



STAKI 2015

NATIONAL REPORT

Report of the **S**tandardised **T**est of **A**chievement in **K**iribati conducted in 2015 with Years 4, 6 and 8 students.

Acknowledgments

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Cover photo of fish trap on Marakei Island

Acronyms

CDAD	Curriculum Development and Assessment Unit
EAU	Examinations and Assessment Unit
EQAP	Education Quality and Assessment Program of the SPC <i>formerly</i> South Pacific Board of Educational Assessment
GoK	Government of Kiribati
KEF	Kiribati Education Facility
KEMIS	Kiribati Education Management Information System
MoE	Ministry of Education
NCAF	National Curriculum and Assessment Framework
PILNA	Pacific Islands Literacy and Numeracy Assessments
SPC	Secretariat of the Pacific Community
STAKI	Standardised Test of Achievement in Kiribati

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Contents

Executive Summary	iii
1. Background	1
1.1 History of STAKI	1
1.2 Administration	1
2. National Results	3
2.1 Year 4 English literacy	3
2.2 Year 6 English literacy	5
2.3 Year 8 English literacy	7
2.4 Year 4 te-Kiribati literacy	9
2.5 Year 6 & 8 te-Kiribati literacy	11
2.6 Year 4 Numeracy	13
2.7 Year 6 Numeracy	15
2.8 Year 8 Numeracy	17
2.9 Overall test observations	19
3. Findings	20
Appendices	
1. Overall Achievement Levels	21
2. Sample school report	22

Figures

Fig 1	<i>Year 4 English overall performance 2011-2015</i>	3
Fig 2	<i>Year 4 English component performance 2013 - 2015</i>	3
Fig 3	<i>Year 4 English performance by gender</i>	4
Fig 4	<i>Year 6 English literacy overall performance 2011-2015</i>	5
Fig 5	<i>Year 6 English component performance</i>	5
Fig 6	<i>Year 6 English performance by gender</i>	6
Fig 7	<i>Year 8 2015 English overall performance</i>	7
Fig 8	<i>Year 8 2015 English component performance</i>	7
Fig 9	<i>Year 8 English performance by gender</i>	8
Fig 10	<i>Year 4 te-Kiribati literacy overall performance 2011-2015</i>	9
Fig 11	<i>Year 4 te-Kiribati literacy component performance 2013 - 2015</i>	9
Fig 12	<i>Year 4 te-Kiribati literacy performance by gender</i>	10
Fig 13	<i>te_Kiribati overall performance - Years 6 and 8</i>	11
Fig 14	<i>Year 6 and 8 te-Kiribati literacy component performance</i>	11
Fig 15	<i>Year 6 and 8 te-Kiribati gender performance</i>	12
Fig 16	<i>Year 4 numeracy overall performance 2011-2015</i>	13
Fig 17	<i>Year 4 numeracy component performance</i>	13
Fig 18	<i>Year 4 numeracy performance by gender</i>	14
Fig 19	<i>Year 6 numeracy overall performance 2011-2015</i>	15
Fig 20	<i>Year 6 numeracy component performance</i>	15
Fig 21	<i>Year 6 numeracy performance by gender</i>	16
Fig 22	<i>Year 8 2015 Numeracy overall performance</i>	17
Fig 23	<i>Year 8 2015 numeracy component performance</i>	17
Fig 24	<i>Year 8 numeracy performance by gender</i>	18

Tables

Table 1	<i>Student participation in STAKI tests in 2015</i>	2
Table 2	<i>Year 4 English performance by district</i>	4
Table 3	<i>Year 6 English performance by district</i>	6
Table 4	<i>Year 8 English performance by district</i>	8
Table 5	<i>Year 4 te-Kiribati literacy performance by district</i>	10
Table 6	<i>te-Kiribati performance by district</i>	12
Table 7	<i>Year 4 numeracy performance by district</i>	13
Table 8	<i>Year 6 numeracy performance by district</i>	15
Table 9	<i>Year 8 Numeracy performance by district</i>	18
Table 10	<i>Percentage of students demonstrating achievement at the expected standard 2007 - 2015</i>	19
Table 11	<i>Requirements for overall levels</i>	21

Executive Summary

The Ministry of Education has completed the process of curriculum renewal in Years 1 - 4. This is a part of the implementation of the National Curriculum and Assessment Framework (NCAF). Years 1 and 2 were initially implemented in 2013, Year 3 was implemented in 2014 and Year 4 in 2015.

The Ministry of Education has been running monitoring tests (known as the *Standardised Tests of Achievement in Kiribati - STAKI*) since 2004. The tests cover Year 4, 6 and 8 student achievements in numeracy and literacy (both te-Kiribati and English). The tests have been run every two years since 2007 with the most recent tests done by students in years 4, 6 and 8 in October, 2015.

2313 Year 4 students, 1935 Year 6 students and 1350 Year 8 students sat the 2015 tests.

The regional *Pacific Literacy and Numeracy Assessments - PILNA* were also due to be run in October. The Ministry co-operated with the Education Quality and Assessment Programme of SPC (EQAP), the managers of PILNA, to use the PILNA tests where possible. Consequently, the Year 4 and 6 numeracy tests, the Year 4 te-Kiribati test and the Year 6 English test were prepared, printed and the marking was managed by EQAP.

The test papers were marked by teams of Kiribati teachers in December and subsequently analysed by officers based in the Examinations and Assessment Unit (EAU).

In addition to this report each school receives details of their student's performance and of their performance relative to other Kiribati schools.

Findings:

The following issues stand out and need to be considered by policy-makers and other stakeholders -

1. Girls performed better than boys in all tests. In te-Kiribati, where comparisons were technically possible, Year 6 girls are performing at levels similar to Year 8 boys.
2. A larger proportion of student enrolments were present for the tests than in 2013. Year 4 attendance increased by 13% as it went from 76% in 2013 to 89% in 2015. Year 6 improved from 79% to 88%. This suggests that daily primary school attendance is improving, especially at Year 4.
3. English literacy
 - In year 4, at 27%, there has been little change in the percentage of students achieving the expected overall standard however 70% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level.
 - the proportion of very weak student performances in Year 4 has declined. This may reflect improved classroom engagement resulting from improved curriculum and pedagogy; an improved attitude towards and familiarity with testing or a combination of those and other factors.

- In Year 6 the percentage of students achieving the expected overall standard has increased to 37% of students from 21% in 2013 and 81% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level.
- In Year 8 only 20% of students are working at their expected level and just 56% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level.
- skills in understanding and interpreting written texts, including instructions, are the most in need of development.

4. Te-Kiribati literacy

- at 42% there appears to have been a decline in the percentage of students achieving the expected overall standard in Year 4 te-Kiribati literacy since 2011.
- There has been improvement in the percentage of Year 6 students demonstrating both minimal and acceptable levels of performance between 2013 and 2015.
- reading comprehension continues to be the biggest weakness in Year 6, however shows marked improvement by Year 8.
- By the end of Year 6, 55% of students are performing at the level expected for the end of primary school. By Year 8 72% of students are performing at or above the same level.

5. Numeracy

- In year 4 the percentage of students achieving the expected overall standard in numeracy at Year 4 has increased dramatically to 78% of students from 26% in 2013. Furthermore, 95% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level.
- In Year 6 the percentage of students achieving the expected overall standard in numeracy at Year 6 has increased dramatically to 54% of students from 20% in 2013. 85% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level.
- In Year 8 only 33% of students are working at or above the expected level of achievement. A further 34% are not at all coping with classroom material and are being completely 'left behind'.
- Skills in measurement and data are the most in need of development. This issue was also identified in the 2013 report.

1. Background

1.1 History of STAKI

Standardised tests of student performance in literacy (both in te-Kiribati and English) and in numeracy have previously been held in Kiribati in 2004, 2007, 2009, 2011 and 2013. Originally the tests were prepared, processed and funded by the South Pacific Board for Educational Assessment (SPBEA), with a gradual transition through to 2013 when the tests were fully prepared and resourced by the Ministry of Education. In 2015 the Ministry of Education decided that, from 2015, STAKI testing would be extended to year 8 and would occur annually.

1.2 Administration

In 2015 the Education Quality and Assessment Programme of SPC (EQAP) developed a set of regional tests (the Pacific Island Literacy and Numeracy Assessments - PILNA) for use in Years 4 and 6. These tests were to be deployed at the same time as the 2015. To avoid duplication of effort both the Year 4 and 6 literacy and numeracy PILNA tests were used instead of locally developed tests.

