

Teacher confidence in teaching

Teachers were asked two sets of questions about their confidence in teaching: one set for literacy topics and the other for numeracy topics. The questions were phrased as: 'How do you find teaching the following aspects of literacy/numeracy?'. Their response options were limited to a four-point scale: 'Very difficult', 'Difficult', 'Easy', and 'Very easy'.

Confidence in teaching literacy

For reporting purposes, teachers who responded with 'Easy' or 'Very easy' were considered to demonstrate confidence in teaching a particular topic.

Table TT2.7 shows the percentage of students in Tonga whose teachers expressed confidence in teaching literacy topics.

Overall, most students in both year levels had teachers who were confident in teaching literacy topics. In both year levels, the proportions of students with such teachers ranged from 68% to 96%.

Across both year levels, areas where a lower proportion of students had teachers who expressed confidence were: 'Quality of ideas' (year four, 68%; year six, 71%) and 'Organisation and structure' (year four, 69%; year six, 74%) in writing. Areas with the highest proportions of students having teachers who expressed confidence were 'Spelling and punctuation' (year four, 93%; year six, 84%); 'Vocabulary' (year four, 84%; year six, 84%); and 'Letter sound correspondence' (year four, 96%; year six, 83%).

Areas where more students had confident teachers appear to be rules-based subjects or those with more established teaching criteria, such as 'Spelling and punctuation' and 'Vocabulary'. Areas where fewer students had confident teachers appear to be in areas with more subjective, or more complex, teaching and assessment criteria, such as 'Quality of ideas' and 'Organisation and structure' in writing.

Table TT2.7

Percentage of students whose teachers express confidence in teaching literacy

Subject	Year 4	Year 6
Vocabulary	 84% (4.8)	 84% (4.6)
Grammar and syntax	 80% (6.1)	 78% (4.5)
Spelling and punctuation	 93% (2.8)	 84% (4.7)
Quality of ideas (writing)	 68% (5.7)	 71% (4.7)
Organisation and structure (writing)	 69% (5.1)	 74% (4.8)
Phonemic awareness	 88% (4.7)	 83% (4.1)
Letter sound correspondence	 96% (1.7)	 83% (4.3)
Reading comprehension	 79% (4.4)	 79% (4.6)
Oral language (speaking and listening)	 86% (3.6)	 83% (4.8)

Percentage of students whose teacher expressed confidence in teaching literacy, Tonga, PILNA 2021

() Standard errors appear in parentheses.

The same questions were asked of teachers in the 2018 PILNA cycle and results from both the 2018 and 2021 cycles of PILNA are presented here for comparison. Table TT2.8 shows the differences in the percentages of students who had a teacher confident in teaching the various literacy areas between 2018 and 2021 PILNA cycles.

Compared with the 2018 PILNA cycle, more students in 2021 had teachers who expressed confidence in teaching literacy across all areas. Every literacy area saw an increase in the proportion of students who had a teacher confident in teaching it. This was true across both year four students and year six students.

Table TT2.8

Percentage of students whose teachers express confidence in teaching literacy in 2018 and 2021

Subject	2018	Difference	2021
Year 4			
Vocabulary	 80% (4.1)		 84% (4.8)
Grammar and syntax	 69% (5.1)		 80% (6.1)
Spelling and punctuation	 75% (4.3)		 93% (2.8)
Quality of ideas (writing)	 56% (5.6)		 68% (5.7)
Organisation and structure (writing)	 56% (5.2)		 69% (5.1)
Phonemic awareness	 80% (4.2)		 88% (4.7)
Letter sound correspondence	 88% (3.4)		 96% (1.7)
Reading comprehension	 69% (4.9)		 79% (4.4)
Oral language (speaking and listening)	 86% (3.2)		 86% (3.6)
Year 6			
Vocabulary	 72% (4.7)		 84% (4.6)
Grammar and syntax	 59% (4.4)		 78% (4.5)
Spelling and punctuation	 77% (4.0)		 84% (4.7)
Quality of ideas (writing)	 52% (5.7)		 71% (4.7)
Organisation and structure (writing)	 58% (5.6)		 74% (4.8)
Phonemic awareness	 73% (4.4)		 83% (4.1)
Letter sound correspondence	 84% (3.6)		 83% (4.3)
Reading comprehension	 62% (5.2)		 79% (4.6)
Oral language (speaking and listening)	 71% (5.2)		 83% (4.8)

Percentage of students whose teachers expressed confidence in teaching literacy in 2018 and 2021, Tonga, PILNA 2021

() Standard errors appear in parentheses.

Confidence in teaching literacy and teacher qualities

A regional scale focused on measuring teachers' confidence in teaching literacy based on teachers' responses was established. Higher scores on this scale indicate higher levels of confidence in teaching literacy. The literacy teaching confidence scores were analysed against teacher demographics (gender, age, teaching experience, and qualification level). The significant findings are listed below.

