From: Mandy McGirr < Mandy.McGirr@education.govt.nz>

Sent: Wednesday, 8 February 2023 11:58 AM

To: MaryJane Parker; Melissa Mead
Cc: Miriam Bookman; Aleeshea Reid

Subject: CAA Reading & Writing review feedback

Categories: Contractors Group meeting

Kia ora korua

The reviewer feedback from Reading and Writing CAAs will be saved onto the NZQA Sharepoint feedback space within the next few hours. There's one Reading feedback document and one Writing document. I'll ask Karen to email confirmation when she has saved the documents.

To keep you looped in, note that Miriam also emailed Sue Chalmers the high level feedback copied below (blue font) with suggested next steps. It reiterates key points that are included in the more detailed two Word documents that are being saved to NZQA Sharepoint.

Ngā mihi Mandy

Wave now uploaded all of our feedback except for Margaret's and Ākonga Māori on the literacy assessments due to access issues. We'll have this uploaded by COP today. I want to give you a heads up on some of that feedback, because this feeds into my previous point re. addressing some of our previous concerns. While I very much acknowledge that we may have differing views on aspects of assessment construction, we still at the very least need to have a conversation about these components and understand the expert evidence that NZQA is relying on to justify assessment design decision. The response we got to our assessment brief did not have substantive responses so we still feel we need more information here as this hasn't occurred in the intervening period.

Some key points we'll be raising about the literacy assessments:

- 1. We want to make sure we are being tight about ensuring evidence being asked is well within scope of the standard. We have some suggestions where we don't think this is the case.
- 2. Where there may be questions/ambiguities in the standard, then we are keen to have a conversation in case it's a matter of reviewing the standard (ie. we'd like to discuss where we think this might be the case)
- 3. Writing:
 - a. With regards to the writing assessment, it's been difficult to review without the rubric. Can we please see this?
 - b. Margaret's advice is that task three isn't necessary. I'm keen to understand the rationale for needing to include it. I suspect this will come down to the marking rubric ie. whether students can meet the evidence requirements of the standards in the previous questions and task 3 is an additional opportunity or whether students have to have evidence in both.
- 4. Reading:
 - a. We have concerns regarding readability (also traversed in the previous assessment brief)
 - b. We think the use of low frequency words needs to be limited in the assessments. This seems to be a particular issue for the first CAA for reading.
- 5. Our review means we are far more comfortable with the first CAA for reading than the second. We therefore suggest using the second CAA for the first assessment event so there is more time to refine/review the first CAA.

Can I please suggest that we set up a meeting in the next week or so with the relevant people on both ends, so that we can understand how NZQA is responding to the feedback for literacy. I'm keen to know what is possible, what NZQA disagrees with (and why) and what might need to otherwise be dealt with changes to the standard.

Dr Mandy McGirr | Senior Advisor (Contract) Te Poutāhū (Curriculum Centre)

Mobile National Office 1 The Terrace

education.govt.nz

He mea tārai e mātou te mātauranga kia rangatira ai, kia mana taurite ai ōna huanga We shape an education system that delivers equitable and excellent outcomes



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Purpose: A briefing on the upcoming literacy & numeracy | te reo matatini me te pāngarau pilot assessment results

Topic: Literacy & numeracy | te reo matatini me te pāngarau pilot assessment results

Date: 19 SEPTEMBER (updated 12 October)

Business owner(s): NCEA Change Programme and NZQA

Introduction

In May 2022, the Ministry released the results of the 2021 literacy & numeracy | te reo matatini me te pāngarau pilot assessment results <u>online</u> and an evaluation report was released to a requestor under the Official Information Act. There was widespread media and sector interest in New Zealand's literacy and numeracy results, and because the pilot results were – as expected – impacted by COVID-19 and the small sample size, the results showed lower levels of literacy and numeracy achievement than many expected.

There are two assessment events this year: the first was held June 27 to July 1 for New Zealand and July 11–15 for Realm Countries, and the second one was held at the end of Term 3. In August, NZQA provided us with the assessment results from the first literacy & numeracy | te reo matatini me te pāngarau pilot assessment event of 2022, alongside some high-level information about the assessment. We want to proactively release this information to the wider Ministry and general public, as doing so will allow us to provide context around any narratives that emerge and encourage further sector focus on supporting ākonga to achieve the NCEA corequisite requirements for literacy and numeracy | te reo matatini me te pāngarau.

The results release will include some early actions that the Ministry and NZQA will take in response to what we have heard from pilot participants and wider stakeholders this year. We will also be releasing:

- a. an evaluation report following the first assessment event (we have attached a draft version to this briefing note).
- b. the Common Assessment Activities from the first assessment event this year.
- c. assessment reports from assessment event one that talk through the strengths and weaknesses of the pilot cohort.
- d. further information for schools and kura on transition arrangements and administering the standards next year.



Key messages

Changes to NCEA will directly assess students on the foundational skills required for learning, life and work

• Literacy, numeracy, te reo matatini, and pāngarau are important foundational skills for learning, life, and work, and it's essential that we support our young people to develop these skills. Developing these skills are fundamental to addressing inequity in the education system and life opportunities for learners.

The Ministry of Education and NZQA are piloting the new standards this year, and next year so that schools have an opportunity to test the standards

- The Ministry of Education and NZQA are piloting the new standards and assessments so that the assessments can continue to be refined and improved.
- The pilots help us to improve the standards and assessment. They also help us to understand how best to support schools and kura with the implementation of the new standards.
- In the first assessment event in 2022, more than 16,000 students across more than 180 schools and kura took part in the assessments. Most of these students will have been engaging with the new standards and assessment for the first time. This has given the Ministry of Education and NZQA an opportunity to gather feedback and ensure the new NCEA literacy and numeracy co-requisites are clear, equitable, valid, and robust.
- The results show that system change is needed, and we must continue to support the sector with implementation. We are carrying out a thorough evaluation of the pilot that will tell us more.
- In the interim, NZQA and the Ministry have identified steps we can take now to improve the assessment experience.

The Ministry of Education and NZQA are supporting the sector with changes

- To help with this transition, we have created a range of resources and support for schools and kura that are available online.
- The newly released materials include teaching and learning guides, subject specific guides, assessment reports, learning matrices/standards, and example Common Assessment Activities.
- New resources and tools build on existing readiness tools that schools and kura can use
 to prepare for the changes, including the e-Assessment for Teaching and Learning Tool
 (e-asTTle), Progress and Achievement Tests (PATs), and the Learning Progression
 Frameworks (LPFs).
- Additional resource has also been provided to Ministry of Education regional offices to support literacy, numeracy, te reo matatini, and pāngarau in schools and kura. Schools and kura can also seek additional support through the Government's loss of learning package, which has a focus on literacy, numeracy, te reo matatini, and pāngarau.

 Alongside the new NCEA literacy and numeracy co-requites, the Ministry also recently launched a series of literacy, communications, and maths actions plans as well as Hei Raukura Mō te Mokopuna.

Students will have further opportunities to achieve

- Students will have had a further opportunity to achieve the standard though another pilot in September and will have further opportunities to achieve the corequisite in 2023 and beyond. They will also be able to meet the NCEA Literacy and Numeracy requirements through the current pathways until the end of 2023.
- Students in all schools will be able to use the standards in 2023 as part of the transition year, and the new co-requisite will be mandatory in 2024.

Inclusive design

- It is important that the standards and assessments are inclusive and that we also support all NCEA learners to make progress in literacy, numeracy, te reo matatini, and pāngarau.
- To do this, we are ensuring that the standards and assessments are designed through a
 Universal Design for Learning lens and that they include contexts and questions that
 empower Māori and Pacific learners. They also include inclusive features such as text to
 speech functionality.
- We are also looking at the wider assessment settings to ensure we've got this right for Deaf and Hard of Hearing Learners, English Language Learners, and students with dyslexia and dyspraxia. This includes looking at the Special Assessment Conditions available are appropriate and whether changes are needed.

Further background material

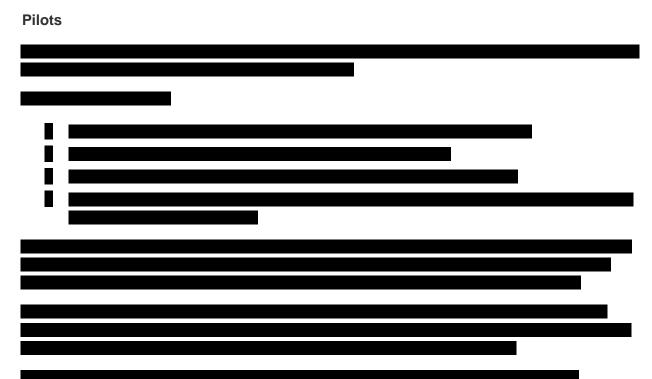
New standards

New standards for NCEA literacy and numeracy | te reo matatini me te pāngarau directly assess foundational literacy and numeracy | te reo matatini me te pāngarau and are part of a comprehensive package of changes being made to strengthen NCEA.

Developing new standards has provided an opportunity to clarify expectations for the foundational skills that support students in their next steps. The standards sit at Curriculum Level 4/5 and are pitched at students who have full control of Level 4 and are ready to work at Level 5. In determining this level, experts looked at the level defined by the international benchmark – the OECD Survey of Adult Skills (PIAAC) – and levelled this with National Curriculum measures The standards have been produced alongside supporting materials that clarify this, such as learning matrices and an unpacking document. These materials are all available on NCEA.Education.

Clarifying the standard of foundational literacy and numeracy also means current curriculum, progress, and assessment tools can be used by teachers and students to understand learners and their next learning steps. For example, tools such as Progress and Consistency Tools

(PATs), e- Assessment for Teaching and Learning Tool (e-asTTle), and the Learning Progression Frameworks (LPFs) can be used to gauge learner readiness.



Learner readiness

The intention of the changes is that students enter assessments when they are ready. This can be at any point along their NCEA journey as the standards are a corequisite to the qualification, not a prerequisite.

Most learners who sat the first assessment event this year were in Year 10, as many schools entered full cohorts to test out the assessment (including assessment logistics). This means that:

- learners who did not achieve one or more of the assessment activities will have further
 opportunities to achieve the literacy and numeracy requirements for NCEA, either
 through the current methods before the end of 2023, or through further opportunities to
 achieve the corequisite
- learners who will be working towards NCEA once the corequisite is fully implemented, mostly those in year 9 or below this year, will have a number of years to prepare for and achieve the corequisite
- the achievement results of the pilot are not indicative of future NCEA attainment due to the multiple opportunities that students will have to complete the assessments.

Having said this, the results also speak to the challenge of literacy and numeracy learning in New Zealand. There is work to be done to support lifting achievement across the learning pathway for literacy and numeracy | te reo matatini me te pāngarau.

New materials

Schools and kura can continue to prepare for the changes by engaging with newly released materials on the NCEA Education website, including teaching and learning guides, subject specific guides, learning matrices/standards, and example Common Assessment Activities and assessment reports. Support has also been provided for Accord Teacher-Only Days to allow schools and kura to focus on what is needed to prepare for the change. More resources will be released across 2022 and 2023.

We have had positive engagement with the materials that we have provided to the sector, including:

- effective practices for literacy and numeracy in the classroom
- how to create strong relationships for success in literacy and numeracy
- how curriculum progress and assessment tools can support evaluating learner readiness
- subject specific guidance across learning areas to support literacy and numeracy
- instructional videos for te reo matatini me te pāngarau
- past Common Assessment Activities
- assessment reports that highlight relative areas of strength and weakness across the student cohort.

Transition year 2023

In 2023, schools will be able to voluntarily use the new literacy and numeracy unit standards, so those that wish to prepare for the changes by using the new standards are able to do so. That is, students will be able to meet the literacy and numeracy | te reo matatini me te pāngarau requirements of the qualification through the current requirements *or* through the new requirements. There will be a full roll out of the new standards in 2024.

Communications narrative

A comprehensive set of changes is being made to NCEA including changes to strengthen the assessment of foundational skills of literacy, numeracy, te reo matatini me te pāngarau.

This change is aimed at supporting young people to have the skills required to transition into tertiary education or the workplace and contribute to their communities. Raising literacy, numeracy, te reo matatini, and pāngarau capability is critical to addressing inequitable outcomes for learners.

Pilots have been a key part of preparing the education sector for these standards, and there will be more opportunities to use the standards in 2023 as we transition to full implementation in 2024.

The pilots are allowing us to refine and improve the standards and assessments, so they are clear, equitable, valid, and robust. The pilots also allow us to better understand how we can support the teaching and learning of literacy and numeracy | te reo matatini me te pāngarau.

In 2022, schools and kura have had two opportunities to participate in a pilot for the new standards in two assessment events. The first assessment event was held between June 27 and July 1, and the second one took place between 19 and 23 September.

We have released the cohort results from the first assessment event this year. They reflect mixed achievement across these standards.

It is important to note that the results do not necessarily reflect school leaver qualification attainment. Students will have a number of further opportunities to pass the assessment throughout their NCEA programme. The intention is for teachers to enter students when they are ready, but many full cohorts were entered, as schools, teachers, and students build an understanding of the standards and assessment.

The pilot results also show that there is work to be done to lift teaching and learning for literacy, numeracy, te reo matatini, and pāngarau.

We are already doing this in a number of ways, and more work will take place as we embed the strategies and action plans as part of *The Literacy, Communications, and Maths Strategy* and *Hei Raukura Mō Te Mokopuna*.

Right now, we have a range of resources and on literacy and numeracy | te reo matatini me te pāngarau on NCEA. Education, including effective practices and subject-specific guidance on

these skills, and will be releasing more soon. Additional investment has also been allocated to our regional offices, who have recruited additional expertise to help schools and kura to prepare for the changes.

In 2023, schools can voluntarily opt-in to use the new standards, and students will be able to meet the literacy and numeracy | te reo matatini me te pāngarau requirements of the qualification through the current requirements *or* through the new requirements. 2023 will be a crucial year for schools and kura to engage in the assessment and strengthen teaching and learning practice to support young people.