EQAP met the development, printing and marking costs for the four tests. The Ministry of Education, supported by the Kiribati Education Facility (KEF) met all costs associated with the remaining five tests.

Setting

Officers from the Curriculum Development and Assessment Division (CDAD) of the Ministry of Education prepared their five test papers in June 2015. The structure of the papers and the questions were closely based on those used in 2013. A few questions were improved to make their requirements clearer or more to make them inclusive of all students. Care was taken to ensure that the Year 4 tests reflected the Year 4 benchmarks for the new curriculum.

Deployment

Test papers were sent to islands at the same time as the secondary school examinations and distributed to Primary schools. Numbers of papers were based on data provided through the Kiribati Education Management System (KEMIS).

All Year 4 and Year 6 students attending on October 23, 2015 sat the three test papers. Year 8 students undertook the tests between 27 and 29 October, 2015. Teachers from other schools on the island generally supervised students.

Papers were collected from schools and returned to the Examinations and Assessment Unit (EAU) for marking and processing.

Only Year 8 students in Government of Kiribati (GoK) schools were included in the STAKI testing program. Based on 2015 JSC examination results approximately 270 students in Year 8 attended non-government schools. These schools are mostly located on South Tarawa.

Marking

Teams of markers, each consisting of experienced teachers and led by a Curriculum Development Officer or Assessment Officer, were assembled in December, 2015 to mark the test papers.

The team leaders provided advice regarding the minimum expected performance for each level.

Results were entered into spread-sheets recording the school, student name, age, gender and marks for each question or section of the paper.

The percentage of enrolled students in attendance (see Table 1) has increase dramatically in comparison to 2013. Year 4 had 89% of enrolled students present compared with 76% in 2013. Year 6 has improved from 79% to 88% attending on the day of the test.

Table 1. Student participation in STAKI tests in 2015

Year 4	South	Central	North	Line Islands	South Tarawa	Total
Total students ¹	304	270	573	234	1223	2604
Participated in STAKI	280	251	442	265	1075	2313
- boys	141	126	220	135	512	1134
- girls	139	125	222	130	563	1179
% present	92%	93%	77%	88%	88%	89%

Year 6	South	Central	North	Line Islands	South Tarawa	Total
Total students ¹	319	229	480	237	933	2198
Participated in STAKI	266	211	396	214	848	1935
- boys	115	99	185	99	381	879
- girls	151	112	211	115	467	1056
% present	83%	92%	82%	90%	91%	88%

Year 8	South	Central	North	Line Islands	South Tarawa	Total
Total students ¹	262	202	291	222	791	1768
Participated in STAKI	230	176	251	142	551	1350
- boys	114	86	100	57	234	591
- girls	116	90	151	85	317	759
% present	88%	87%	86%	64%	70%	76%

¹ sourced from KEMIS on 26 Jan 2016 plus estimates where data was missing

Processing and Analysis

EAU staff checked the data for anomalies and missing marks, making any corrections as required. Results for each test were then analysed, comparing them between components, districts, genders and in comparison to the 2013 results.

Each component of each student test result, such as *measurement* or *grammar* was given one of the following achievement levels. The levels were based on the total marks for that component and were determined by the relevant marking team leader in consultation with the markers.

- L4 is working above the expected level;
- L3 is working at the expected level;
- L2 is working towards the expected level;
- L1 is critically below the expected level; or
- L0 no evidence of achievement

An overall result in the test was then decided using the achievement levels from each component of the test, ensuring that students were performing at their final level in a majority of the components of the domain. Details of the rules used are at *Appendix 1*.

Matters of interest or note, both in components of the test or overall, were then highlighted in test reports, all of which follow later in this document.

School Reports

Reports are provided to each school, showing which, if any, of their results are statistically significantly weaker than the national spread of results. A sample of this report is provided at *Appendix 2*. Additionally, schools receive details of the levels attained by each of their students in each component of each test.

These reports are provided to schools to support them in developing their continuous school improvement plans.

2. National Results

2.1 Year 4 English literacy

Students in Year 4 in 2015 were the first to have been exposed to the new curriculum. This curriculum has a focus on learning literacy skills in te-Kiribati and then transitioning to English in upper primary and junior secondary levels. Initially the focus is on oral English with reading and writing in English being introduced in Years 3 and 4.

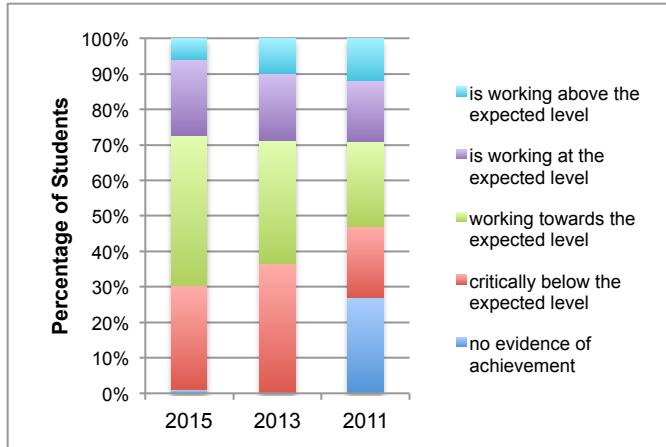


Fig 1 Year 4 English overall performance 2011-2015

There has been a steady improvement in the number of students who are, at least, working towards the expected level. The proportion of students who are working well above the expected level has steadily declined from 12% to 6% in the four year period.

Almost every student engaged with the test and made some type of attempt.

The test focussed on three components of literacy:

- listening,
- reading, and
- writing.

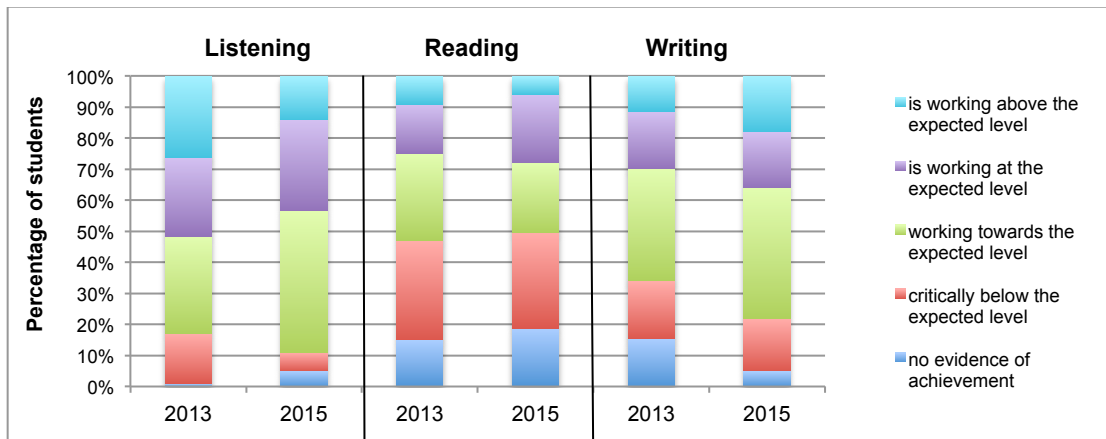


Fig 2 Year 4 English component performance 2013 - 2015

When compared to 2013, less students are critically underperforming in listening and writing. There has also been a small improvement in the percentage of students who are reading and writing at or above the expected standard.

Student's reading skills continue to be the most poorly developed. Only 27% of students are working at the expected level and 50% are failing to show any or only very limited evidence of achievement.

Table 2 Year 4 English performance by district	Students in each group		
	no evidence or critically below expected level	working towards expected level	working at or above expected level
Total	717 (30%)	1013 (42%)	668 (28%)
Central	80 (33%)	93 (39%)	67 (28%)
North	121 (26%)	211 (45%)	141 (30%)
South	137 (40%)	130 (38%)	78 (23%)
Linnux	103 (39%)	122 (46%)	42 (16%)
South Tarawa	276 (26%)	457 (43%)	340 (32%)

Line Island students are not performing at the same level as the other districts.

Analysis of the proportions achieving the expected standard by gender shows that girls performed better than boys in the test. This is a consistent pattern that has been seen in every STAKI test.

The spread of achievement for each gender is shown in Fig 3. The variation in performance between the boys and the girls is statistically significant.

