to school scale was formed from the answers to seven questions students were asked in this area.

Comparisons to student performance were made between the average attitudes of students who were at or above expected levels of performance and students who were below these levels of performance.

Across both year levels, students who performed at or above the expected proficiency level in numeracy scored higher on the attitude scales for school, but there was no such relation to their attitude scales for mathematics.

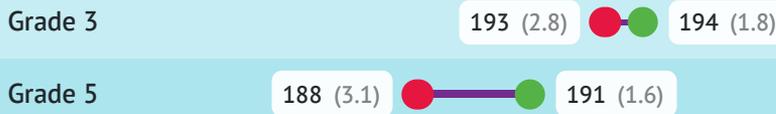
Grade three and grade five students who performed at or above the expected level in numeracy had similar mathematics attitude scores on average (grade three, 194; grade five, 191) as students in the same grade groups who did not meet expected numeracy performance (grade three, 193; grade five, 188). These results are presented in Figure STF1.3.

### Figure STF1.3: PILNA Scale: Student attitudes to mathematics

Average scores of students on attitude towards mathematics scale by year level and proficiency

The PILNA scales for attitudes to school, reading, writing, and numeracy all have an average of 200 and a standard deviation of 40. Most scores on these scales are expected to be within 40 points of 200 (160–240). The attitudes to reading, writing, and numeracy scales were all formed from the five questions students were asked in each area. The attitude to school scale was formed from the answers to seven questions students were asked in this area.

#### Numeracy



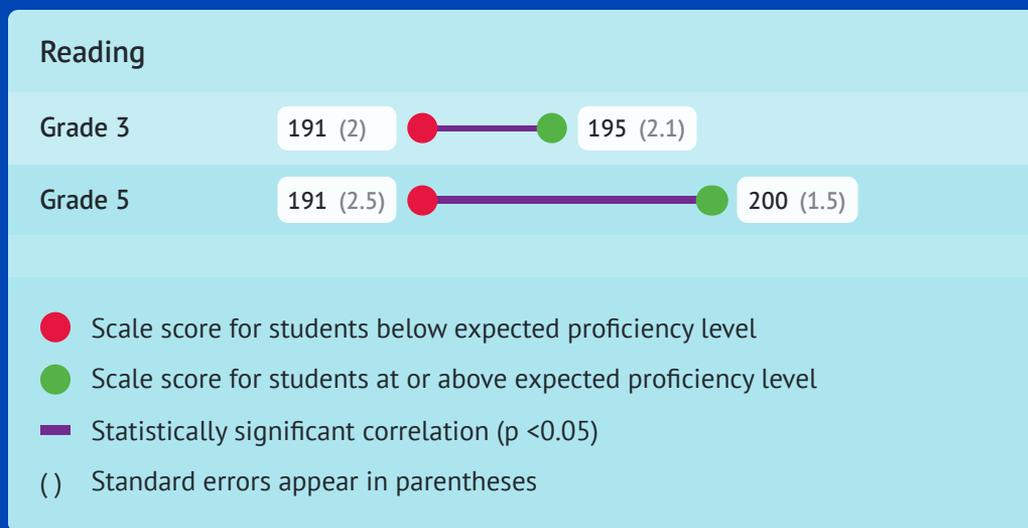
- Scale score for students below expected proficiency level
- Scale score for students at or above expected proficiency level
- Statistically significant correlation ( $p < 0.05$ )
- ( ) Standard errors appear in parentheses

Differences in attitude were observed for the performance levels for reading. Grade three and grade five students who performed at or above the expected level in reading had higher attitude scores on average (grade three, 195; grade five, 200) than students in the same grade groups who did not meet the expected reading performance (grade three, 191; grade five, 191). There was a larger difference between grade five attitude scores for reading than those for grade three. These comparisons are shown in Figure STF1.4.

### Figure STF1.4: PILNA Scale: Student attitudes to reading

Average scores of students on attitude towards reading scale by year level and proficiency

The PILNA scales for attitudes to school, reading, writing, and numeracy all have an average of 200 and a standard deviation of 40. Most scores on these scales are expected to be within 40 points of 200 (160–240). The attitudes to reading, writing, and numeracy scales were all formed from the five questions students were asked in each area. The attitude to school scale was formed from the answers to seven questions students were asked in this area.