The Ministry and NZQA are also carrying out a thorough evaluation of the pilot that is taking into account feedback from pilot participants and an analysis of the results. We have released the first evaluation report that looks that the first of two assessments in 2022.

The Ministry and NZQA have already agreed on a number of actions that will support the implementation of the standards, including exploring ways to provide individualised feedback to students, publishing the assessment paper from the first 2022 assessment event, reviewing the construction of assessment items, examining the levelling of the assessment items, and strengthening guidance for Special Assessment Conditions.

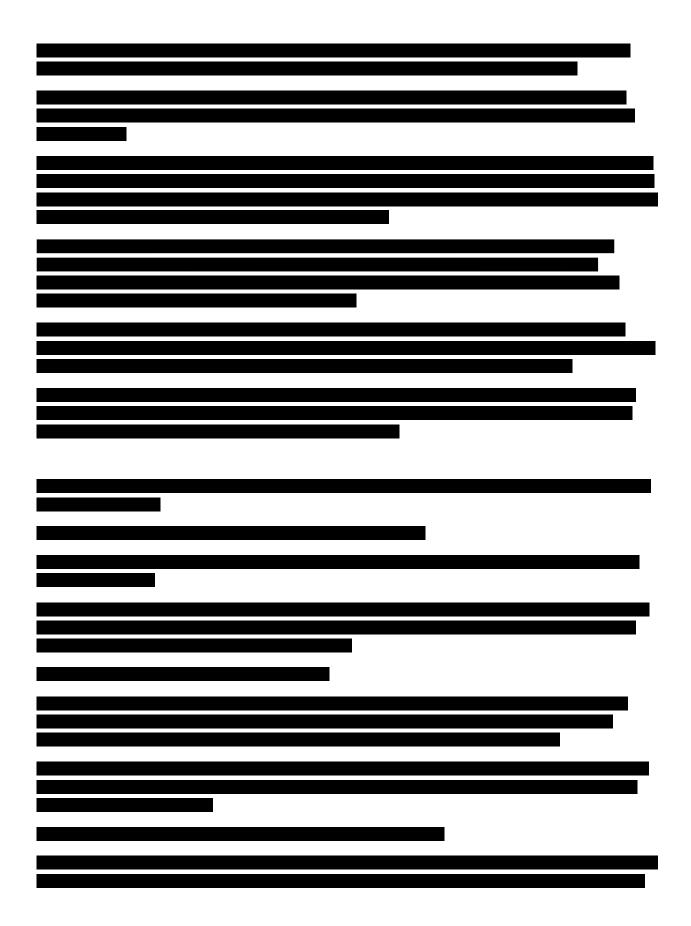


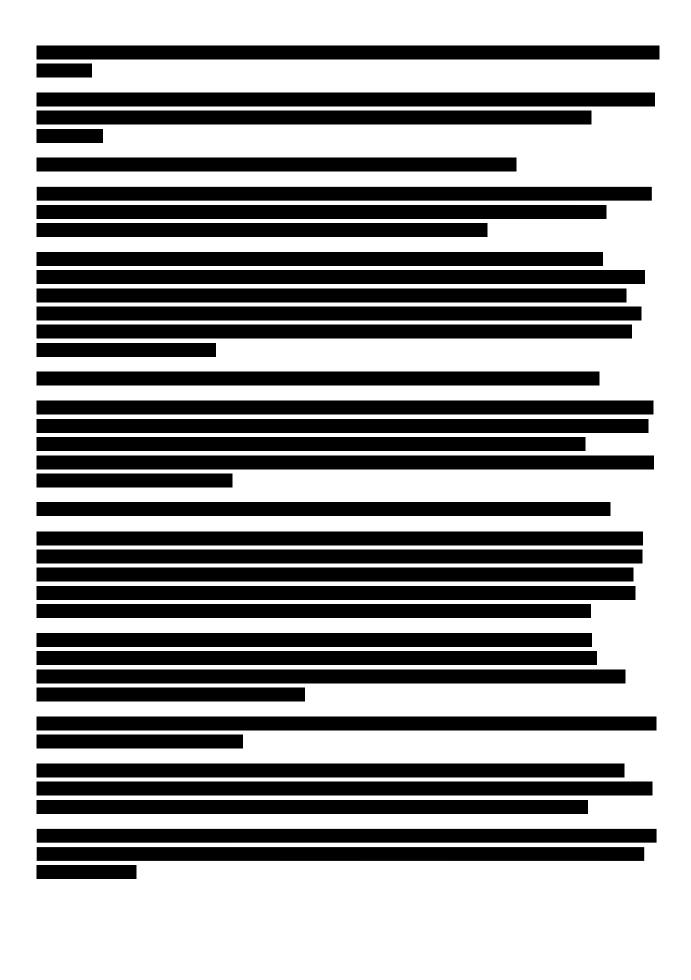
Communications issues and concerns



Appendix – Communications products

- 1. 2. 3. 4





What is the Ministry and NZQA doing now to improve the assessments for the standards?
The Ministry and NZQA are carrying out a thorough evaluation of the standards and assessments to ensure that they are inclusive, robust, and valid. The findings of this evaluation will inform any changes to the standards and the assessments going forward. In the interim, there are actions that NZQA and the Ministry are taking now to strengthen the assessments going forward. This responds to key themes that we have heard throughout the pilot year from participants.

What level are the standards at?

The standards are at Level 4/5 of the National Curriculum. This is when a student has full control over level 4 and is ready to work at Level 5. To determine the level of the standards, we sought expert advice from two Technical Advisory Groups in in 2018, one for literacy and numeracy, and one for te reo matatini me te pāngarau. This level reflects what is internationally recognised as the foundational skills required to support learning life and work. Experts looked at the level defined by the international benchmark – the OECD Survey of Adult Skills (PIAAC) – and levelled this with National Curriculum measures. We expect that students will build on these foundations throughout their NCEA journey and in life.

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Re the vocabulary and reading levels, and the number of texts in the literacy reading assessment.

After the MOE / NZQA meeting (28/2/23) to discuss the 2023 literacy assessments, we decided to look at similar assessments from two other jurisdictions.

Below is a comparison of the term one NZQA reading assessment with one literacy assessment from Australia and one sample assessment from British Colombia. The assessments from Australia and BC target year / grade 7.

The comparison suggests that the NZQA assessments are aligned to 'like' assessments.

Recommendation: That we meet to discuss further (as agreed at initial meeting). Gen Slack is happy to schedule this.

AOTEAROA NEW ZEALAND. NZQA READING 1 (2023). 60 (plus) minutes with 35 questions

TEXT ID		тне тех	СТ	QUESTIONS
	WORD LENGTH	READABILITY GRADE	LEX VOCAB- Off list %	VOCAB- Off list %
1 blog	384	8	23 (14 without Pasifika names)	13
2 volcano	275	7	11	17 (terms explained in text)
3 ruby	342	9	8	9
4 eels	368	6	12	8
5 singers	345	7	10	10
6 kiwi	365	9	16	13
7 teens	388	12 (11 without names)	21 (12 without names)	3 (without names)
8 advert	251	7	14	4

AUSTRALIA. NAPLAN YEAR 7 (2016). 65 minutes with 50 questions

TEXT ID	THE TEXT			QUESTIONS
	WORD	WORD READABILITY LEX VOCAB- Off list		VOCAB- Off list %
	LENGTH	GRADE	%	
1Penguins	183	6	16	16
2 Animals	123	8	4	3
3Antarctica	257	10	11	11
4 Stranger	355	9	14	13
5looking back	399	7	9	10
6 Electric car	319	10	11	8
7 trash	281	11	9	6
8Antonio	479	11	14	13

BRITISH COLOMBIA (Foundation Skills Assessment) GRADE 7. 60 minutes with 30 questions						
TEXT ID		READABILITY GRADE	LEX VOCAB- Off list %			
	683 (and diagram-complex)	7	16			
2 Real life Blood Suckers	1050	7	18			
3 Culture by design	614	9	14			
4 Making Bannock	726	6	10			
5 Bogeyman	932	7	15			

Links to BC and Australian grade 7 / year 7 assessments.

https://acaraweb.blob.core.windows.net/acaraweb/docs/default-source/assessment-and-reporting-publications/e3-naplan-2016-final-test-reading-magazine-year-7-(redacted-name-on-page-7).pdf?sfvrsn=2

https://www2.gov.bc.ca/assets/gov/education/administration/kindergarten-to-grade-12/assessment/gr7-fsa-sample-literacy-en.pdf

Summary

Assessment	No. of Grade 6 texts	No. of Grade 7 texts	Grade 8		Grade 10 texts	No. of Grade 11/12 texts	Total no. of questions	of words
NZQA Reading 1 2023	1	3	1	2		1	35	2718
NAPLAN	1	1	1	1	2	2	50	2396
British Columbia	1	3		1				4005 (plus the text in a diagram)

Grade 6 = 10–11-year-olds

Grade 7= 11–13-year-olds

Grade 8= 12–14-year-olds

Grade 9= 13–15-year-olds

Grade 10= 14–16-year-olds

Grade 11= 15-17-year-olds

Grade 12= college

Link to BC Grade 10 literacy sample assessment (interesting to look at in terms of progression expectations). Equivalent of our year 11 (NCEA level 1).

https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/assessment/grade-10-literacy-sample-a.pdf

References for the literacy standards

Links to LPF Reading and Writing.

https://assets.curriculumprogresstools.education.govt.nz/public/Uploads/Big ideas reading framework-v2.pdf

https://assets.curriculumprogresstools.education.govt.nz/public/Uploads/Big ideas writing framework-v2.pdf

Link to ELLP

https://esolonline.tki.org.nz/ESOL-Online/Planning-for-my-students-needs/Professional-support-for-teachers-and-teacher-aides/English-Language-Learning-Progressions

Link to Exemplar Matrices (NZC)

https://assessment.tki.org.nz/Media/Files/Exemplar-PDFs/Matrices

Link to Step 4 (Learning Progressions for Adult Literacy)

https://ako.ac.nz/assets/Knowledge-centre/ALNACC-Resources/Learning-progressions/ALNACC-Background-Learning-Progressions-for-Adult-Literacy.pdf

Some curriculum links:

National Standards (now archived)

https://nzcurriculum.tki.org.nz/Archives/Assessment/Reading-and-writing-standards/The-standards/End-of-year-8

National Curriculum England

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment data/file/381344/Master final national curriculum 28 Nov.pdf

From: Susan Henry

Sent: Thursday, 17 November 2022 11:11 AM

To: MaryJane Parker; Sue Chalmers

Cc: Kevin Hoar
Subject: RE: EM Lit Num

With reading there is a template that writers use – the tracking of outcomes is done on a spreadsheet as work progresses.

It's not quite as simple as 'suggesting suitable texts' – the text must allow for specific types of questions linked to specific outcomes.

I can meet (within NZQA) to share / discuss the template. I would prefer this to be the week after next when I am back in Wellington – but sometime next week could be okay.

Sue

From: MaryJane Parker < MaryJane. Parker@nzqa.govt.nz>

Sent: Thursday, 17 November 2022 10:44 AM **To:** Sue Chalmers <Sue.Chalmers@nzqa.govt.nz>

Cc: Susan Henry <Susan.Henry@nzqa.govt.nz>; Kevin Hoar <Kevin.Hoar@nzqa.govt.nz>

Subject: RE: EM Lit Num

Thanks Sue. Kevin and Sue let me know if you want a meeting within NZQA and I will organise if you indicate when you are free.

Regards Mary Jane

From: Sue Chalmers < Sent: Thursday, 17 November 2022 10:40 AM

To: MaryJane Parker < MaryJane.Parker@nzqa.govt.nz>

Cc: Susan Henry < Susan. Henry@nzqa.govt.nz >; Kevin Hoar < Kevin. Hoar@nzqa.govt.nz >

Subject: RE: EM Lit Num

Hi Mary Jane,

Yes, we have had discussions, although I wouldn't say we have reached agreement yet. The level of involvement is still under discussion. Miriam did agree that Margaret and Karen are not part of the development teams.

What we have agreed though, including with Sue and Kevin, is that we will share the blueprints with Margaret and Karen when the development teams have completed a draft. Bottom line is, we have to have a "product" to discuss with them.

I am very happy for Margaret to suggest some suitable texts for the development team to consider. Sue, you may find a convenient way to share the proposed texts with Margaret before you get too far down the track with developing the questions. Do they form part of the blueprint?

We have agreed to send them a copy of an early draft when it is at a stage ready for critique. At this point, Margaret and Karen can provide advice on the language used in all the assessments, not just numeracy.

I am copying this to Sue and Kevin to bring them into the loop and so we are all on the same page. At each step, we need to have something tangible for them to provide advice on. I am not sure whether a joint meeting is the best way to go – it would seem to be better use of our people's time if Sue meets with Margaret online, and Kevin meets with Karen. Then you can talk about the timelines for your respective developments. The three of you can work out whether you need/would like Mary Jane to attend, or not.

Please let me know we need to meet together before you progress this with the Ministry. I know your time is limited at present, Sue and Kevin.

Sue

From: MaryJane Parker < MaryJane.Parker@nzqa.govt.nz >

Sent: Thursday, 17 November 2022 10:05 AM **To:** Sue Chalmers < Sue.Chalmers@nzqa.govt.nz >

Subject: EM Lit Num

Hi Sue

We have just come out of a meeting with MoE. Miriam advised that she has had discussions with you and is keen to have Karen and Margaret involved in the development stage of the CAA. We advised that the draft would be with them early January, however, Miriam wants Karen and Margaret to see the blueprint asap and perhaps 'help' with choosing of texts for Literacy and looking at language use in Numeracy!! Miriam asked if I could at the very least set up a meeting with Kevin and Sue and MoE to discuss this. I am aware this is quite sensitive and we need clear parameters of what MoE's input could be at this stage of the proceedings. I have agreed to go back to Miriam with an indication of a meeting or documents being sent to them prior to the review of the first draft.

Interested to hear your thoughts.

Regards Mary Jane

Email	One
LIIIaii	One.