Of particular concern is the large difference in the proportion of students critically underperforming - 40% for boys and 20% for girls. The difference (20%) is more marked than it was in 2013 (15%).

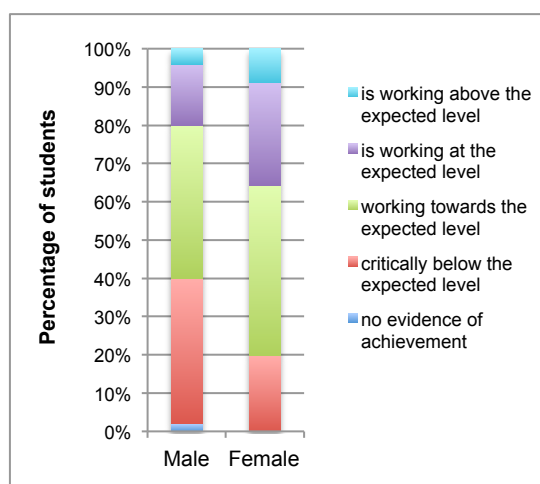


Fig 3 Year 4 English performance by gender

General Observations

- There has been little change in the percentage of students achieving the expected overall standard in English at Year 4 since 2011.
- The proportion of very weak student performances has, however, declined. This may reflect improved classroom engagement resulting from improved curriculum and pedagogy; an improved attitude towards and familiarity with testing or a combination of those and other factors.
- 70% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level.
- Skills in reading are the most in need of development. This is the same as was observed in 2013.
- Students in the Line Islands are under-performing in comparison to their peers in other districts.
- Overall, student performance has marginally improved in comparison to 2013.
- Student performance in the Southern District has declined slightly when compared to 2013.
- Girls continue to perform better than boys and the gap between the two groups is growing.

2.2 Year 6 English literacy

Almost every student engaged with the test and made some type of attempt.

There has been an improvement in the performance of Year 6 students, with 37% performing at or above the expected standard compared to 21% in 2013.

This is a significant improvement on the results seen in 2013.

81% of students are performing at a minimum standard and demonstrate they can, at least, engage with the expectations, if not demonstrate competence.

This test did not include a listening component as it was being used across the region.

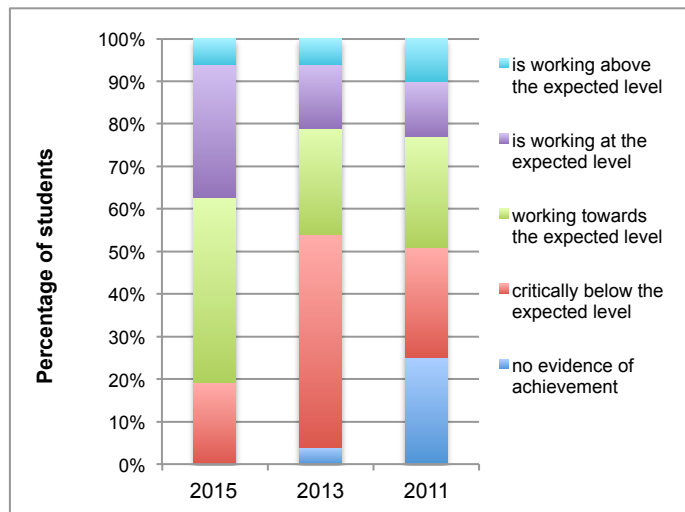


Fig 4 Year 6 English literacy overall performance 2011-2015

The test focussed on three components of literacy:

- reading,
- language elements, and
- writing.

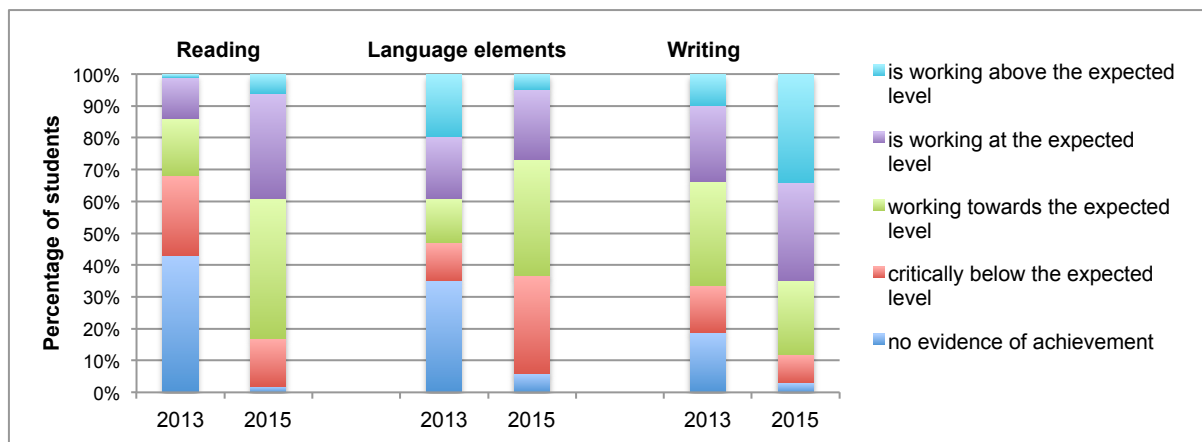


Fig 5 Year 6 English component performance

Both reading and writing have improved significantly since 2013.

Less than 20% of students are unable to demonstrate a minimal understanding of written texts.

Only 12% of students had difficulty creating a piece of writing that displayed some of the expected elements. 65% of students produced writing that met the expected standard.

Table 3 Year 6 English performance by district	Students in each group		
	no evidence or critically below expected level	working towards expected level	working at or above expected level
Total	335 (18%)	528 (28%)	1019 (54%)
Central	20 (10%)	65 (31%)	125 (60%)
North	66 (17%)	103 (27%)	214 (56%)
South	27 (10%)	70 (26%)	169 (64%)
Linnux	54 (26%)	69 (33%)	86 (41%)
South Tarawa	168 (21%)	221 (27%)	425 (52%)

Students from the Line Islands are not performing at the same level as students from the other districts.

Analysis of the proportions achieving the expected standard by gender shows that girls performed better than boys in the test. This is a consistent pattern that has been seen in every STAKI test.

The spread of achievement for each gender is shown in Fig 6. The variation in performance between the boys and the girls is significant.

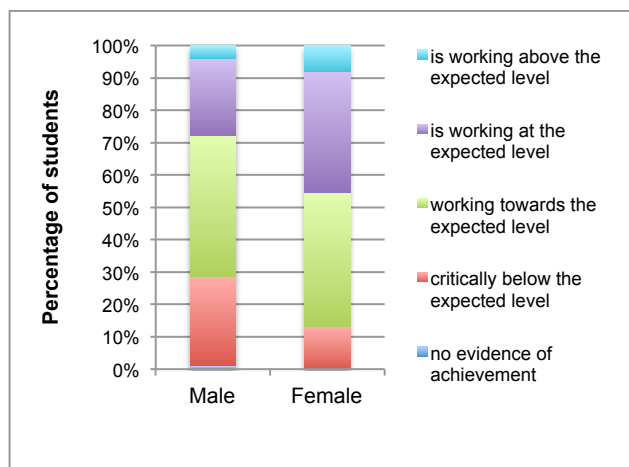


Fig 6 Year 6 English performance by gender

General Observations

- The percentage of students achieving the expected overall standard in English at Year 6 has increased to 37% of students from 21% in 2013.
- 81% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level.
- Students in the line Islands performed poorly in comparison to their peers in other districts.
- Girls continue to perform better than boys. The gap between the two groups has remained steady since 2013.

2.3 Year 8 English literacy

Students in Year 8 are in the second year of the three year Junior Secondary curriculum. This is the first time in many years that an English literacy test has been held for all students in Year 8. There is an English examination held at the end of Year 9. It is one of the compulsory components of the Junior Secondary Certificate examinations that mark the end of compulsory education in Kiribati.