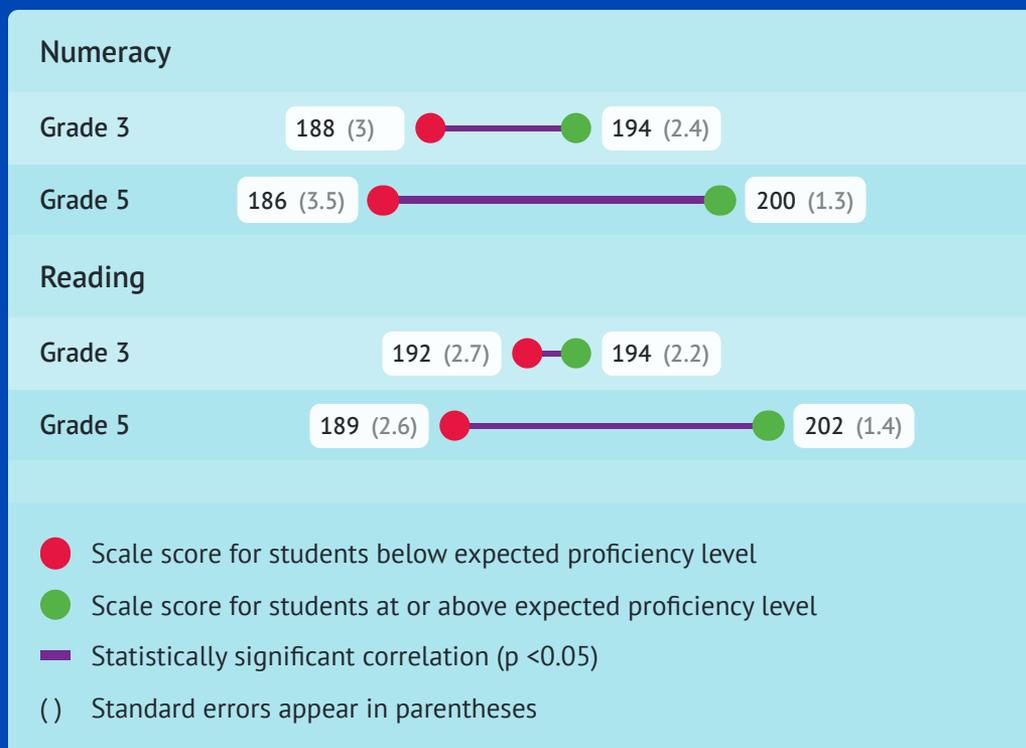


Comparisons were also made between student performance and attitudes to school in general. Across both grade three and grade five levels, students who were performing at or above the expected level had higher attitude scores to numeracy. Only grade five students who performed at or above the expected level for reading saw higher attitude scores for school. No association between reading proficiency and attitude to school was observed at the grade three level. Figure STF1.5 shows these comparisons.

### Figure STF1.5: PILNA Scale: Student attitudes to schooling

Average scores of students on attitude towards schooling scale by grade level and proficiency

The PILNA scales for attitudes to school, reading, writing, and numeracy all have an average of 200 and a standard deviation of 40. Most scores on these scales are expected to be within 40 points of 200 (160–240). The attitudes to reading, writing, and numeracy scales were all formed from the five questions students were asked in each area. The attitude to school scale was formed from the answers to seven questions students were asked in this area.



## What does this mean?

The findings from this PILNA cycle show that a high proportion of students in Papua New Guinea in both grade levels are enjoying reading, writing and mathematics and identify them as being important. However, when it comes to ratings about finding each subject easy or rating themselves as doing well in each subject, one area falls behind: numeracy at grade five. Numeracy ratings in these areas were noticeably lower than for reading and writing. This may mean that, while students are still enjoying mathematics at grade five, a larger proportion are challenged by the subject than are challenged by reading and writing. This may be an area that requires more attention by educators.

When comparing student attitude scores to performance, one thing is clear; students who met the expected performance in a subject area had higher attitude scores for the subject and for school in general. While no association was observed between numeracy proficiency and attitude to mathematics, it was, nevertheless, observed for numeracy proficiency and attitude to school. This suggests an association between student attitudes to a subject and their performance in that subject.

Importantly, this association is not clear and causality cannot be determined. For example, do positive attitudes to reading make someone more likely to be a better reader or is it those who are already good at reading who develop positive attitudes to reading because it's easier for them?