Kia ora Kevin,

The review of *US32406*: *Use mathematics and statistics to meet the numeracy demands of a range of situations* has come through via Phillipa Junger.

She raises two points:

Meaningful is not used in the title of the standard or outcome 3, but the phrase range of meaningful situations occurs in the purpose of the standard and in outcomes 1 and 2. There were two possible solutions to this - the word "meaningful" is removed from the standard, or the word "meaningful" is added to the title of the standard. If the word "meaningful" is added, this would require the following edits:

- 1. Title of the standard would become US32406: Use mathematics and statistics to meet the numeracy demands in a range of meaningful situations
- 2. Outcome 2: Use mathematics and statistics to meet the numeracy demands in a range of meaningful situations (Use of "in a range of meaningful situations" rather than "of a range of meaningful situations")
- 3. Outcome 3: Explain the reasonableness of mathematical and statistical responses in a range of meaningful situations (noting that outcome 3 only says "to situations" currently)

Outcome 1 states mathematical and/or statistical approaches to solving problems but the standard states use mathematics and statistics.

It is recommended that outcome 1 is edited to say *Formulate mathematical and statistical* approaches to solving problems in a range of meaningful situations.

These edits would not change the nature of the standard and remove potential confusion around phrasing as there is a consistency of wording.

Let me know your thoughts on this - I'm happy to progress this via a memo to Sue and Miriam (who is our acting Senior Manager currently) as we did for previous edits.

Ngā mihi

Karen

Karen Chow | Learning Area Lead | ELSA Secondary Tertiary Operations and Integration DDI National Office Matauranga House education.govt.nz

Melissa Mead From:

Sent: Thursday, 21 July 2022 3:51 PM

To: Sue Chalmers; Rose Cole; Nikki King; Gavin Middleton; John Berry; Jane Bambery; Denis Purdy

Subject: FW: NCEA newsletter input

Hi All,

Please see below some nice feedback from Papatoetoe High School 😊

Melissa

Melissa Mead (she/her)

Senior Project Manager | Literacy & Numeracy, Te Reo Matatini me te Pāngarau NCEA Change Programme

NZQA

Ehara taku toa i te toa takitahi, engari taku toa i te toa takitini.

125 The Terrace P O Box 160 Wellington

Melissa.Mead@nzqa.govt.nz

From: Miriam Bookman < Miriam. Bookman@education.govt.nz>

Sent: Thursday, 21 July 2022 3:47 PM

To: Melissa Mead <Melissa.Mead@nzqa.govt.nz>; Michael Clark <Michael.Clark@education.govt.nz>; MaryJane

Parker < MaryJane. Parker@nzqa.govt.nz> Subject: FW: NCEA newsletter input

FYI – I reached out to for our Curriculum newsletter, but thought you might also want to see the positive

feedback 😊

Miriam

Miriam Bookman (she/her) | Senior Manager (Acting) Secondary Tertiary, Pathways and Transitions Te Poutāhū (Curriculum Centre)

DDI

| Mobile

From:

Sent: Thursday, 21 July 2022 3:43 pm

To: Miriam Bookman < Miriam. Bookman@education.govt.nz>

Subject: RE: NCEA newsletter input

Hey Miriam

Here's a little bit from the team that ran the pilots here.

A couple of disclaimers:

- Our pilot for the first assessment window were small. Approx 30 students involved -For the first assessment window we only piloted the reading and writing, not the numeracy. In the September assessment window PHS will be doing all 3.
- We don't actually know how well the kids performed. I think results come through in mid-August.

Overall, the literacy (and numeracy, if you just wanted to include that as well) pilot was a positive experience for the students and teachers involved. The students, who are all digital natives, found the software platform very user friendly. As long as the students have their NZQA learner logins sorted prior to sitting the common assessment activities (CAA), the actual navigation through the CAA was straightforward for the students. The trickiest aspect is making sure all the students have their NZQA learner logins ready to go beforehand.

The administration of the CAA from an administrator or supervisor perspective is straightforward as long as some time has been spent navigating around assessment master, the software platform used to administer the CAA. If you have confident administrators and supervisors then minor issues can be sorted quickly and the students aren't adversely affected.

As a side note, depending on a school's infrastructure our team would recommend administering the CAA in large groups to try and cut down on the number of adults needing to learn about the software etc.

Nāku iti noa, nā



From: Miriam Bookman < <u>Miriam.Bookman@education.govt.nz</u> > Sent: Tuesday, 19 July 2022 8:44 am
To: Subject: RE: NCEA newsletter input
Kia ora
Thanks for this. Friday would be great!
Have a great week.
Miriam
Miriam Bookman (she/her) Senior Manager (Acting) Secondary Tertiary, Pathways and Transitions Te Poutāhū (Curriculum Centre) DDI Mobile

From:

Sent: Monday, 18 July 2022 5:36 pm

To: Miriam Bookman < Miriam.Bookman@education.govt.nz>

Subject: Re: NCEA newsletter input

You don't often get email from Learn why this is important

Hey

Yep. Could do. I am meeting with my SLT this Friday and will talk to DP that ran the pilots at our place. He is in right now, so might leave hime alone for a couple of days!



On 18/07/2022, at 3:08 PM, Miriam Bookman < Miriam.Bookman@education.govt.nz > wrote:



Hope that things are well for you and you are you are enjoying the school holiday.

Rob Mill has been in touch to say that he was pleased to hear some positive feedback from you on the literacy and numeracy pilot. I wondered if you wouldn't mind going on record in a Curriculum newsletter with some positive feedback about the pilot?

If so, I'd appreciate you sending a sentence or two through.

Ngā mihi

Miriam

Miriam Bookman (she/her) | Senior Manager (Acting) Secondary Tertiary, Pathways and Transitions Te Poutāhū (Curriculum Centre)

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From: MaryJane Parker

Sent: Monday, 3 October 2022 4:52 PM

To: Sue Chalmers

Subject: FW: Observation opportunities

fyi

From: Margaret Franken < Margaret.Franken@education.govt.nz>

Sent: Monday, 3 October 2022 4:50 PM

To: Susan Henry <Susan.Henry@nzqa.govt.nz>

Cc: MaryJane Parker <MaryJane.Parker@nzqa.govt.nz>; Miriam Bookman <miriam.bookman@education.govt.nz>;

Karen Chow < Karen. Chow@education.govt.nz>; Rob Mill < Rob. Mill@education.govt.nz>

Subject: Observation opportunities

Kia ora Sue

Thank you for organising the opportunity for me to observe the panel leads in their work refining the writing rubric and selecting samples of texts at different levels of achievement in relation to the rubric; and to observe the training of the markers in their use of the rubric to allocate scores to the samples.

The experience has made this part of the process very clear to me. It was also very interesting to hear the robust discussion around some of the challenges in allocating the marks.

In anticipation, thank you for agreeing to send me a copy of the rubric and associated materials by email. As discussed, I am aware that this material is confidential.

I presume the next step after the markers have returned their marks is to decide on the cut scores and to determine the point at which a candidate passes – in other words, the level that determines the standard.

I would appreciate an opportunity once again to observe this stage of the assessment process for both the reading and the writing. Arguably, this is the most important part of the process to understand.

I look forward to hearing from you and/or Mary Jane about this.

On another matter, we discussed some possibilities for changes to the standards such as allowing use of a spell checker. As well as providing some "ecological validity" in that it is what writers do in the real world, it might also be the case that it reduces the distraction of poor spelling and typos in the assessment process. There are also possible implications to consider. I'll follow this up with Miriam.

Ngā mihi Margaret

Dr Margaret Franken | Learning Area Lead TP-Te Poutāhū (Curriculum Centre)

Mobile National Office Mātauranga House

Available Monday to Wednesday

education.govt.nz

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From: Sue Chalmers Sent: Wednesday, 22 February 2023 3:56 PM To: MaryJane Parker; Melissa Mead Subject: FYI: Re Hui with Te Kōpuku High **Categories:** Contractors Group meeting From: Sue Chalmers Sent: Wednesday, 22 February 2023 3:55 PM To: Miriam Bookman < Miriam. Bookman@education.govt.nz> Cc: Aleeshea Reid < Aleeshea. Reid@education.govt.nz > Subject: RE: Re Hui with Te Kopuku High Brilliant response. Informative, sending a clear message. Very happy for you to send this. Thanks for sharing it with us. Sue From: Miriam Bookman < Miriam. Bookman@education.govt.nz> Sent: Wednesday, 22 February 2023 12:02 PM To: Sue Chalmers <Sue.Chalmers@nzqa.govt.nz> Cc: Aleeshea Reid < Aleeshea. Reid@education.govt.nz> Subject: FW: Re Hui with Te Kopuku High Kia ora Sue – apologies for the further email (although at least we are probably improving on our previously identified lack of communication!). We've received a query from below. Can you let me know if you're happy with the response we've put together? It touches on assessment so thought I would make sure you are happy with what's proposed. Miriam Kia ora

Thank you for getting in touch with us on the concerns you have regarding the NCEA corequisite assessments.

As you are aware, changes are occurring to NCEA to strengthen literacy and numeracy. This is to ensure that young people are leaving school with the foundational skills in literacy, numeracy, te reo matatini, and pangarau to support learning, life, and work. At the moment, too many learners are leaving school without these important skills.

The changes to NCEA will mean that students are directly assessed on these skills at approximately Level 4/5 of the National Curriculum. For literacy and numeracy this is through a Common Assessment Activity and for te reo matatini me te pāngarau, the assessment can take place through a Common Assessment Activity or through submitting a portfolio of evidence (kete manarua).

The Common Assessment Activity is being designed to reduce the need for Special Assessment Conditions (SAC). For example, there is no time limit for the assessments and schools/kura are able to determine how they are

administered. Schools and kura also have the flexibility when during the assessment week the CAAs are administered determine the allocation of students in classrooms and who is supervising/administering the assessments. This means, for example, that if a student needs a quiet room with a familiar face to supervise the assessment, this is possible. NZQA is also running a trial of text to speech technology for the writing and numeracy assessments which will provide a further accessibility support.

For those students who may need further Special Assessment Conditions beyond this (as you've mentioned), schools and kura will not have to seek approval from NZQA to administer this.

In addition, the Common Assessment Activities themselves are being developed with an accessibility lens across them. For example, ensuring that the assessments are underpinned by Universal Design for Learning principles. Examples of this being applied include ensuring questions are asked in an accessible and user friendly way and that flow and formatting of the online platform is accessible and user friendly.

These settings are in place to ensure that students who are working at Level 4/5 of the National Curriculum for literacy, numeracy, te reo matatini, me te pāngarau, are able to achieve the standards.

We have also considered alternative forms of assessment through our design process (for example portfolio) for the literacy and numeracy assessments, but have discounted this on the evidence that to do portfolios at scale, there would need to be significant capability building to ensure that portfolios reflected the outcomes of the standards. We would otherwise risk disadvantaging learners who opted for portfolio assessment to meet the criteria of the standards.

We would be more than happy to discuss these matters further with you. If you let us know your availability we would be happy to set up an online call.

NI	~	m	ш	h

Miriam

Miriam Bookman (she/her) | Senior Manager (Acting) Secondary Tertiary, Pathways and Transitions Te Poutāhū (Curriculum Centre)

DDI Mobile

From:

Sent: Tuesday, 14 February 2023 8:37 am

To: Rebecca Early < Rebecca. Early@education.govt.nz >

Cc: Maehe Paki < Maehe.Paki@education.govt.nz >;

Subject: Re Hui with Te Kōpuku High

You don't often get email from

Learn why this is important

Mōrena Rebecca,

RE EQUITY ISSUE AND THE NEURODIVERSE

We wish to be proactive in ensuring that the new NCEA co-requisites do not penalise the neurodiverse. Our take on things at present is that without NCEA corequisites for literacy/reo matatini and numeracy/pāngarau, the neurodiverse are at high risk of not achieving the NCEA qualification.

Our concern extends to other learners and we suspect that Māori learners in general will be negatively impacted by the changes.

We are a kura that has taken full advantage of the flexibilities provided by NCEA to ensure all learners can evidence their learning in a range of ways that play to their strengths.

Not requiring submissions to NZQA for Special Assessment Conditions (SAC) does not really address the issue.

One of our staff members was on the HIgh Needs Review team that recently completed its work for Minister Tenetti. Despite strong advocacy from herself and other Māori and Pacifica members for Māori and Pacifica and the neuro-diverse, she came away highly disappointed that anything significant will change for these groups of learners.

We are keen to understand what we as a kura and what the Ministry can do further to address this inequity issue

Ngā mihi



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From: Sue Chalmers

Sent: Friday, 1 July 2022 2:59 PM

To: Miriam Bookman
Subject: FYI: LitNum Update

Kia ora Miriam,

I just wanted to share some internal feedback with you. This week has been a great success. As of this morning, we have had about 28,000 students complete the assessments. The team at NZQA supporting schools in delivering the assessments has worked tirelessly to make this work for students and their teachers, and it has paid off. We have been brave and courageous in our approach to this assessment and have reaped the rewards.

We still have a lot of work to do, but for now, we will celebrate this significant success.

Please see the comments from schools at the bottom – these are in stark contrast to what report on earlier in the week.

We will get more analysis and feedback in the coming weeks, but these are some comments we've received from schools/kura so far:

"The overall judgement from my students so far was this was an extremely positive experience for them. They are some of the highest risk students in the school. These kids are some of the most difficult kids cognitively and behaviourally and I'm actually really excited about this assessment because it's something they ALL can access and there's no gate-keeping around it. They're asking me really high-level questions and have been really engaged with the whole process which has been a surprise to all of us. One of the questions for example tripped them because I think that they think they're not allowed to 'imagine' anything - I'm just finding it fascinating trying to work out what's going on with their reading... I'm collecting evidence from these kids' work - I think it's a complete counterbalance to what the principals were saying on RNZ yesterday. They've left the assessment feeling really positive about the whole thing. I think this could be a big positive step toward equity for some of our kids up here in Northland. Thanks for all the work you're doing. - Whangarei Girl's High

"We have completed the Literacy standards at St Andrew's this week. I was supervising so able to see the tests. I thought the tests worked well, although suspect that my Year 10 class will learn that their shift key and the full stop is a requirement for the writing standard. I keep telling them! Now they might believe me! There was excellent guidance built into the writing questions, for those who read carefully.