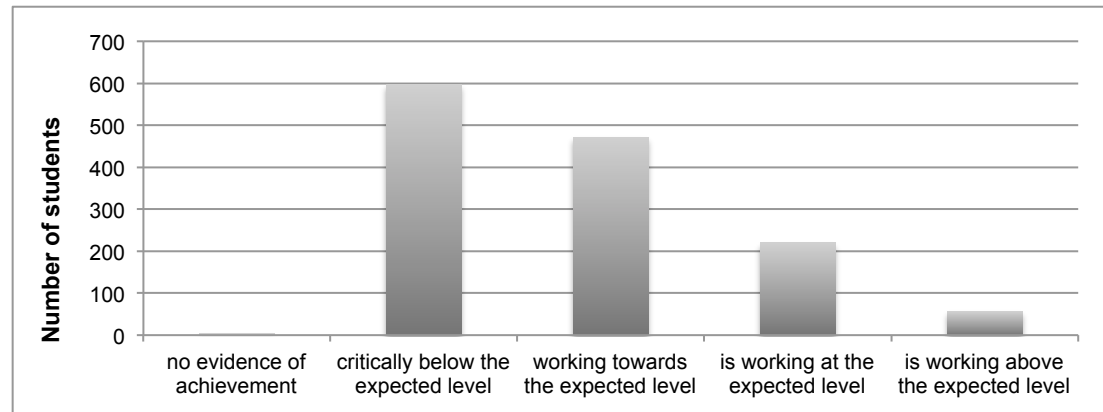


Fig 7 Year 8 2015 English overall performance

Clearly, the majority of students tested are not demonstrating a level of English literacy which is expected of all students at the end of year 8. Only 227 (20%) of students are working at the or above the expected level.

The results are not surprising as student performance in the Year 9 English exams shows a similar pattern. Of the 2035 students who sat the Year 9 exam in 2015, only 547 student (27%) achieved a raw mark of 40 or better out of 80 possible marks.

The test focussed on six components of literacy:

- listening,
- vocabulary,
- reading comprehension,
- understanding instructional text
- grammar, and
- writing.

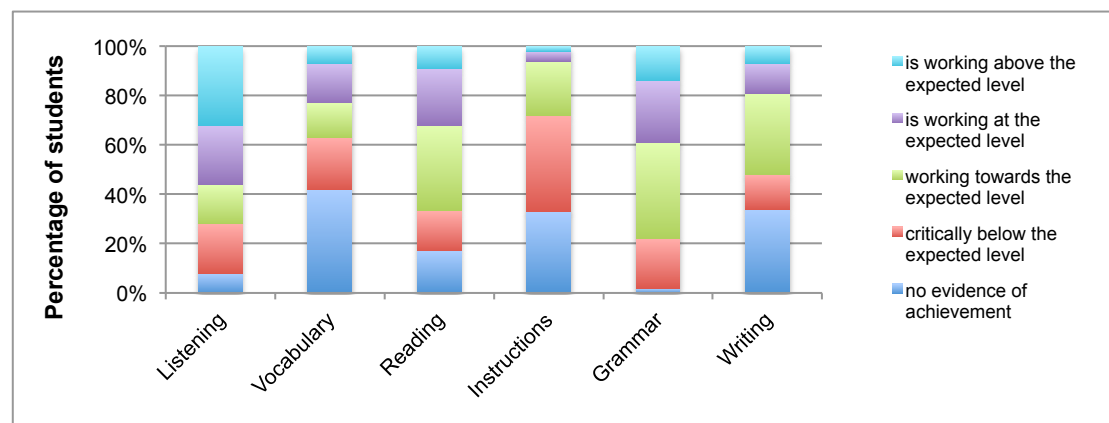


Fig 8 Year 8 2015 English component performance

Students have significant difficulties with understanding and interpreting instructional texts. This is a major concern given that this is an essential skill in the work place. General reading comprehension and writing are also very poor.

Understanding of verbal texts was done more competently, however more than 40% of students still could not demonstrate a satisfactory level.

	Students in each group		
	no evidence or critically below expected level	working towards expected level	working at or above expected level
Total	601 (45%)	472 (35%)	277 (20%)
Central	76 (43%)	62 (35%)	38 (22%)
North	119 (47%)	93 (37%)	39 (16%)
South	118 (51%)	67 (29%)	45 (20%)
Linnux	60 (42%)	53 (37%)	29 (21%)
South Tarawa	228 (41%)	197 (36%)	126 (23%)

The Line Islands and South Tarawa stand out as the better performing districts.

Analysis of the proportions achieving the expected standard by gender shows that girls performed better than boys in the test. This is a consistent pattern that has been seen in every STAKI test and JSC examination.

The spread of achievement for each gender is shown in Fig 9. The variation in performance between the boys and the girls is statistically significant.

Of particular concern is the large difference in the proportion of students critically underperforming - 57% for boys and 35% for girls.

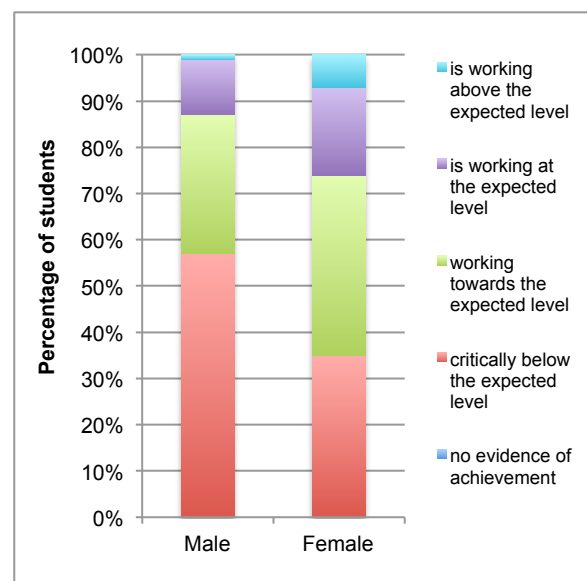


Fig 9 Year 8 English performance by gender

General Observations

- Only 56% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level.
- Skills in understanding and interpreting written instructions are the most in need of development.
- Students in the Line Islands and South Tarawa are performing better in comparison to their peers in other districts.
- Girls perform better than boys.

2.4 Year 4 te-Kiribati literacy

Students in Year 4 in 2015 were the first to have been exposed to the new curriculum. This curriculum has a focus on learning literacy skills in te-Kiribati and then transitioning to English in upper primary and junior secondary levels. Initially the focus is on oral English with reading and writing in English being introduced in Years 3 and 4.

Only 42% of students demonstrated a level of performance that shows they are working at or above the expected level. There has been a steady decline in measured performance since 2011.

The test in 2015 is not directly comparable to the 2011 and 2013 tests. There was no listening component in 2015, as the test was used, in translation, across the Pacific region. In 2013, students were most proficient in listening.

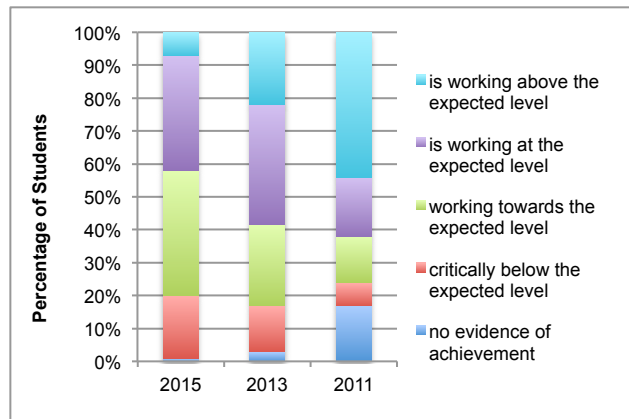


Fig 10 Year 4 te-Kiribati literacy overall performance

The test focussed on three components of literacy:

- reading,
- language elements, and
- writing.

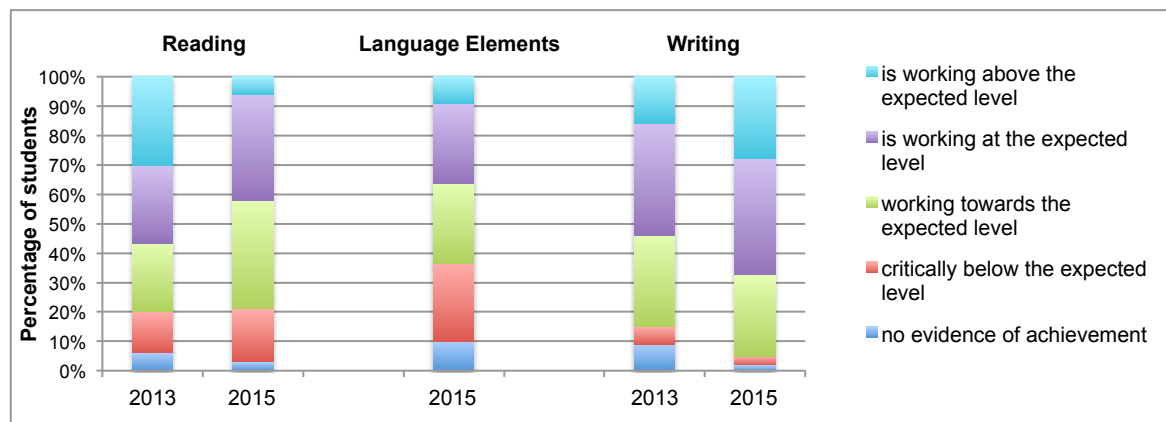


Fig 11 Year 4 te-Kiribati literacy component performance 2013 - 2015

The proportion of students who are writing at the expected level has improved since 2013 and is now at 68% of the students. Only 5% of students can not demonstrate a minimal level of competence in writing.