- Female teachers were more confident in teaching literacy than male teachers.
- Teachers who had a degree level or higher qualification were more confident than teachers who did not.
- Teachers with less experience in teaching (less than 10 years) expressed more confidence in teaching literacy than teachers with more experience (more than 10 years).

The PILNA scale for teachers' confidence in teaching literacy has an average of 200 and a standard deviation of 40. Most scores are expected to be within 40 points of 200 (160–240). This scale was formed using statistical analysis of all nine answers to questions about teachers' confidence in teaching this area.

Confidence in teaching numeracy

Table TT2.9 below shows the percentage of students whose teachers expressed confidence in teaching numeracy topics.

Most students in both year levels had teachers who were confident in teaching numeracy topics. In both year levels, the proportion of students with confident teachers ranged between 71% and 94%, a similar range to literacy topics.

Across both year levels, the topics where a lower proportion of students had teachers who expressed confidence were 'Fractions and percentages' (year four, 77%; year six, 74%) and 'Measurement' (year four, 75%; year six, 71%). Topics with the highest proportions of students whose teacher expressed confidence were 'Place value' (year four, 94%; year six, 88%) and 'Numbers and patterns' (year four, 93%; year six, 88%).

Table TT2.9

Percentage of students whose teachers express confidence in teaching numeracy

Subject	Year 4	Year 6
Number and patterns	 93% (2.3)	 88% (3.5)
Place value	 94% (2.4)	 88% (3.5)
Fractions and percentage	 77% (4.6)	 74% (4.4)
Operations	 85% (4.0)	 84% (4.1)
Measurement	 75% (5.9)	 71% (4.6)
Geometry	 80% (4.0)	 73% (5.1)
Data and chance	 84% (4.5)	 76% (4.6)

Percentage of students whose teacher expressed confidence in teaching numeracy, Tonga, PILNA 2021

() Standard errors appear in parentheses.

The same questions were asked of teachers in the 2018 PILNA cycle and results from both the 2018 and 2021 cycles of PILNA are presented for comparison. Table TT2.10 shows the differences in the percentages of students who had a teacher confident in teaching the various numeracy areas between 2018 and 2021 PILNA cycles.

Similar findings were found in numeracy as in literacy. In every numeracy area, across both year levels, a higher proportion of students had a teacher confident in teaching the areas in 2021 than in 2018.

Table TT2.10

Percentage of students whose teachers express confidence in teaching numeracy in 2018 and 2021

Subject	2018	Difference	2021
Year 4			
Number and patterns	 95% (2.0)		 93% (2.3)
Place value	 90% (3.3)		 94% (2.4)
Fractions and percentage	 69% (4.4)		 77% (4.6)
Operations	 89% (2.6)		 85% (4.0)
Measurement	 71% (5.0)		 75% (5.9)
Geometry	 70% (5.0)		 80% (4.0)
Data and chance	 87% (3.5)		 84% (4.5)
Year 6			
Number and patterns	 91% (3.0)		 88% (3.5)
Place value	 93% (2.3)		 88% (3.5)
Fractions and percentage	 70% (4.3)		 74% (4.4)
Operations	 90% (2.8)		 84% (4.1)
Measurement	 70% (5.1)		 71% (4.6)
Geometry	 73% (4.2)		 73% (5.1)
Data and chance	 83% (3.5)		 76% (4.6)

Percentage of students whose teachers expressed confidence in teaching numeracy in 2018 and 2021, Tonga, PILNA 2018, 2021

() Standard errors appear in parentheses.

Confidence in teaching numeracy and teacher characteristics

A regional scale with nine items focused on measuring teachers' confidence in teaching numeracy based on teachers' responses was established. Higher scores on this scale indicate higher levels of confidence in teaching numeracy. As with literacy, the numeracy teaching confidence scores were compared to teachers' demographic groups (gender, age, teaching experience, highest qualification). There were no gender or teaching experience differences for numeracy teaching confidence, but significant differences were found.

- Teachers who had a degree level or higher qualification were more confident in teaching numeracy than teachers who did not.

- Teachers who were in the older age range (over 35 years old) were more confident in teaching numeracy than teachers in the younger age range (20–35 years old).

The PILNA scale for teachers' confidence in teaching numeracy has an average of 200 and a standard deviation of 40. Most scores are expected to be within 40 points of 200 (160–240). The scale was formed using statistical analysis of the answers to seven questions that teachers were asked about their confidence in teaching this area.

What does this mean?

A high proportion of students in Tonga have teachers who are confident in teaching literacy and numeracy. Overall, a lower proportion of students in Tonga have teachers confident in teaching numeracy compared with the regional average.

In literacy, more students have confident teachers in areas that are structured or rule based, such as 'Punctuation' and 'Vocabulary'. Fewer students have confident teachers in areas that require more subjective or complex teaching and assessment, such as 'Quality of ideas' and 'Organisation and structure' in writing.

Differences were noted within the comparisons for teacher demographic factors and literacy and numeracy teaching confidence. The implications of these associations are unknown.