My class enjoyed the reading assessment. There was great coverage of 'foundational literacy' over the 8 questions."
College

[&]quot;Support and instructions received from NZQA for the L/N assessments has been fantastic. We are feeling much more confident." - Waiuku College

"Just wanted to let you know that we have had a pretty successful start to the pilot at Waimea College. No connection issues! There were quite a few away with covid, illness etc but most were there and have completed the Reading test. They were very well behaved and focused too. Our staff were amazing too at supervising and supporting our students. Onwards and upwards." - Waimea College

"It's been a learning experience for all of us, but absolutely awesome the last few days" - Massey High School

Ngā mihi Sue

Sue Chalmers Kaiwhakahaere Matua Aromatawai/Chief Advisor Assessment Wāhanga Aromatawai/Assessment Division NZQA

Ph: Mob:

Ahakoa ngaru ana te moana, ka eke tonu nei te waka! A choppy mountainous ocean can always be navigated by a small canoe!

From: MaryJane Parker

Sent: Monday, 28 November 2022 8:22 AM

To: Miriam Bookman **Subject:** Goog news

Categories: Contractors Group meeting

Hi Miriam

We received this email from wghs.school.nz

Thanks again - it was super interesting and personally I think this shift back to basic literacy skills is going to have a massive positive effect (despite current negative media). I've been working with some of the lowest literacy girls in the school and their learning has been massively helped knowing there is a tangible goal to attain. It's helped with

Thanks again



She may be useful for a 'user story'.

engagement and attendance.

Regards Mary Jane

Mary Jane Parker | Workstream Lead - Literacy and Numeracy

External Assessment | **Aromatawai ā-waho** Assessment Division | **Wāhanga Aromatawai**

New Zealand Qualifications Authority | Mana Tohu Mātauranga o Aotearoa







Literacy: Writing (32405) Assessment Guidance

Used to find evidence for Outcome 1: Write meaningful texts for different purposes and audiences

	The standard	Below the standard	At the standard	Above the standard
1.1	Select and use content that is appropriate to purpose and audience. Content: the relevance, quantity, quality, selection and elaboration of ideas for the topic.	 Purpose and main idea may be unclear and/or cluttered by irrelevant detail. May be unclear because writing has competing ideas. Main idea may be unclear because supporting detail is too general or even off-topic. 	 Main idea is evident, with some elaboration, which may be general or limited. Relevant ideas with some elaboration. Mostly simple ideas - related to the personal, immediate world of the writer (concrete, predictable, familiar, personal and/or close to writer's experience). Some more complex ideas evident. 	 A main idea or topic is clear, focused and interesting, with appropriate detail. The deliberate choice of relevant ideas or subject matter to engage and influence the reader. Elaboration should be relevant and may include background information, factual detail, evidence, description, explanation, analysis or evaluation.
1.2	Use text structures in ways that are appropriate to purpose, audience and text type. Structure / organisation: the presence and development of structural features appropriate to the specified purpose; the organisation of ideas into a coherent text.	 Attempts at organisation; may be a "list" of items. Beginning and ending not clear. Ideas not clearly linked into a coherent 'whole'. May contain some of the component parts that are typically associated with a text written for a particular purpose. 	 Organisation is appropriate, but conventional. Attempt at introduction and conclusion. The way ideas are linked to each other and to the broader context of the writing and/or the wider world results in a text that is meaningful to the reader. Contains the component parts that are typically associated with a text written for a particular purpose. 	 Effective structure and sequencing. Inviting introduction and satisfying closure. The relationships between ideas, or ideas and detail/s, are clear and the writing 'flows' with clear text connectives, consistency of verb tense, and accuracy of referring words (e.g., pronouns) across the text as a whole.



1.3	Make language choices that are appropriate to purpose and audience. Language choices: the presence and development of language features and vocabulary appropriate to the specified purpose and audience.	 Words may be correct but mundane. Common words chosen, limited evidence of appropriate language selection. Monotonous, often repetitious, sometimes inappropriate for purpose/audience. 	 Language is functional and uses many everyday words: words that are related to the personal world of the writer; words that are used frequently. Some precise words used. Descriptions may be overdone at times. Register and tone are appropriate to purpose and audience. There is some variation in sentence type and length. 	 Vocabulary: broad range of words, word choice energizes writing. Precise, carefully chosen words that are descriptive, expressive, academic, technical or abstract, as required by the text type. Strong, fresh, vivid images. Sentences have an easy flow and rhythm; effective variety in length and structure. Language choices (e.g., figurative language, narrative perspective, tense) suggest careful selection for appropriate register and tone.
1.4	Write text that demonstrates sufficient technical accuracy to communicate meaning, without intrusive errors in spelling, punctuation, or grammar. Technical accuracy: the quality, effectiveness and correctness of sentences.	 Limited evidence of control of conventions. Some awkward sentence constructions. Common simple patterns used; several sentences begin the same way. 	 Control of most writing conventions. Errors reflect risks with unusual or sophisticated structures. Sentences generally well controlled; may lack variety in length and structure. 	 Strong control of conventions. Errors are few and minor.



The writing assessment required students to complete three tasks – two pieces of writing and a combination of short answer tasks and multi choice questions. Students were required to complete all three tasks. All three tasks provided evidence that contributed to the final assessment decision.

The following are examples of student writing with marker commentary.

Question	Answer	Notes on 1.1	Notes on 1.2	Notes on 1.3	Notes on 1.4
This student selected the option to 'write about a trip that you have been on'.	Last Night i Packed my bags and headed to the airport, me and my family went on a trip to hawai Thats where we are today, The Hotel we are in is tall and looks so expensive i wish my parents didnt spend to much mony on this, Also there was a Big pool right infront of this hotel, So i decided to get into my swim gear and go swimming. When i went out there the wind was so nice and warm, and when i got into the pool you wouldn't believe how warm it felt! There was also a spa Beside the pool but ill go in there after i go swimming. After i got out of the pool i went to the spa and relaxed there for 30 minutes. Once i Got Back into my clothes i went back to my hotel room to watch some tv, Our hotel had 4 rooms, Had tv in all of them, Dang this hotel must have cost a fortune! My Mum asked if i wanted to go to have lunch somewhere and i said yeah i would love to, so My Mum took me to a lovely resturant where the food was the best! The end	Purpose and main idea are unclear: although the text is about the topic (a trip) a main idea/s about the trip needs to be evident. The supporting detail is too general: some elaboration other than the generalised comments is required, such as "the wind was so nice and warm", "Big pool right infront of this hotel" is required.	 Although there is an attempt at organisation, the text consists mainly of a list of events (arriving at the hotel, having a swim, a spa, watching t.v. and then having a meal). The content needs to be organised so that the various events are sufficiently linked in order to develop a more coherent 'whole'. For example, details about the hotel's cost ("so expensive" and later "must have cost a fortune") and the spa "There was also a spa Beside the pool" and later "After i got out of the pool i went to the spa" 	 There is an attempt to engage the reader with the use of direct address ("you wouldn't believe how warm it felt") along with the use of first person (" i wish my parents") but the effectiveness of this technique has been lost because of the limited evidence of appropriate language selection. Words are generally correct but mundane, lacking specificity, e.g., "Hotel we are in is tall", "Big pool", "lovely restaurant", "the food was the best". Language choice can be repetitious, e.g., "so nice and warmhow warm it was"; "looks so expensivecost a fortune". Tense is used inappropriately, e.g., changes from past tense ("packed my bags went to the airport") to the present ("where we are today", "ill go in there after i go swimming") and back to past ("I got I went") does not appear to be purposeful. 	There is limited evidence of control of conventions, particularly the inappropriate use of capital letters and the awkward sentence constructions.





Question	Answer	Notes on requirement 1.1	Notes on requirement 1.2	Notes on requirement 1.3	Notes on requirement 1.4
This student selected the option to 'write about life in 2020 for a time capsule. The time capsule will be buried so it can be dug up by people in the future'. Some ideas for the time capsule were provided with the question.	2020. A year of dismay, heartbreak and international disruption. To give the people of the future some insight into what life was really like for us folks in 2020, our community has decided to create a time capsule and get everyone in town to write about their experiences. Personally, 2020 was a mixed bag. The confusion during the first lockdown only fuelled my mind's taste for anxiety, as it desperately attempted to tackle the tsunami of tasks brought about by the schooling curriculum. Many mornings in lockdown were spent sighing extensively and making incoherent noises directed at the workload. Fortunately, as lockdown progressed, the storm seemed to recede as teachers gave out less frequent work and I learned to overcome the torrential assignments. This was not the only difference in lockdown however It felt so alien not to be interacting with others besides my immediate family. When lockdown ended, it was time to wake up. Time to go back to school, time to start playing sports, and everything else that goes with interacting with humans in the dayto-day. So that's what I'll tell the people of the future. I'll make them understand the tremendous hardships, the tortuous boredom and the monotonous schoolwork which made up a good portion of my year. But despite how I've described it, 2020 was also full of new	 A main idea or topic is clear, focused and interesting, with appropriate detail: all details are relevant to the topic (2020). The details provide an explanation for the writer's description of the year as being a "mixed bag", as stated in the introduction. There is evidence of the deliberate choice of relevant ideas and subject matter to engage and influence the reader, e.g., the details about the consequence of lockdown will be familiar to readers. Elaboration, such as the details, description, explanation and evaluation, is relevant, e.g., description of "anxiety" over "workload"; explanation of eventually "[learning] to overcome the torrential assignments"; evaluation that despite the hardships "2020 was also full of new challenges and experiences". 	 The text has an inviting introduction, clearly setting out the purpose of the text: "To give the people of the future some insight", "everyone in the town to write about their experiences" and a satisfying closure, which summarises the content "the tremendous hardships, the tortuous boredom and the monotonous schoolwork" as well as reminding the reader of the text's specific purpose "tell the people of the future". There is evidence of effective structure and sequencing of the body of the text, as the second and third paragraphs detail the experiences for this writer, e.g., the "mixed bag" of "curriculum", "lockdown" and lack of "interaction". The relationships between ideas, or ideas and detail/s, are clear and the writing 'flows' with clear text connectives, e.g., "as lockdown progressed", "This was not the only difference in lockdown 	 There is a broad range of words, and word choice energizes writing. Precise, carefully chosen words that are descriptive (e.g., "heartbreak and international disruption") expressive (e.g.," fuelled my mind's taste for anxiety") and abstract expressions, including the use of an extended metaphor (e.g., "tsunami of tasks", "the storm seemed to recede", "torrential assignments") The use of strong, fresh, vivid images, such as "sighing extensively and making incoherent noises directed at the workload" and "It felt so alien not to be interacting with others besides my immediate family" help to engage the reader. Sentences have an easy flow and rhythm, particularly with the use of three-part structures, e.g. "it was time to wake up. Time to go back to school, time to start playing sports"; "tremendous hardships, the tortuous boredom and the monotonous schoolwork". There is an effective variety in length and structure of sentences. For example, the text begins with a one-word sentence (2020) for impact, followed by a carefully constructed sentence 	Strong control of conventions.



challenges and experiences. Hopefully the people of the future will be more outgoing now that they know how easily your daily activities can be taken away.	however", "But despite how I've described it". There is consistency of verb tense (simple past tense) and accuracy of referring words (e.g., pronouns, such as "everyone in town their experiences", "in lockdown It") across the text as a whole. There is consistency of verb tense (simple past tense) and accuracy of referring words (e.g., pronouns, such as "everyone in town their experiences", "in lockdown It") across the text as a whole. There is consistency of verb tense (simple past, with a concluding reference to the future, as appropriate for a time capsule).
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A series of questions/tasks including multi choice, proofreading, re writing was used to find evidence for Outcome 2: Use written language conventions to support communication, for example:

Rewrite these two statements as one sentence using the word 'because':

- I made a mistake
- I need a new piece of paper

Choose the correct sentence:

- Amyra and Cody is coming over tonight.
- Amyra and Cody like pizza.
- Amyra and Cody hates anchovies on pizza.
- Amyra and Cody enjoys watching movies.

Rewrite this sentence so it is clear that you sold the car, not the stereo:

• I removed the stereo from my car and sold it.

Your cousin, Ella, accidently breaks a neighbour's window with her rugby ball. She writes an apology note and asks you to check it. sorry I break your window with my rugby ball it was a accident i will pay to have it repaired Correct the mistakes by rewriting the note.





Literacy and Numeracy

NZQA & MoE English-Medium pilot school webinar

October 2022

This hui is being recorded and will become a formal record of the LitNum work programme. Your comments and attendance at this hui may be publicly disclosed in summary of engagement and consultation documents. These records will be stored securely in the official NZQA information repository and only accessed by authorised NZQA and Ministry of Education personnel.



Nau mai, haere mai



In today's webinar we will cover the following:

- Reflections on assessment event two and the pilot evaluation
- What we can learn from the pilot experience
- Next steps (2023)





Assessment Two in numbers



Assessed entries				
Numeracy	15, 924			
Literacy reading	12,349			
Literacy writing	11,050			
Pāngarau	160			
Te Reo Matatini	173			

Number of providers (school / kura / tertiary)				
Numeracy	156			
Literacy reading	119			
Literacy writing	119			
Pāngarau	9			
Te Reo Matatini	10			

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How the pilot is influencing the assessment



Evaluation

- Assessment results
- Feedback from students
- Feedback from teachers
- Psychometric testing

What we are already doing

- Exploring individualised feedback
- Publishing the first assessment paper
- Improving assessment processes

Assessment Results



Assessment Event Two 19 – 23 September

Assessment results available XXX

Assessment feedback



Readiness Tools



	Literacy – Reading	Literacy – Writing	Numeracy
 Curriculum Progress Tools which include: Learning Progressions Frameworks (LPFs) Progress and Consistency Tool (PaCT) 	Descriptors in the range 750 – 850	Descriptors in the range 800 – 900	Descriptors in the range 750 – 850
<u>e-asTTLe</u>	4A or higher	4A or higher	4A or higher
Learning Progressions for Adult Literacy and Numeracy	Step 4	Step 4	Upper Stage 5
English Language Learning Progressions (ELLP)	Upper Stage 3, Lower Stage 4	Upper Stage 3, Lower Stage 4	Not applicable

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Teaching and Learning Resources



Every teacher needs to understand what NCEA Literacy and Numeracy might look like in their subject

Every teacher needs to be a teacher of literacy and numeracy in their subject; every teacher needs to know what they can do to support literacy and numeracy.