Whilst the number of students who demonstrate understanding of written texts at the level expected has declined to 44% of students, at 80% of students there is no change in the proportion who can, at least, demonstrate a minimal level of competence in reading.

Table 5 Year 4 te-Kiribati literacy performance by district	Students in each group		
	no evidence or critically below expected level	working towards expected level	working at or above expected level
Total	463 (20%)	884 (38%)	966 (42%)
Central	55 (22%)	96 (38%)	100 (40%)
North	89 (20%)	163 (37%)	190 (43%)
South	50 (18%)	113 (40%)	117 (42%)
Linnux	83 (31%)	100 (38%)	82 (31%)
South Tarawa	186 (17%)	412 (38%)	477 (44%)

The performance of students in the Line Islands is significantly different to the other districts.

Analysis of the proportions achieving the expected standard by gender shows that girls performed better than boys in the test. This is a consistent pattern that has been seen in every STAKI test.

The spread of achievement for each gender is shown in Fig 12. The variation in performance between the boys and the girls is statistically significant.

The gap between boys and girls working at or above the expected level has grown from 10% in 2013 to 20% in 2015.

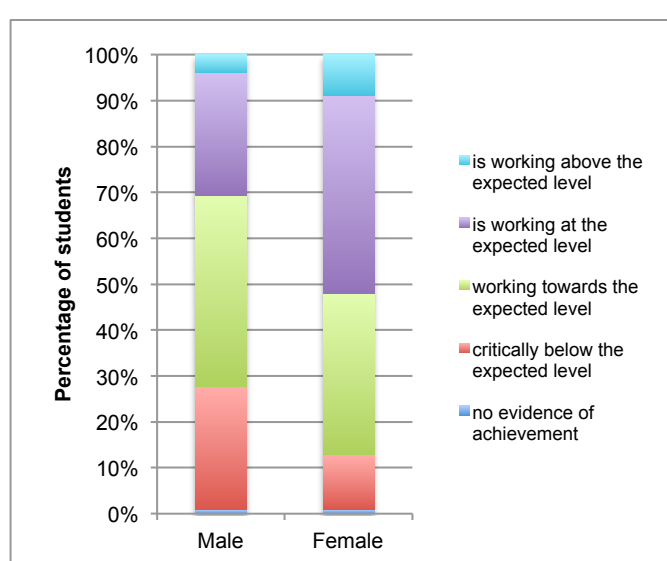


Fig 12 Year 4 te-Kiribati literacy performance by gender

General Observations

- There appears to have been a decline in the percentage of students achieving the expected overall standard in te-Kiribati literacy at Year 4 since 2011. This is partially explained by changes in the structure of the test.
- 80% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level.
- Students in the Line Islands are under-performing in comparison to their peers in other districts.
- Given the changes in the structure of test it is difficult to comment on overall comparative performance with 2013.
- Writing skills have improved since 2013.
- Girls continue to perform better than boys and the gap between the two groups is growing.

2.5 Year 6 and 8 te-Kiribati literacy

Students in Year 8 are in the second year of the three year Junior Secondary curriculum. This is the first time in many years that a te-Kiribati literacy test has been held for all students in Year 8. There is an Kiribati Studies examination held at the end of Year 9. It is one of the compulsory components of the Junior Secondary Certificate examinations that mark the end of compulsory education in Kiribati.

The tests for both Year 6 and Year 8 students used the same construct and were assessed using similar marking schemes. The 'expected level' is set at the end of Year 6 (Primary school).

Year 6 student performance has improved between 2013 and 2015.

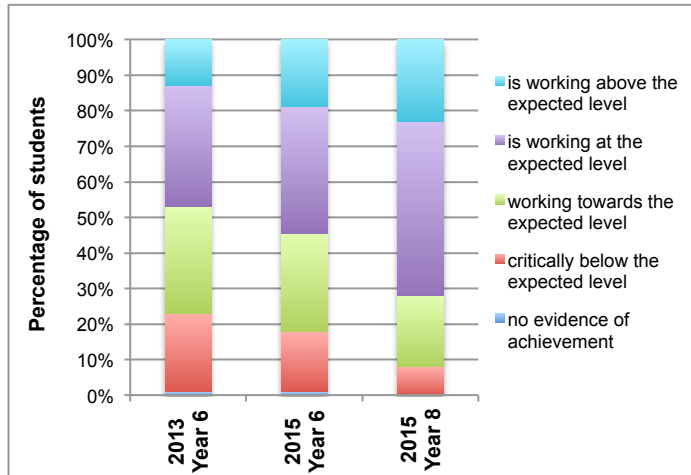


Fig 13 te-Kiribati overall performance - Years 6 and 8

The students in Year 8 (who were in Year 6 in 2013) have improved markedly, with 28% not having achieved a satisfactory 'end of Primary school' standard by the end of Year 8.

Two years previously 53% of the same students had not met the same standard. Clearly their skills have developed during their time in Junior Secondary school.

The test focussed on five components of literacy:

- listening,
- vocabulary,
- reading comprehension,
- grammar, and
- writing.

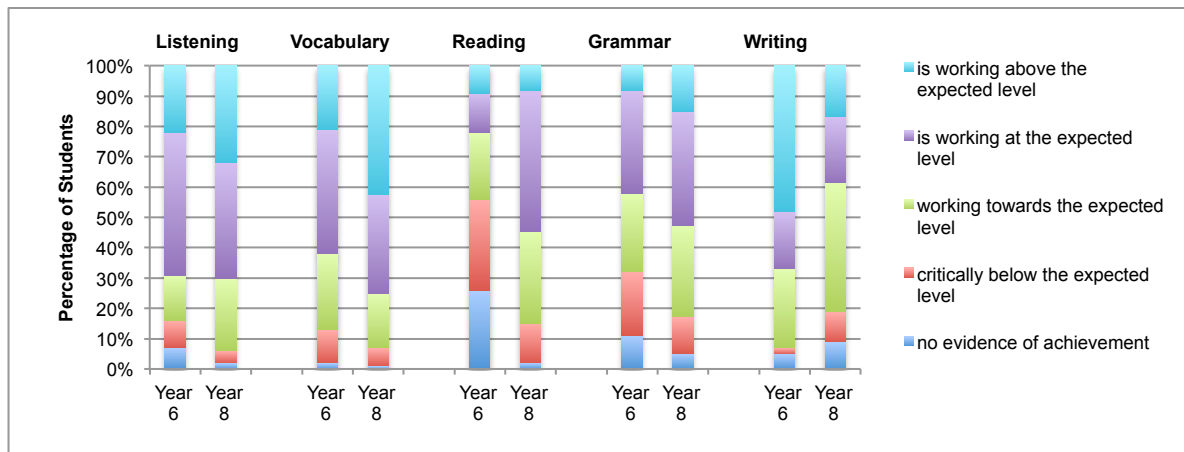


Fig 14 Year 6 and 8 te-Kiribati literacy component performance

The greatest improvement between Year 6 and 8 is in comprehension when reading text. Vocabulary and grammar skills also improve. Those students who have trouble understanding spoken te-Kiribati do not appear to improve, at least using this testing approach, in the two years.

Skills in composing written texts appear to decline; perhaps as a result of lack of practice. Most written work in Year 7 and 8 is meant to be in English.

In Year 6, reading comprehension is by far the weakest skill. This was the also the case in 2013. It may well be due to the lack of suitable written material available in te-Kiribati.