Even small shifts in practice can make a big difference.

Good practice for embedding literacy and numeracy can be planned or spontaneous.

The following teaching and learning resources will be released on 15 August:

- Literacy Pedagogy Guides (LPGs)
 Agriculture Horticulture, Drama, Visual Arts
- Numeracy Pedagogy Guides (NPGs)
 Dance, DVC, English, Music
- Numeracy Enhanced Plans (NEPs)
 Alternative Education, English, Health,
 PE, Science, Social Science, Visual Art

What we can learn from the pilot experience



How you can support others prepare for the assessment

- Pedagogy
- Logistics



Next year



- Transitional year any school or organisation with consent to assess can enter students
- There will be two assessment events, one in Term 2 and one in Term 4
- Students will be able to meet the literacy and numeracy requirements either through the new standards OR through the existing mechanisms

Ngā mihi nui-

Thank you for being a part of Literacy and Numeracy 2022 Pilot programme.







Confidential Report on Numeracy Pilot Term 2, 2022, for NZQA and The Ministry of Education

Standard number: US 32406

Background

2022 is the second opportunity to undertake a pilot study into how the Unit Standard US 32406 might be assessed. It follows a small-scale pilot study in 2021 involving about 1000 students. In Term 2, 2022, 13350 students attempted the assessment. While the increase in sample size gives greater confidence in the reliability of the data, caution must be exercised about inference to the population of junior secondary students in Aotearoa/New Zealand. Until further data is gathered about the nature of student cohorts that participated in the first 2022 assessment, particularly age and teacher assessment of Curriculum Levels, any inference is speculative.

The implementation of the standard has been delayed until 2024 which allows time for the sector to respond to the teaching and assessment demands of the literacy and numeracy standards, and for the NZQA and MOE teams to work on valid and practical ways to assess the standard. It is intended that these standards are requirements for any accreditation of NCEA qualifications so the stakes for students are extremely high.

Sources of data

This report is a synthesis of data from three main sources:

- 1. The working notes and documents of the writing group and National Assessment Facilitator.
- 2. The data set of students' responses to the CAA (Common Assessment Activity) which allows for interrogation at an item level, and aggregation to explore whether, or not, the three outcomes are met.
- Survey responses provided by 21 of the 23 markers. The survey consisted of 10 items, including Likert Scale items and open items, particularly around the balance and contexts used in the CAA and patterns in students' responses.

Development of the CAA (Common Assessment Activity)

The writing group for 2022 consisted of three writers, two of whom also wrote for 2021. Continuity of the team made the process of item development easier than the previous year. Most items for the two assessments were created during a writing retreat in Christchurch and in the following weeks by hosting items on a secure server. The team applied the same assessment blueprint as used in 2021.

The blueprint consists of a spreadsheet that maps each item to the outcomes and content areas of the standard. Considerable work went in to ensuring that both CAAs for 2022 reflected a balance of the three outcomes, and a broad coverage of the mathematical and

statistical strands and sub-strands in the NZC. A requirement of the current standard is that students demonstrate achievement across all three outcomes:

Outcome 1: Formulating the required mathematics and statistics.

Outcome 2: Using mathematical and statistical procedures.

Outcome 3: Explaining/justifying the reasonableness of mathematical and statistical responses.

The writing team adopted the same item style that proved successful in 2021. This style consisted of:

- 1. Brief introduction of a single context which is the theme of that question.
- 2. Three items developed from the context that offer opportunities to assess across the three outcomes. Not all questions assess all three outcomes.
- 3. Restricted response items for Outcomes 1 and 2, and more extended, open outcomes for Outcome 3.

Writers carefully considered the contexts used in the questions against the following criteria:

- 1. Plausible and realistic (candidates were likely to experience similar contexts in their lives).
- 2. Engaging, particularly for young people.
- 3. Involving appropriate mathematical and statistical demands.

Each CAA consists of ten questions, each comprising three parts. Marking is binary meaning the candidate provides sufficient evidence of achievement or they do not. The maximum possible score is 30. A complete CAA is compiled by creating a selection of questions that assess appropriately across all outcomes and content areas. That balance is checked using the assessment blueprint.

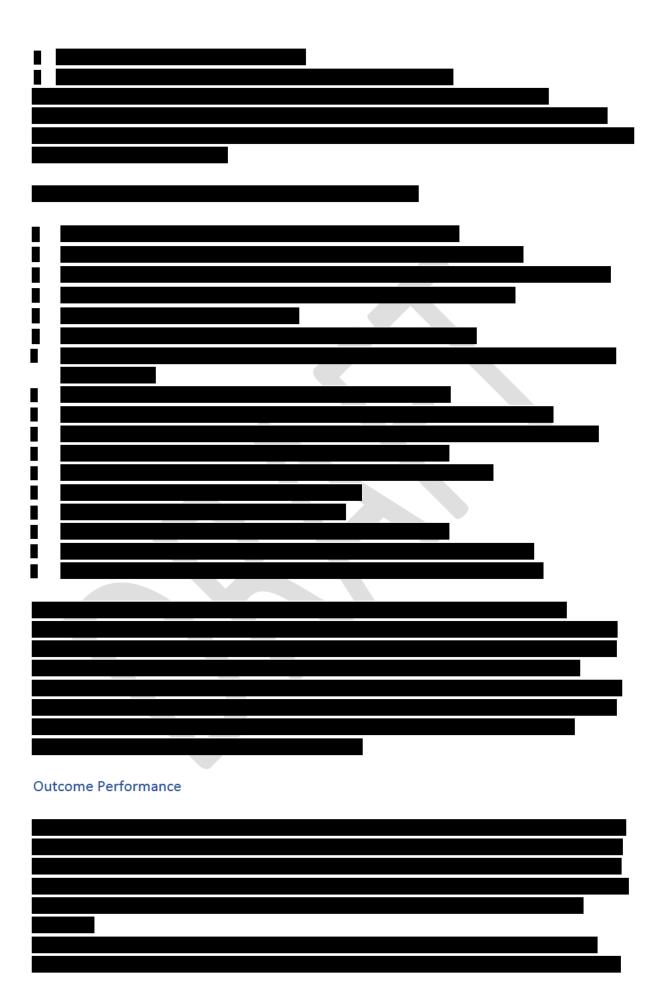
The questions go through several processes before inclusion in the CAAs and not all questions are used. Apart from the contextual aspect, the following are important parts of the process:

- Checking that the language is as clear and simple as possible to minimise the difficulty of the literacy requirements (reading and writing);
- Considering how the question works in both a digital and written environment;
- Development of graphics, were needed, to support students' interpretation of the question and the appeal and face validity of the test;
- Feedback from independent reviewers from NZQA and MOE;
- Maintenance of the security of the items.
- Editing that may impact on the presentation and language of the item.

Once a CAA is developed it is reviewed several times and field tested by members of the writing team to check that the digital platform performs correctly in the way the item presents to candidates.

Profile of student performance in Term 2.

Item Performance	
Item Performance	



Other Patterns in Student Performance	

Context

Marker comments about the contexts used in the Term 2 CAA were very supportive. Most contexts were described as realistic, and markers reported strong engagement by students in answering all the questions. Two markers questioned whether an item on accidents in the workplace was relevant to students' daily lives and that some students appeared to be disadvantaged by the context. Other markers expressed surprise at how well candidates engaged with the same workplace safety item.

Markers acknowledged the difficulty in finding contexts that are relevant to the lives of all students. For example, two markers commented that bus timetables may be relevant to some urban students while irrelevant to most rural students. Some markers commented of the breadth of cultural inclusion in the items.

In summary, the contexts in the Term 2 CAA appeared to engage students. Caution is needed about imposing beliefs about contexts that student will find engaging. One of the best answered items was about the travels of kūaka (Godwit) birds on migration between Alaska and New Zealand. The context is not one that students in New Zealand are likely to encounter in their daily lives, yet it proved effective in assessing the application of mathematics. One marker summarised the role of context by saying that Numeracy is about applying personal mathematics and statistics to realistic situations that might be familiar or unfamiliar.

Time taken for the assessment

The distribution of time students took to complete the CAA is given in Figure 2. The data represent the difference in time between students logging onto the system and logging off. The significant proportion (\approx 20%) of students whose log showed times greater than 100

minutes suggest that these data as not totally reliable and times over 120 minutes suggest that machines were not logged off when the candidate finished. There is also no way to know how long students were logged on before working on the CAA. Given the logistics of getting access for large cohorts of students, it is highly likely that many students logged on several minutes before beginning the assessment.

The median time of 82 minutes is clearly longer than the 60 minutes expected and may be partly due to the factors given above. If the data are accepted, then about 75% of candidates took longer than the time expected for the CAA. Coupled with observations of the literacy and computer skill demands of the assessment, the time data suggests that some changes are required to test conditions, and to the assessment mode in future.

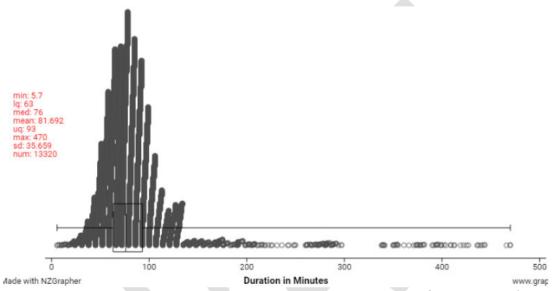
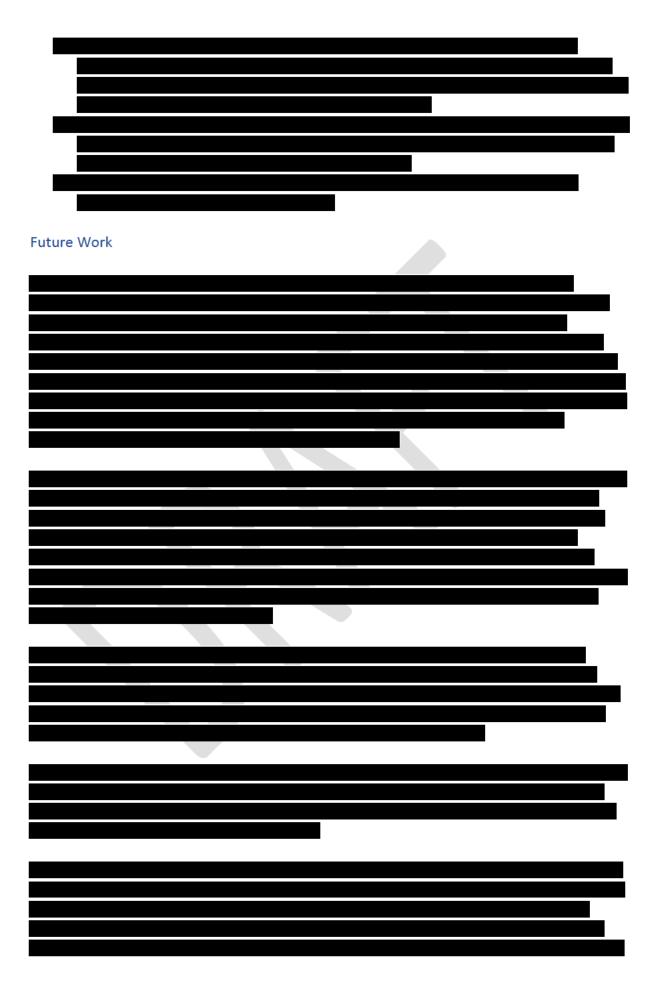


Figure 2: Time taken in minutes to complete the CAA assessment (Term 2, 2022)

Advice to the Sector



Assessing the Standard

The Term 2 pilot assessment showed a wide range of achievement by candidates. It also demonstrated that candidates' capacity to meet Outcome 3 of the standard was very dependent on the literacy and digital skill for expressing explanations and justifications. Overall, the median achievement of candidates was disappointing, and the data showed content areas in mathematics and statistics in which students appeared poorly prepared. Consistently assessing and raising the level of achievement in Numeracy is the aim of the Numeracy Standard. That can only be achieved by a concerted teaching effort at all levels of schooling prior to Year 10 and across the delivery of the whole NZC, not just mathematics and statistics.

The assessment team responsible for the Numeracy Standard needs to explore robust ways to corroborate the cut-score and criteria used to assign "achieved" or "non-achieved" to student performance on the CAA. Currently the group is applying advice from an outside agency regarding methods to do so, to complement the strong data analysis that supports these decisions at present. The team also needs to consider other ways to access Outcome 3 in the digital space, to alleviate the time required by candidates to complete lengthy explanations and justifications. A balance of open response and closed response questions needs to be used on future assessment. Such a change will reduce the writing demands of the CAA and reduce the time taken by candidates.

The writing team also faces challenges about demarking Outcomes 1 and 2 in the items. In 2021 the team explored items for Outcome 1 that asked candidates to identify correct and incorrect models in relation to situations. Those items created negative feedback from the sector based on the 'closing off' of students preferred models. In 2022, items assessing Outcome 1 are more open. In doing so, the writing team created items where it was difficult to delineate Outcome 1 and 2 items, at times. The team needs to explore ways to assess Outcome 1 that remain open to students' variable strategic preferences while still reliably assessing the Outcome.

Concluding Comments

The team at NZQA, including officials, editors and writers wish to thank all those involved in the successful pilot in Term 2, 2022. We especially want to thank those people who provided feedback on items, advice on assessment methods, and provided pictures and graphics. Finally, the team recognises the amazing team of efficient and competent markers.

9 August 2022.

2022 Numeracy Term 3 Psychometric Report

Introduction

This paper reports the psychometric analysis of Numeracy Standard 32406 'Use mathematics and statistics to meet the numeracy demands of a range of situations' that was administered during Term 3 2022.

The purpose of the analysis was to investigate how the assessment had performed from a statistical/psychometric viewpoint.

The analysis was carried out by NZQA.

Summary of findings

The assessment had the following psychometric properties:

- Cronbach's alpha (KR-20) was 0.86, indicating a reasonably high level of internal consistency among the items
- Overall the items that were analysed discriminated well
- The difficulty measures of the items were spread across much of the distribution of student achievement.

Data

The data consisted of item responses from 15,585 students to 30 dichotomously scored items. The students were identified only by NSN and the item responses coded 1 for correct and 0 otherwise. In addition to the item response data, the data included a grade indicating whether the student had achieved the standard or not.

Note that 6 items from the assessment were excluded during marking and were therefore excluded from the analysis:

- Q1a
- Q2b
- Q6c
- Q9a
- Q9b
- Q9c.

With the above 6 items excluded from the analysis, the maximum a student could score for the assessment is 24 rather than 30.

There were two separate criteria for which a student was deemed to have achieved the standard:

- Criteria No. 1
 - They answered 14 or more items correctly, and
 - They answered 3 or more items from Learning Outcome 3 correctly
 - Learning Outcome 3 consists of 9 items

- Criteria No. 2
 - O They scored a total of either 12 or 13
 - They answered 3 or more items from Learning Outcome 3 correctly
 - They answered 2 or more of the 6 excluded items correctly.

Model

We analysed the dichotomous data by using the Rasch model. The Rasch model was applied using WINSTEPS software. The graphs were produced using R software.

The next section reports the results of the analysis.

Results

Of the 15,585 students with item responses:

- Using Criteria No. 1
 - o There were 7,005 students who achieved the standard
- Using Criteria No. 2
 - O There were 477 students who achieved the standard.

Therefore, in total there were 7,482 out of the 15,585 students (48%) who achieved the standard.

Table 1 shows summary statistics from the distribution of student scores as well as its equivalent in terms of measure (logits). Table 1 shows that student scores ranged from zero through to the maximum possible of 24.

Table 1. Summary statistics of students scores and its equivalent in terms of logits.

Summary Statistic	Total score	Measure (logits)
Mean	13.67	0.45
Standard deviation	5.58	1.39
Maximum	24	4.69
Upper Quartile	18	1.29
Median	14	0.43
Lower Quartile	10	-0.34
Minimum	0	-5.04

The Cronbach Alpha for the assessment is 0.86.

Figure 1 shows the probability density function of student scores. It also shows the minimum score required to attain the grade of Achieved using Criteria No. 1. Note the density is asymmetric and is at its highest at the most occurring score of 18.

Figure 1. Probability Density Function of Scores. The vertical black coloured dashed line at the score of 14 designates the minimum score required to attain the grade of Achieved using Criteria No. 1.

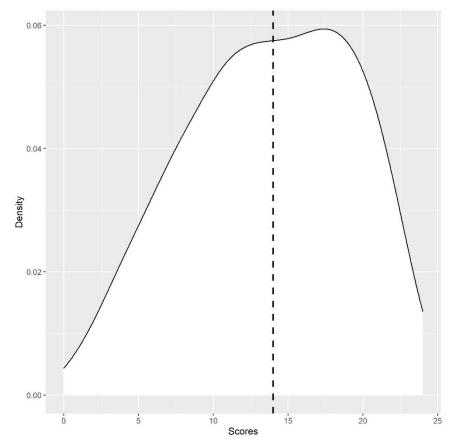


Table 2 lists each item in order followed by its level of difficulty (easier, moderate, more difficult), and its associated learning outcome. From the first entry in the table we see that Q1b is moderately difficult relative to the other items, and associated with the second learning outcome.

Table 2. Difficulty of each Item and associated learning outcome.

Item	Difficulty	Outcome	Notes
Q01b	Moderate	2	
Q01c	Moderate	3	
Q02a	Moderate	1	
Q02c	Moderate	3	
Q03a	More difficult	1	
Q03b	Easier	2	
Q03c	Moderate	3	
Q04a	Moderate	1	High discrimination (relative to other items)
Q04b	Easier	2	
Q04c	Easier	3	
Q05a	Easier	2	High discrimination (relative to other items)
Q05b	Moderate	2	
Q05c	Moderate	3	
Q06a	Moderate	1	
Q06b	Easier	1	
Q07a	Moderate	3	
Q07b	Easier	1	High discrimination (relative to other items)
Q07c	More difficult	3	
Q08a	Easier	2	
Q08b	More difficult	2	
Q08c	Easier	3	
Q10a	Easier	1	
Q10b	Moderate	2	
Q10c	Moderate	3	

Table 3 shows the individual item statistics from the analysis.

When reading Table 3 the following definitions apply:

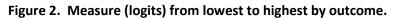
- Measure (logits)
 - O The Rasch difficulty measure of the item
- Standard error (logits)
 - The standard error in the measure (i.e. the standard measurement error of the term)
 - In the Rasch model, error is conceptualised as a normal distribution centred on the measure with the standard deviation equal to the standard error
- Infit mean square
 - Diagnostic statistic describing fit of the item data to the Rasch model weighted by information
 - That is, a fit measure influenced largely by the students for whom the item is well-targeted
 - Computed relative to the other items
 - As a rule of thumb, is acceptable between the values of 0.5 and 1.5
- Outfit mean square
 - O Diagnostic statistic describing fit of the item data to the Rasch model
 - That is, a fit measure influenced largely by the students for whom the item is not well-targeted
 - Computed relative to the other items

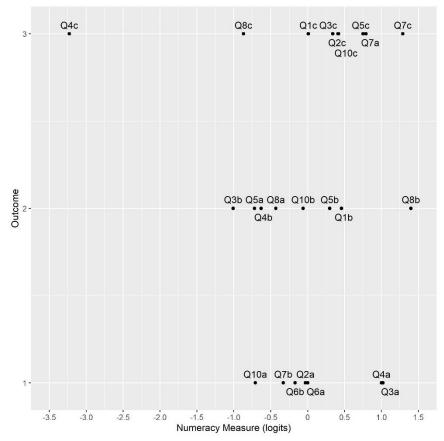
- As a rule of thumb, is acceptable between the values of 0.5 and 1.5
- Point-measure correlation (inclusive)
 - The Pearson point-measure correlation coefficient, between the item and the overall measure estimate for the students, where the measure estimation includes the current item
 - Analogous to the point-biserial coefficient and indicates the discrimination of the item
- Point-measure correlation (exclusive)
 - The Pearson point-measure correlation coefficient, between the item and the measure, where the measure estimation excludes the current item.

Table 3. Individual item statistics.

Item	Measure	Standard	Infit mean	Outfit	Point-	Point-
	(logits)	error	square	mean	measure	measure
		(logits)		square	correlation	correlation
					(inclusive)	(exclusive)
Q01b	0.46	0.02	0.82	0.77	0.61	0.50
Q01c	0.01	0.02	0.96	0.92	0.52	0.49
Q02a	-0.03	0.02	0.96	0.94	0.52	0.49
Q02c	0.41	0.02	0.89	0.82	0.57	0.49
Q03a	1.02	0.02	1.12	1.17	0.41	0.49
Q03b	-1.01	0.02	1.06	1.18	0.41	0.45
Q03c	0.34	0.02	0.92	0.87	0.55	0.49
Q04a	1.00	0.02	0.76	0.68	0.64	0.49
Q04b	-0.63	0.02	1.15	1.13	0.38	0.47
Q04c	-3.23	0.04	0.86	0.58	0.38	0.29
Q05a	-0.72	0.02	1.28	1.50	0.28	0.46
Q05b	-0.30	0.02	0.88	0.84	0.57	0.49
Q05c	0.75	0.02	1.03	1.00	0.48	0.49
Q06a	0.00	0.02	1.08	1.13	0.44	0.49
Q06b	-0.17	0.02	0.99	1.00	0.49	0.48
Q07a	0.79	0.02	0.81	0.73	0.61	0.49
Q07b	-0.33	0.02	1.27	1.41	0.31	0.48
Q07c	1.29	0.02	0.99	0.93	0.49	0.48
Q08a	-0.43	0.02	1.19	1.35	0.34	0.47
Q08b	1.40	0.02	1.17	1.31	0.36	0.48
Q08c	-0.87	0.02	0.81	0.71	0.57	0.45
Q10a	-0.71	0.02	1.15	1.22	0.37	0.46
Q10b	-0.06	0.02	0.93	0.90	0.53	0.49
Q10c	0.42	0.02	0.90	0.83	0.56	0.49

Figure 2 shows the second column of Table 3 (i.e. Measure (logits)) in visual form and by learning outcome. From Figure 2 we see that the lowest value is -3.23 for Q4c which is associated with the third learning outcome. We interpret the lowest value of -3.23 for Q4c as the easiest of all the items for the students. In contrast the highest value of 1.40 for Q8b in the second learning outcome indicates the most difficult of all the items for the students.





Figures 3 through to 26 show the item characteristic curves with associated 95% confidence intervals (solid black coloured curves).