Table 6 te-Kiribati performance by district	Year 6			Year 8		
	no evidence or critically below expected level	working towards expected level	working at or above expected level	no evidence or critically below expected level	working towards expected level	working at or above expected level
Total	335 (18%)	528 (28%)	1019 (54%)	108 (8%)	274 (20%)	1005 (72%)
Central	20 (10%)	65 (31%)	125 (60%)	9 (5%)	34 (19%)	137 (76%)
North	66 (17%)	103 (27%)	214 (56%)	10 (4%)	61 (24%)	185 (72%)
South	27 (10%)	70 (26%)	169 (64%)	9 (4%)	36 (15%)	192 (81%)
Linnux	54 (26%)	69 (33%)	86 (41%)	12 (8%)	29 (20%)	101 (71%)
South Tarawa	168 (21%)	221 (27%)	425 (52%)	68 (12%)	114 (20%)	390 (68%)

Whilst the Line Islands performed worst in Year 6 they recover in year 8 to perform comparably to other districts.

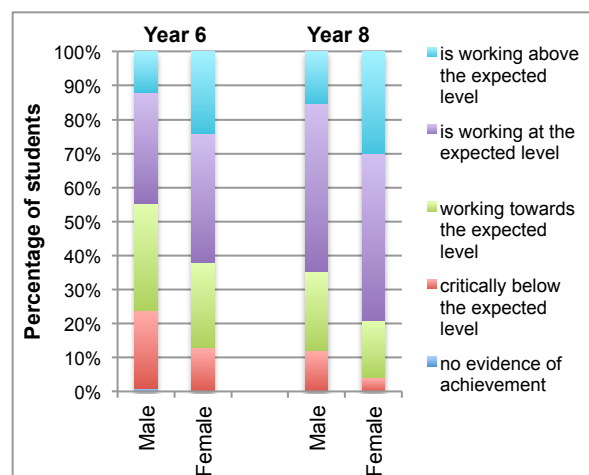


Fig 15 Year 6 and 8 te-Kiribati gender performance

The proportions achieving the expected standard by gender shows that girls performed better than boys in both tests. This is a consistent pattern that has also been seen in every STAKI test and JSC examination.

The spread of achievement for each gender is shown in Fig 15. The variation in performance between the boys and the girls is significant.

It is interesting to note that the performance of the boys in Year 8 is similar to the girls' performance in Year 6.

General Observations

- There has been improvement in the percentage of Year 6 students demonstrating both minimal and acceptable levels of performance between 2013 and 2015.
- Reading comprehension continues to be the biggest weakness in Year 6, however shows marked improvement by Year 8.
- By the end of Year 6, 55% of students are performing at the level expected for the end of primary school. By Year 8 72% of students are performing at or above the same level.
- Girls perform better than boys, showing about a two year development gap between the genders.

2.6 Year 4 Numeracy

Students in Year 4 in 2015 were the first to have been exposed to the new curriculum. This curriculum has a focus on learning numeracy skills in te-Kiribati and then transitioning to using English in upper primary and junior secondary levels. This numeracy assessment was undertaken in te-Kiribati except for students at Rurubao Primary School.

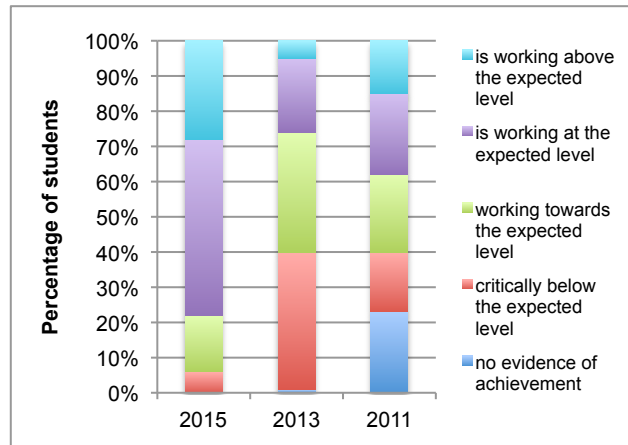


Fig 16 Year 4 numeracy overall performance 2011-2015

Almost every student engaged with the test and made some type of attempt.

78% of students demonstrated that they could perform numeracy tasks at or above the expected standard of performance for students at the end of Year 4.

This is a massive improvement on the 2013 and 2011 figures.

The test focussed on three components of numeracy:

- number,
- operations, and
- measurement.

The vast majority of students were able to undertake the number and operations tasks to a satisfactory degree.

Measurement continues to be a problem, with students having difficulties when they have to use a ruler to measure length and when locating hands on an analogue clock face.

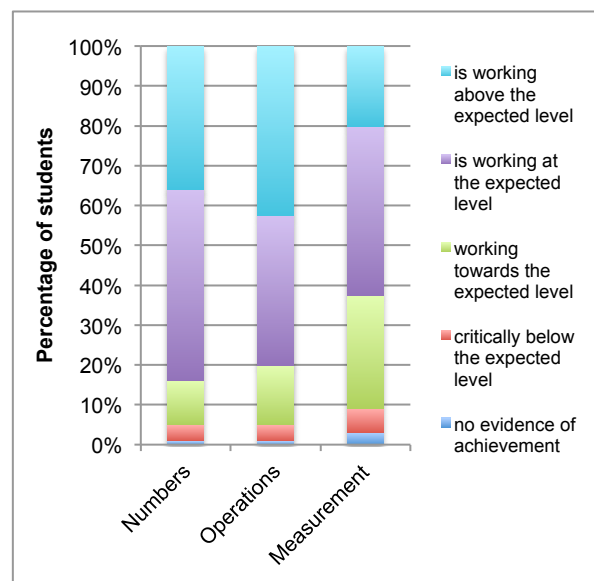


Fig 17 Year 4 numeracy component performance

Year 4 numeracy performance by district	Students in each group		
	no evidence or critically below expected level	working towards expected level	working at or above expected level
Total	134 (6%)	365 (16%)	1792 (78%)
Central	12 (5%)	53 (21%)	185 (74%)
North	27 (6%)	76 (17%)	339 (77%)
South	22 (8%)	43 (15%)	219 (77%)
Linnux	19 (7%)	49 (19%)	193 (74%)
South Tarawa	54 (5%)	144 (14%)	856 (81%)

The performance of students in South Tarawa is noticeably better than for the other districts. Schools in South Tarawa undertook two similar numeracy tests at the end of each Term. Their enhanced results may be attributable, at least in part, to familiarity by the students with the testing process and question style used in these numeracy tests.

Analysis of the proportions achieving the expected standard by gender shows that girls performed better than boys in the test. This is a consistent pattern that has been seen in every STAKI test.

The spread of achievement for each gender is shown in Fig 18. The variation in performance between the boys and the girls is significant, however is only half the difference seen in Year 4 English literacy

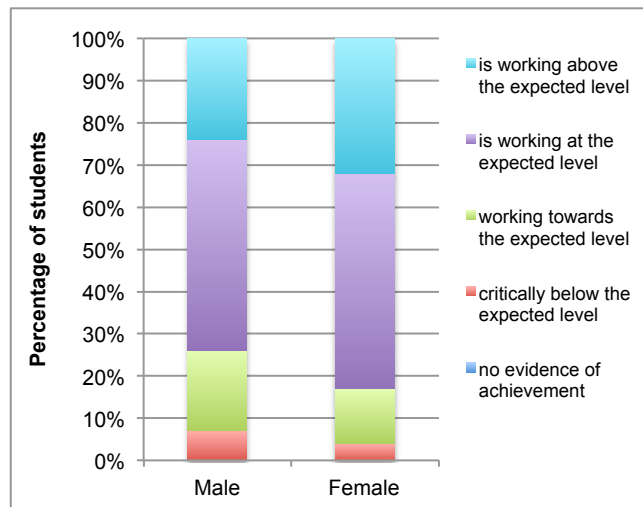


Fig 18 Year 4 numeracy performance by gender

General Observations

- The percentage of students achieving the expected overall standard in numeracy at Year 4 has increased dramatically to 78% of students from 26% in 2013.
- 95% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level.
- Skills in measurement, especially use of rulers and analogue time faces are the most in need of development. This is the same as was observed in 2013.
- Students in South Tarawa performed better in comparison to their peers in other districts.
- Girls continue to perform better than boys. The gap between the two groups has remained steady since 2013.

2.7 Year 6 Numeracy

Almost every student engaged with the test and made some type of attempt.