Figure 3. Item Characteristic Curve for Item Q1b

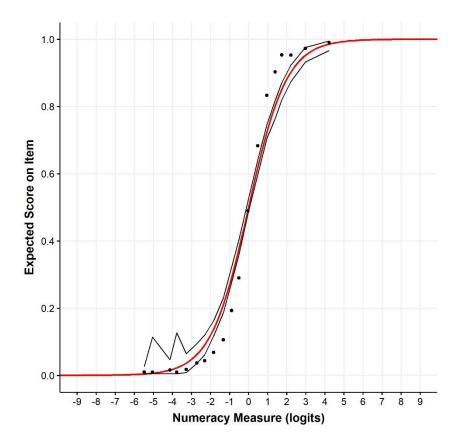


Figure 4. Item Characteristic Curve for Item Q1c

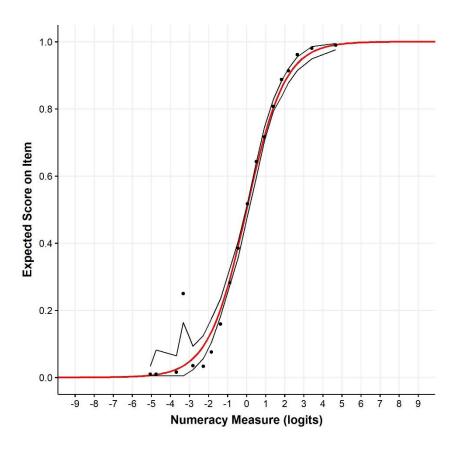


Figure 5. Item Characteristic Curve for Item Q2a

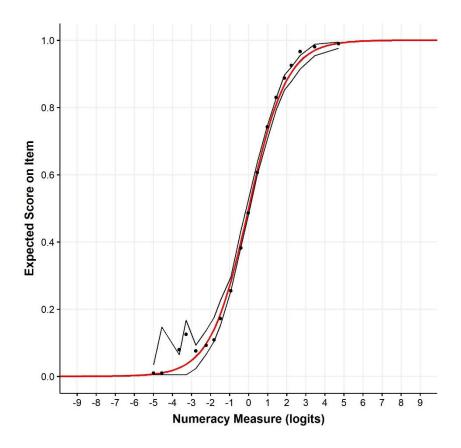


Figure 6. Item Characteristic Curve for Item Q2c

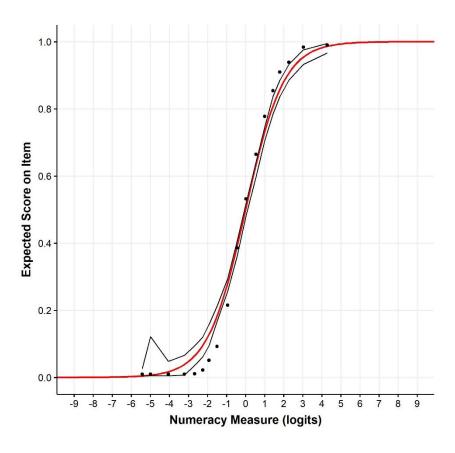


Figure 7. Item Characteristic Curve for Item Q3a

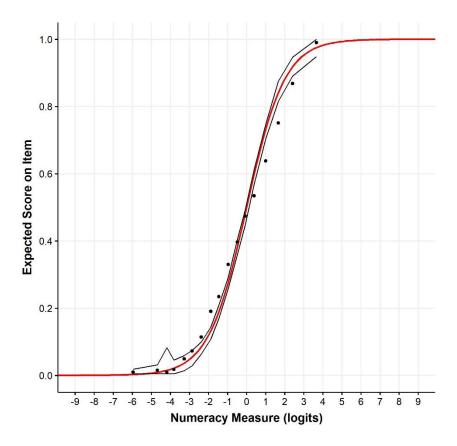


Figure 8. Item Characteristic Curve for Item Q3b

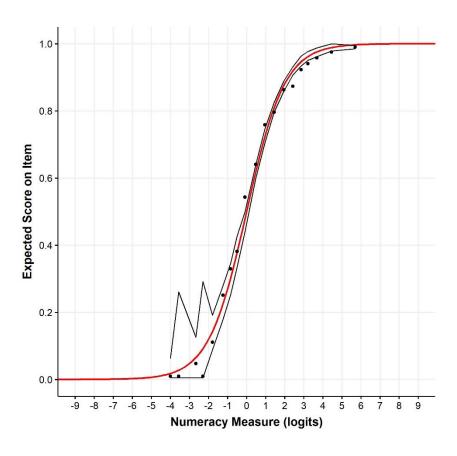


Figure 9. Item Characteristic Curve for Item Q3c

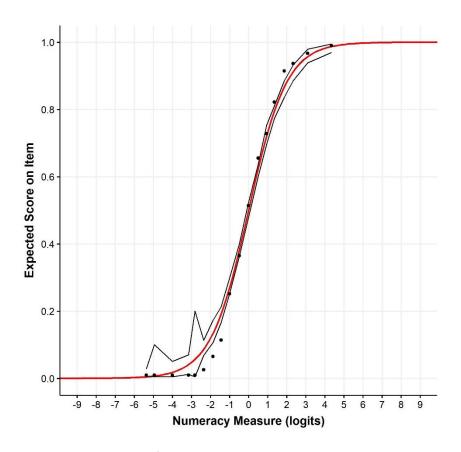


Figure 10. Item Characteristic Curve for Item Q4a

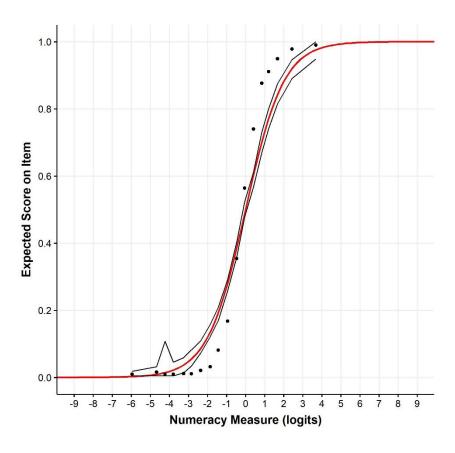


Figure 11. Item Characteristic Curve for Item Q4b

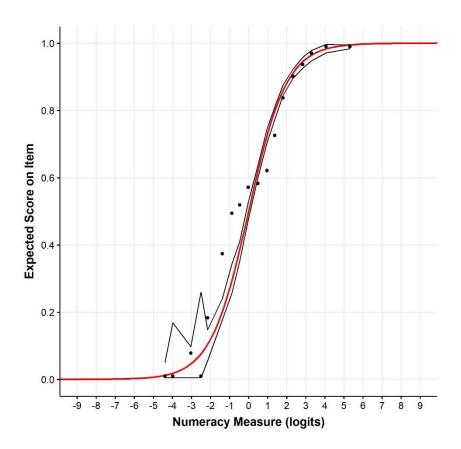


Figure 12. Item Characteristic Curve for Item Q4c

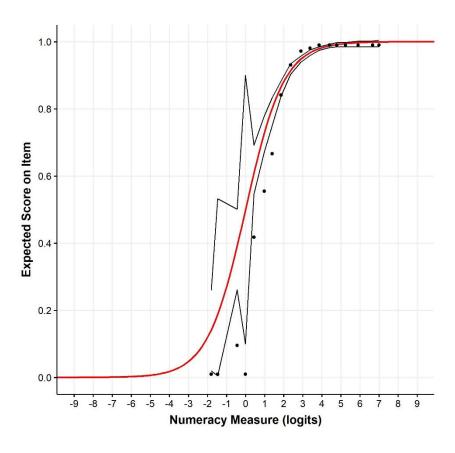


Figure 13. Item Characteristic Curve for Item Q5a

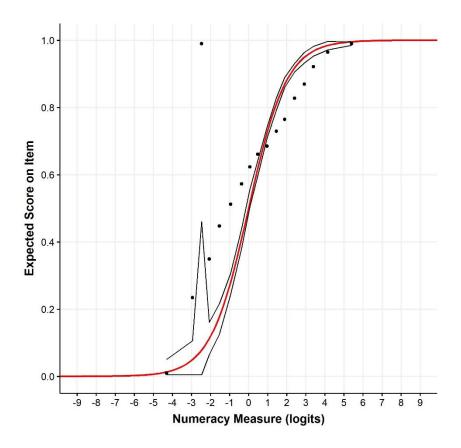


Figure 14. Item Characteristic Curve for Item Q5b

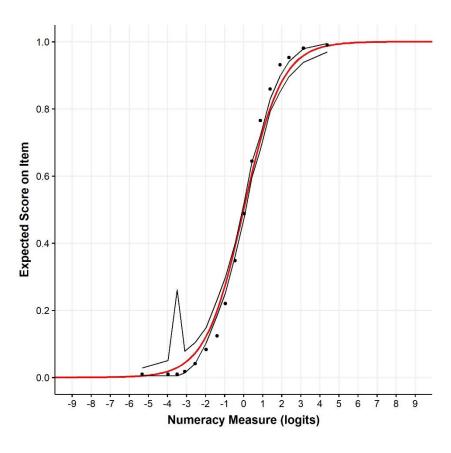


Figure 15. Item Characteristic Curve for Item Q5c

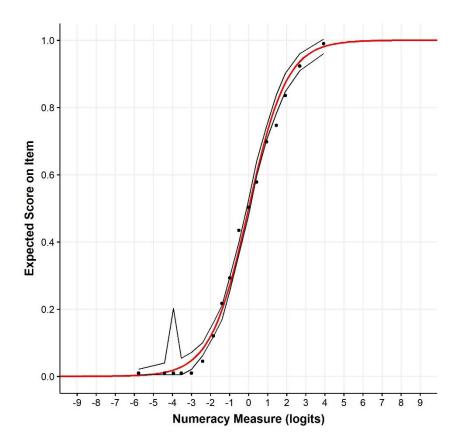


Figure 16. Item Characteristic Curve for Item Q6a

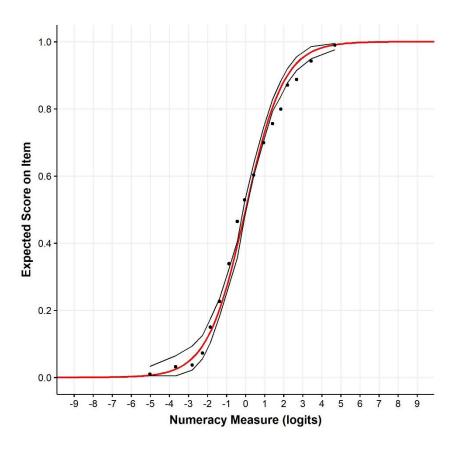


Figure 17. Item Characteristic Curve for Item Q6b

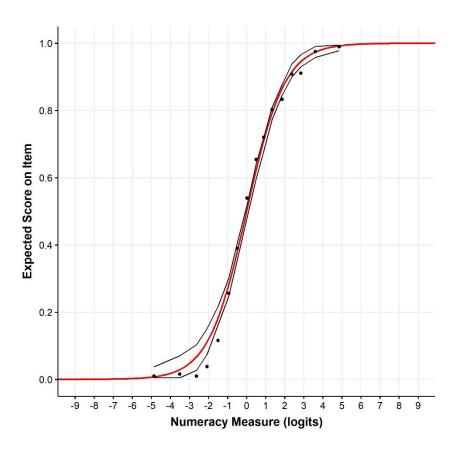


Figure 18. Item Characteristic Curve for Item Q7a

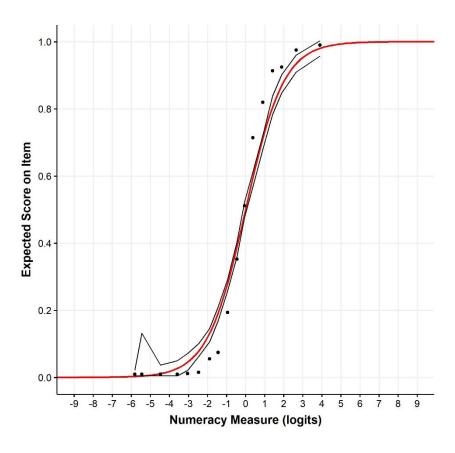


Figure 19. Item Characteristic Curve for Item Q7b

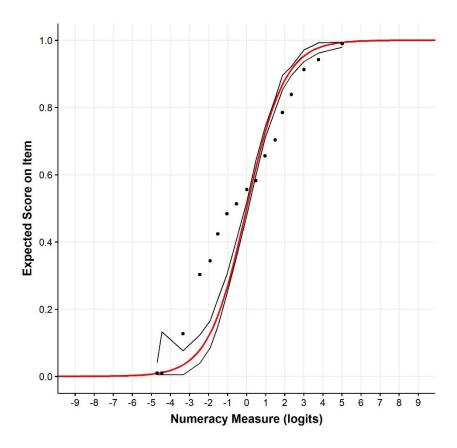


Figure 20. Item Characteristic Curve for Item Q7c

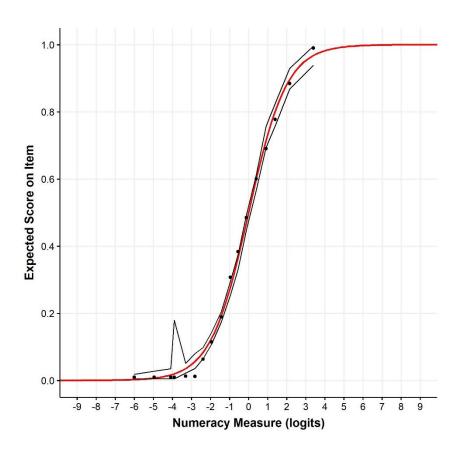


Figure 21. Item Characteristic Curve for Item Q8a

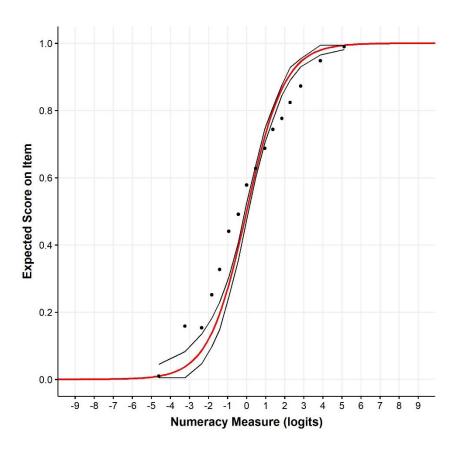


Figure 22. Item Characteristic Curve for Item Q8b

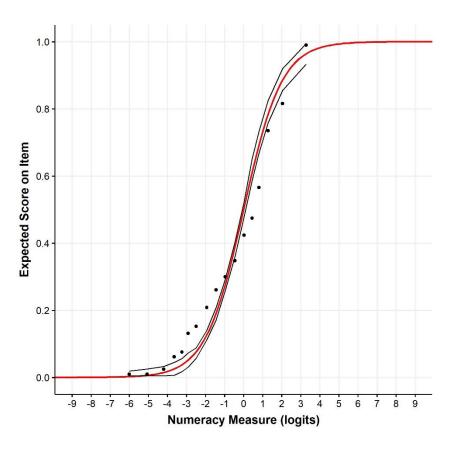


Figure 23. Item Characteristic Curve for Item Q8c

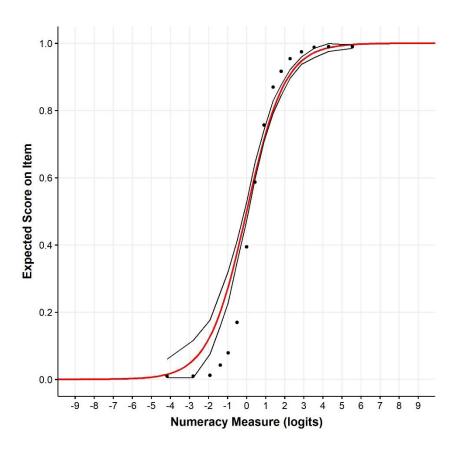


Figure 24. Item Characteristic Curve for Item Q10a

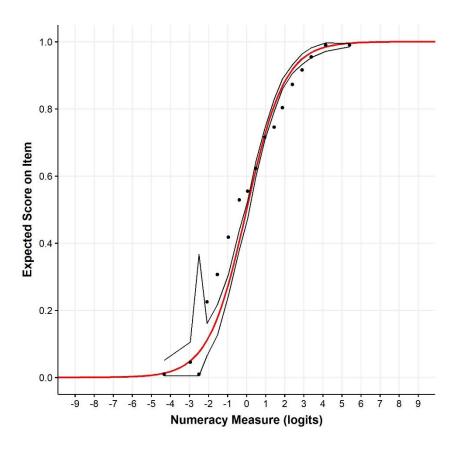


Figure 25. Item Characteristic Curve for Item Q10b

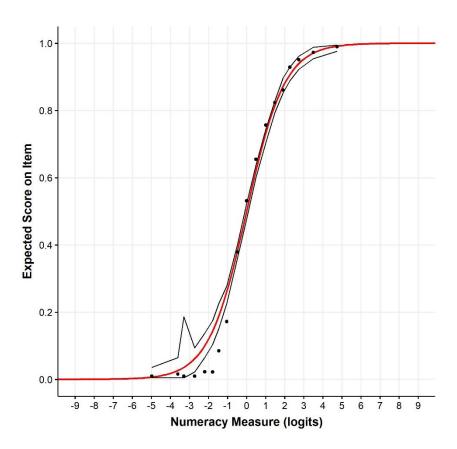
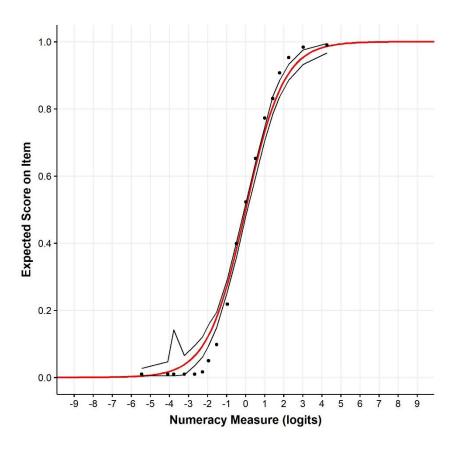


Figure 26. Item Characteristic Curve for Item Q10c



NCEA level one digital Pāngarau assessment

Psychometric analysis 2022



Introduction

This document is a psychometric analysis of NCEA data from the external assessment for the standard "Pāngarau 2022, 32412 Te whakamahi pāngarau me te tauanga hei whakatutuki i ngā hiahia pāngarau o ngā pūāhua whai take".

The analysis investigates how the assessment had performed from a statistical/psychometric viewpoint.

The analysis was carried out by NZCER under contract to NZQA.