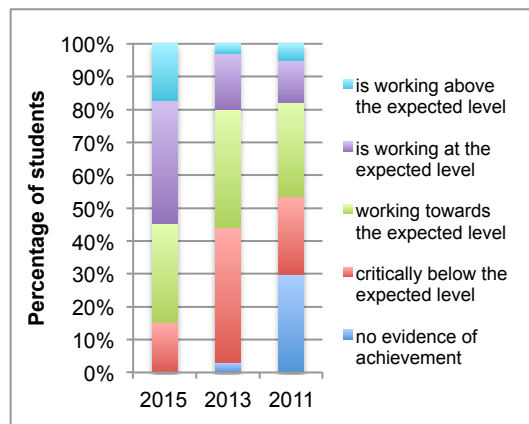


Fig 19 Year 6 numeracy overall performance 2011-2015

There has been a major improvement in the performance of Year 6 students, with 54% performing at or above the expected standard.

This is a significant improvement on the results seen in 2013.

85% of students are performing at a minimum standard and demonstrate they can, at least, engage with the expectations, if not demonstrate competence.

The test focussed on four components of numeracy:

- number,
- operations,
- measurement, and
- data.

A large majority of students were able to undertake the number, operations and data related tasks to a satisfactory degree.

The percentage of students who demonstrate they are working at the expected level with operations has improved from 31% to 67% of students.

Measurement continues to be a problem, with students having difficulties when they have to use a ruler to measure length and when dealing with time related questions, including reading analogue clock faces.

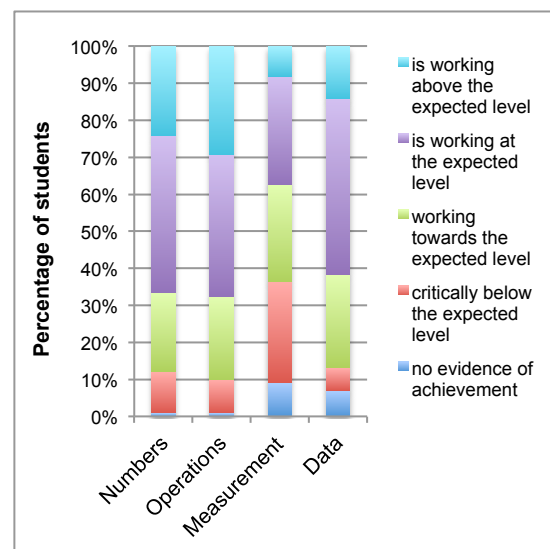


Fig 20 Year 6 numeracy component performance

Year 6 numeracy performance by district	Students in each group		
	no evidence or critically below expected level	working towards expected level	working at or above expected level
Total	297 (15%)	587 (30%)	1052 (54%)
Central	30 (13%)	79 (34%)	123 (53%)
North	61 (16%)	117 (30%)	215 (55%)
South	50 (19%)	83 (32%)	128 (49%)
Linnux	44 (22%)	66 (33%)	93 (46%)
South Tarawa	112 (13%)	242 (29%)	493 (58%)

The performance of students in South Tarawa is better than for the other districts. This is a change from 2013. Schools in South Tarawa undertook two similar numeracy tests at the end of each Term.

Their enhanced results may be attributable, at least in part, to familiarity by the students with the testing process and question style used in these numeracy tests.

Analysis of the proportions achieving the expected standard by gender shows that girls performed better than boys in the test. This is a consistent pattern that has been seen in every STAKI test.

The spread of achievement for each gender is shown in Fig 21. The variation in performance between the boys and the girls is significant.

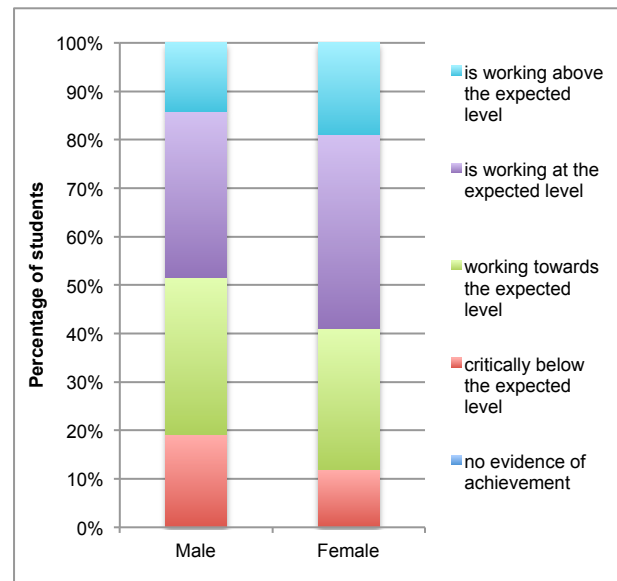


Fig 21 Year 6 numeracy performance by gender

General Observations

- The percentage of students achieving the expected overall standard in numeracy at Year 6 has increased dramatically to 54% of students from 20% in 2013.
- 85% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level.
- Skills in measurement, especially use of rulers and analogue time faces are the most in need of development. This is the same as was observed in 2013.
- Students in South Tarawa performed better in comparison to their peers in other districts.
- Girls continue to perform better than boys. The gap between the two groups has remained steady since 2013.

2.8 Year 8 Numeracy

Students in Year 8 are in the second year of the three year Junior Secondary curriculum. This is the first time in many years that a numeracy test has been held for all students in Year 8. There is an Mathematics examination held at the end of Year 9. It is one of the compulsory components of the Junior Secondary Certificate examinations that mark the end of compulsory education in Kiribati.

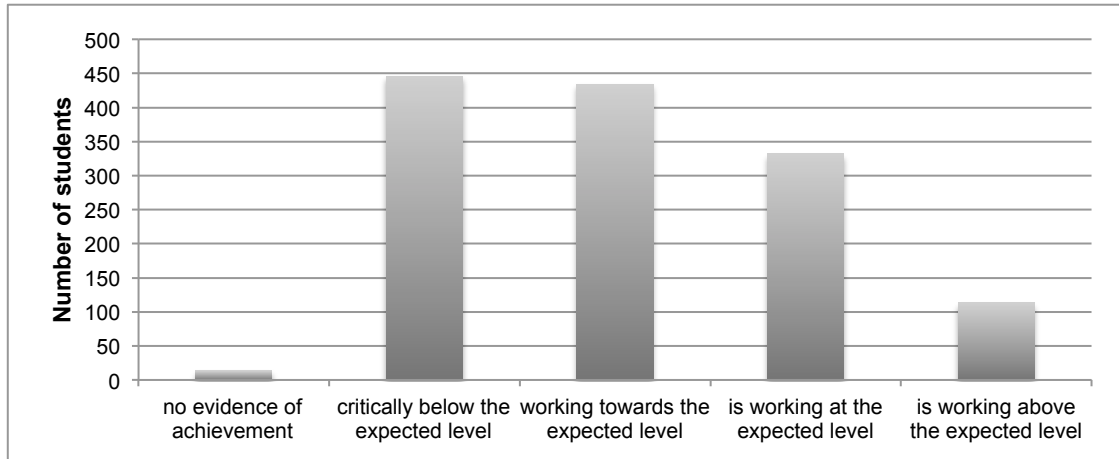


Fig 22 Year 8 2015 Numeracy overall performance

The majority of students tested are not demonstrating the level of numeracy skill which is expected of all students at the end of year 8. Only 445 (33%) of students are working at or above the expected level.

The results are not surprising as student performance in the Year 9 Mathematics exams shows a similar pattern. Of the 2034 students who sat the Year 9 exam in 2015, only 540 student (27%) achieved a raw mark of 50 or better out of 100 possible marks.

The test focussed on five core components of numeracy:

- problem solving,
- operations,
- measurement,
- geometry, and
- data.

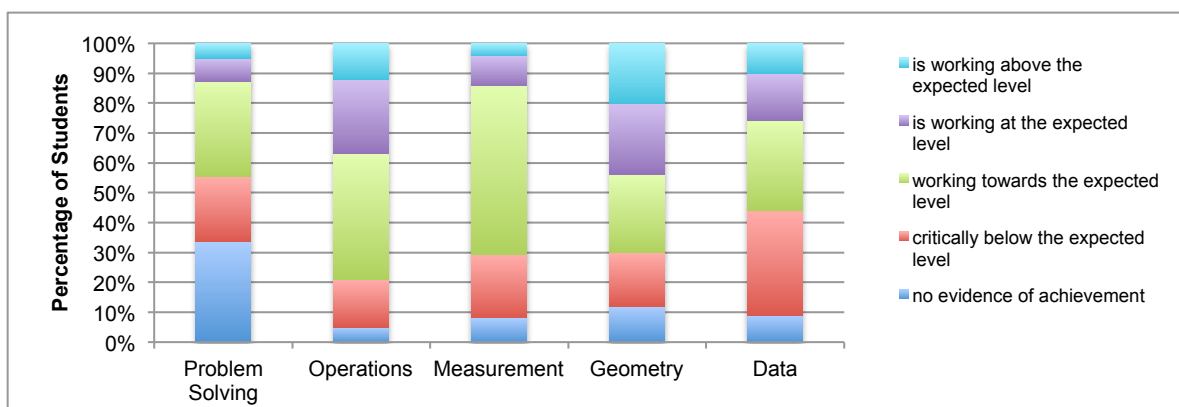


Fig 23 Year 8 2015 numeracy component performance

The deficiencies identified in this group of students in the STAKI 2013 National Report p13 (when they were in year 6) show that the same weaknesses have continued through Years 7 and 8.

Skills in measurement and geometry appear to have not developed at the pace that is expected.

Students continue to struggle with problem solving tasks. These involve problems described (in English) using words and only 13% of students are competent at dealing with them. It is very likely that the poor English skills of the students impede their ability to understand the actual tasks as the actual mathematical operations were straight forward.

	Students in each group		
	no evidence or critically below expected level	working towards expected level	working at or above expected level
Total	460 (34%)	434 (32%)	445 (33%)
Central	59 (34%)	55 (31%)	61 (35%)
North	61 (26%)	86 (37%)	87 (37%)
South	68 (30%)	79 (34%)	82 (36%)
Linnux	45 (31%)	50 (34%)	50 (34%)
South Tarawa	227 (41%)	164 (29%)	165 (30%)

South Tarawa stands out as the poorest performing district.

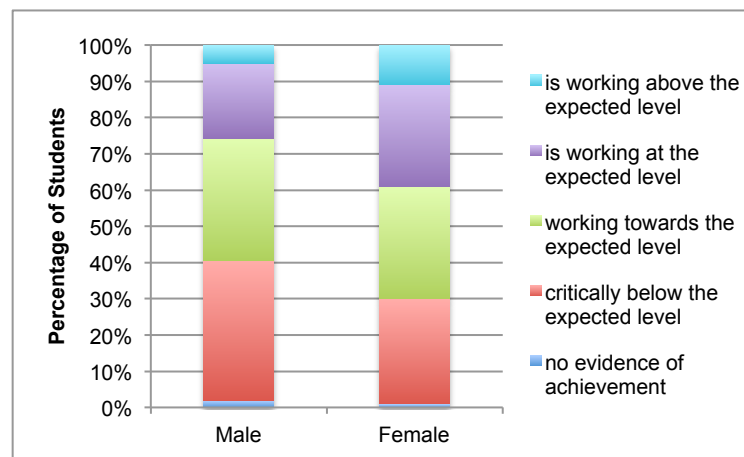


Fig 24 Year 8 numeracy performance by gender

Girls performed better than boys in the test. This is a consistent pattern that has been seen in every STAKI test and JSC examination.

The spread of achievement for each gender is shown in Fig 24. The variation in performance between the boys and the girls is statistically significant.

General Observations

- Only 66% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level. 34% are not coping with classroom material and being completely 'left behind'.
- Only 33% of students are working at or above the expected level of achievement
- Skills in measurement and data are the most in need of development. This problem was previously observed in the same cohort of students when they were in Year 6 in 2013.
- Students in South Tarawa are performing poorly in comparison to their peers in other districts.
- Girls perform better than boys, although the variation is not as marked as in literacy

2.9 Overall Test Observations

The proportion of students meeting the expected standard since the 2007 test is shown in Table 10 below.

Year 4	English	Te Kiribati	Numeracy
STAKI 2015	27%	42%*	78%*
STAKI 2013	31%	59%	27%
PILNA 2012	16%		40%
STAKI 2011	29%	62%	38%
STAKI 2009	39%	60%	30%
STAKI 2007	27%	53%	22%

Year 6	English	Te Kiribati	Numeracy
STAKI 2015	37%*	55%	54%*
STAKI 2013	23%	50%	20%
PILNA 2012	23%		34%
STAKI 2011	22%	60%	18%
STAKI 2009	32%	56%	16%
STAKI 2007	14%	49%	17%

Year 8	English	Te Kiribati	Numeracy
STAKI 2015	20%	73%	33%

Table 10. Percentage of students demonstrating achievement at the expected standard 2007 -2015

The results from the numeracy tests indicate a major improvement in student performance at the primary school level.

Primary school literacy is less conclusive, with English stable in Year 4 and improving in Year 6. Te-Kiribati appears stable in year 6 and has declined in Year 4, however there were significant variations between the 2015 test and earlier tests.

Year 8 results are consistent with the comparable JSC examinations.

*Note ** The student results of the four tests that were also a part of the PILNA programme have been analysed using standards and expectations set locally. At the time of preparation there was no information available about the expected standards that will be applied by EQAP in their analysis. Accordingly, it is very likely that figures published as a part of the PILNA report will differ from those in this report.

3. Findings

The following issues stand out and need to be considered by policy-makers and other stakeholders -

Girls perform better than boys in all tests. In te-Kiribati, where comparisons were technically possible, Year 6 girls are performing at levels similar to Year 8 boys.

A larger proportion of student enrolments were present for the tests than in 2013. Year 4 attendance increased by 13% as it went from 76% in 2013 to 89% in 2015. Year 6 improved from 79% to 88%. This suggests that daily attendance is improving.

English literacy

- In year 4 at 27% there has been little change in the percentage of students achieving the expected overall standard however, 70% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level.
- the proportion of very weak student performances in Year 4 has declined. This may reflect improved classroom engagement resulting from improved curriculum and pedagogy; an improved attitude towards and familiarity with testing or a combination of those and other factors.
- In Year 6 the percentage of students achieving the expected overall standard has increased to 37% of students from 21% in 2013 and 81% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level.
- In Year 8 only 20% of students are working at their expected level and just 56% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level.
- skills in understanding and interpreting written texts, including instructions, are the most in need of development.

Te-Kiribati literacy

- at 42% there appears to have been a decline in the percentage of students achieving the expected overall standard in Year 4 te-Kiribati literacy since 2011.
- There has been improvement in the percentage of Year 6 students demonstrating both minimal and acceptable levels of performance between 2013 and 2015.
- reading comprehension continues to be the biggest weakness in Year 6, however shows marked improvement by Year 8.
- By the end of Year 6, 55% of students are performing at the level expected for the end of primary school. By Year 8 72% of students are performing at or above the same level.

Numeracy

- In year 4 the percentage of students achieving the expected overall standard in numeracy at Year 4 has increased dramatically to 78% of students from 26% in 2013. Furthermore, 95% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level.
- In Year 6 the percentage of students achieving the expected overall standard in numeracy at Year 6 has increased dramatically to 54% of students from 20% in 2013. 85% of the students are working at a level that can be considered to be 'minimally acceptable' for their year level.
- In Year 8 only 33% of students are working at or above the expected level of achievement. A further 34% are not at all coping with classroom material and being completely 'left behind'.
- Skills in measurement and data are the most in need of development. This issue was also identified in the 2013 report.

Appendix 1. Overall Achievement Levels

The overall achievement level (L0 - L4) for each student test result was determined using the following set of rules -

Minimum profile of levels in each component of the test				
Number of components in tests	Level 1	Level 2	Level 3	Level 4
3 components	1 x L1	2 x L2 1 x L1	2 x L3 1 x L2	2 x L4 1 x L3
4 components	1 x L1	2 x L2 2 x L1	2 x L3 2 x L2	2 x L4 2 x L3
5 components	1 x L1	3 x L2 1 x L1	2 x L3 2 x L2 1 x L1	2 x L4 2 x L3 1 x L2
6 components	1 x L1	3 x L2 2 x L1	3 x L3 2 x L2 1 x L1	3 x L4 2 x L3 1 x L2

Table 11. Requirements for overall levels

For example, Year 6 te-Kiribati literacy has 5 components -

- listening,
- vocabulary,
- reading comprehension,
- grammar and
- writing.

Appendix 2. Example of summary reports provided to schools

The report below is an example of one page of the reports provided to each school. Schools also receive details of their individual students' performance. Schools are expected to use the information to inform their School Improvement Plans.