Summary of findings

- 1. The assessment had the following psychometric properties:
 - Cronbach's alpha (KR-20) was 0.78, indicating a reasonably high level of internal consistency among the items
 - Most items discriminated well
 - Overall, Outcome 3 (represented by item W5i) was the most difficult, followed by Outcome 4.
 Outcome 1 was the easiest.
 - The difficulty measures of the items were spread across much of the distribution of ākonga achievement.
 - The relationship between the total score and achievement of the standard was clear. There was a range of total scores where some ākonga achieved the standard and others did not, but this range only covered 3 score points similar in magnitude to the standard error of measurement.

Recommendations

1. The analyses in this document were carried out using data that had been already marked (non-missing item responses were coded as 0 or 1). Further analyses of distractor quality for multiple choice items can be carried out to investigate how response options relate with achievement of the ākonga who selected them.

Data

The data provided to NZCER consisted of item responses for 159 examinees to 30 scored items. The examinees were identified only by NSN. In addition to the item response data, the data included an indication of whether an ākonga had achieved the standard or not.

A candidate was determined to have achieved the standard if:

- 1. They scored
 - a. at least 6 on Outcome 1
 - b. at least 6 on Outcome 2
 - c. at least 1 on Outcome 4 and
 - d. their total score was at least 16.

Analysis

Approach

We analysed the assessment data using methods from both Classical Test Theory and by using a partial credit Rasch model. The Rasch model was applied using WINSTEPS software. All other analysis was carried out using R software.

The Rasch model was used to support the analysis of item performance. Importantly, the examinee measures and item measures produced by the Rasch model are closely related to the examinee total score and item total score, which themselves are key to marking processes used for this assessment.

Results

Table 1 summarises the score distributions for the assessment overall and each outcome. The maximum total score was 30.

Table 1 Score distribution summaries

Summary statistic	Total score (Outcome 1-11 items)	Total score (Outcome 2 – 14 items)	Total score (Outcome 3 – 1 item)	Total score (Outcome 4 – 4 items)	Total score (overall – 30 items)	Measure (logits)
Mean	5.23	5.64	0.28	1.50	12.62	-0.65
Mean as a percentage	48%	40%	28%	37%	42%	
Standard deviation	2.96	3.27	0.45	1.03	6.59	1.69
Upper quartile	7.5	8	1	2	18	0.47
Median	5	6	0	2	13	-0.30
Lower quartile	3	4	0	1	9	-0.96
Cronbach's Alpha (KR-20)	0.64	0.64		0.03	0.78	
Standard error of measurement	1.78	1.97		1.02	3.12	

We can see from Table 1 that Outcome 3 (represented by item W5i) was the most difficult, followed by Outcome 4. Outcome 1 was the easiest. The overall Standard error of measurement is approximately half the width of the range of scores where some ākonga achieved the standard and others did not (Total scores 16, 17, and 18). This means that after accounting for the reliability of the assessment, there was no conflict between the what the Outcomes tell us about achieving the standard, and what the Total score tells us about achieving the standard.

Table 2 summarises the percentages in each achievement category.

Table 2 Achievement category summaries

Achievement category	Number	Percentage of total
Not achieved (scored less than 16)	106	67%
Not achieved (scored 16, 17 or 18)	3	2%
Achieved (scored 16, 17 or 18)	17	11%
Achieved (scored more than 18)	33	21%

For this assessment, Cronbach's Alpha (KR-20) was 0.78, indicating a reasonably high degree of internal consistency reliability.

A Rasch analogue of KR-20 is the Person Reliability statistic. For this assessment, this statistic was 0.83—indicating a reasonably high level of reliability. The analogous statistic for items, the Item reliability statistic is .94—indicating a reasonably high level of reliability.

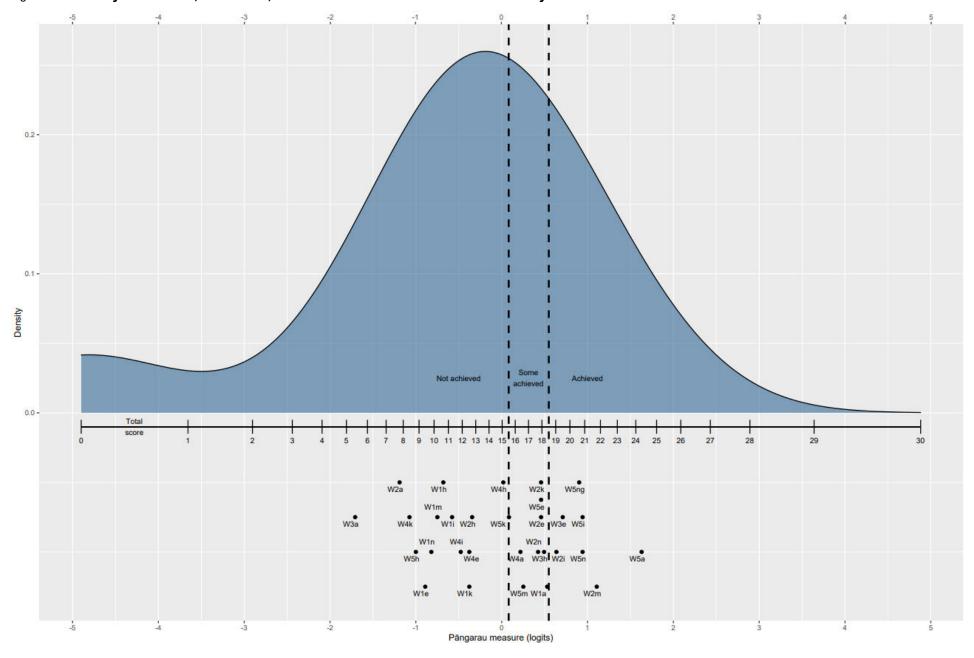
The distribution of achievement, achievement categories (Not achieved, Some achieved, and Achieved) and item difficulties are summarised graphically in Figure 1. Item difficulty thresholds are represented using dots with the item number and threshold printed beside the dot. Item difficulty thresholds located to the right of the figure represent relatively more difficult opportunities to score than those located to the left. Ākonga who scored at the

same location on the achievement scale as an item difficulty threshold, would typically have been equally likely to answer correctly or incorrectly.

For example:

- 'W3a', on the left, represents the scale location at which students were equally likely to score 1 or 0 on the item W3a this was an easier item
- 'W5a', on the left, represents the scale location at which students were equally likely to score 1 or 0 on the item W5a this was a more difficult item

Figure 1 Summary of measure, total score, achievement distribution and item difficulty



Item analysis

Findings from our item analysis are summarised in Table 3. These findings were based on a standard Rasch analysis which provides several item statistics and diagnostic graphics. These are provided in Table 4 and Figure 2 through Figure 31. Item analysis summary

Item	Difficulty	Outcome	Notes
W1a	Moderate	2	
W1e	Easier	1	
W1h	Easier	1	
W1i	Easier	1	Relatively more discriminating
W1k	Easier	1	
W1m	Easier	1	
W1n	Easier	1	
W2a	Easier	2	
W2e	Moderate	2	
W2h	Easier	2	
W2i	More difficult	2	
W2k	Moderate	2	
W2m	More difficult	2	
W2n	Moderate	2	
W3a	Easier	2	
W3e	More difficult	2	
W3h	Moderate	2	
W4a	Moderate	1	
W4e	Easier	1	
W4h	Moderate	1	Relatively less discriminating
W4i	Easier	1	
W4k	Easier	4	
W5a	More difficult	1	
W5e	Moderate	2	
W5h	Easier	2	
W5i	More difficult	3	Relatively more discriminating
W5k	Moderate	2	
W5m	Moderate	4	
W5n	More difficult	4	
W5ng	More difficult	4	Relatively less discriminating

Table 4 can be understood using the following definitions.

Measure (logits) is the Rasch difficulty measure of the item.

Standard error (logits) is the standard error in the measure (i.e., the standard measurement error of the item). In the Rasch measurement model, error is conceptualised as a normal distribution centred on the measure with a standard deviation equal to the standard error.

Infit mean square is a diagnostic statistic describing fit of the item data to the Rasch measurement model weighted by information. That is, a fit measure influenced largely by the examinees for whom the item is well-targeted. It is a statistic computed relative to the other items and is acceptable between the values of 0.5 and 1.5¹.

Outfit mean square is a diagnostic statistic describing fit of the item data to the Rasch measurement model. That is, a fit measure influenced largely by the examinees for whom the item is not well-targeted. It is a statistic computed relative to the other items and, as a rule of thumb, is acceptable between the values of 0.5 and 1.5.

Point-measure correlation (inclusive) is the Pearson point-measure correlation coefficient, between the item and the overall measure estimates for the examinees, where the measure estimation includes the current item. This statistic is analogous to the point-biserial coefficient and indicates the discrimination of the item

Point-measure correlation (exclusive) is the Pearson point-measure correlation coefficients, between the item and the measure, where the measure estimation excludes the current item.

6

¹ See What do Infit and Outfit, Mean-square and Standardized mean? (rasch.org)

Table 3 Item statistics

ltem	Measure (logits)	Standard error (logits)	Infit mean square	Outfit mean square	Point-measure correlation (inclusive)	Point-measure correlation (exclusive)
W1a	0.53	0.19	0.88	0.82	0.51	0.37
W1e	-0.89	0.19	0.96	0.97	0.40	0.36
W1h	-0.68	0.19	0.97	0.94	0.40	0.37
W1i	-0.58	0.18	0.81	0.75	0.58	0.37
W1k	-0.38	0.18	0.86	0.82	0.53	0.38
W1m	-0.75	0.19	1.02	1.10	0.33	0.37
W1n	-0.82	0.19	0.99	0.99	0.37	0.36
W2a	-1.19	0.20	0.98	0.93	0.37	0.34
W2e	0.46	0.19	0.87	0.85	0.51	0.37
W2h	-0.34	0.18	0.91	0.93	0.46	0.38
W2i	0.64	0.19	0.98	0.95	0.40	0.37
W2k	0.46	0.19	0.92	0.93	0.45	0.37
W2m	1.11	0.21	1.14	1.24	0.18	0.34
W2n	0.42	0.19	1.01	0.97	0.38	0.37
W3a	-1.71	0.22	0.93	0.77	0.41	0.31
W3e	0.71	0.19	1.18	1.33	0.15	0.36
W3h	0.49	0.19	1.07	1.10	0.29	0.37
W4a	0.22	0.18	0.90	0.87	0.48	0.38
W4e	-0.38	0.18	1.03	0.99	0.35	0.38
W4h	0.02	0.18	1.23	1.27	0.14	0.38
W4i	-0.48	0.18	0.94	0.88	0.45	0.37
W4k	-1.07	0.19	0.94	0.89	0.42	0.35
W5a	1.63	0.23	1.06	1.18	0.23	0.31
W5e	0.46	0.19	1.01	1.00	0.36	0.37
W5h	-1.00	0.19	0.92	0.83	0.45	0.35
W5i	0.94	0.20	0.81	0.72	0.56	0.35
W5k	0.08	0.18	1.13	1.16	0.24	0.38
W5m	0.25	0.18	1.09	1.13	0.28	0.38
W5n	0.94	0.20	1.18	1.45	0.12	0.35
W5ng	0.90	0.20	1.26	1.39	0.07	0.36

Figure 2 through Figure 31 are characteristic curves for each of the items. The red line is determined by parameters from the Rasch model and shows the proportion of examinees the model predicts will answer the question correctly as scores increase from low to high. The black lines indicate 1.96 standard errors either side of the red line. Each of the black dots represents a group of examinees. The horizontal location of a black dot is the average measure of the group, and the vertical location is the proportion of students in the group who answered correctly.

The extent to which the black dots follow the red line indicates the extent to which the item data fits the Rasch model.

Figure 2 Item characteristic curve for item W1a

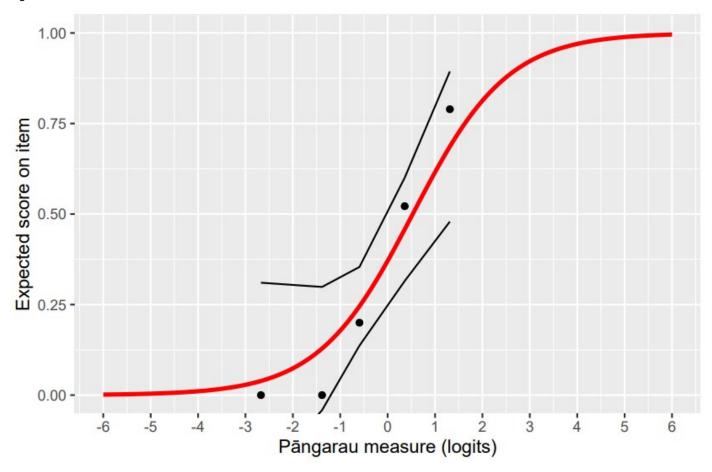


Figure 3 Item characteristic curve for item W1e

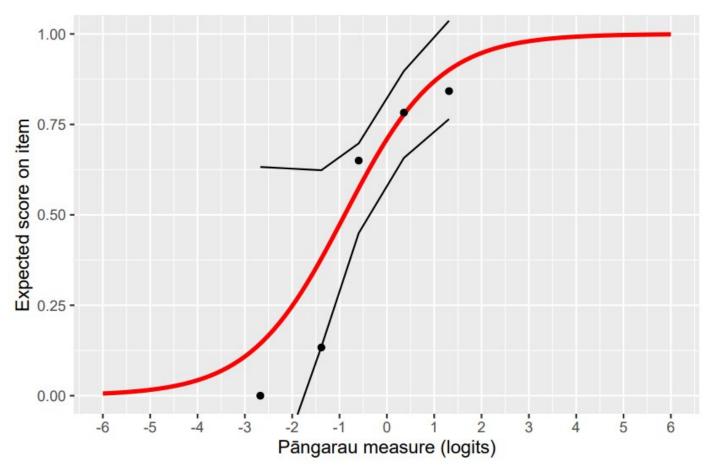


Figure 4 Item characteristic curve for item W1h

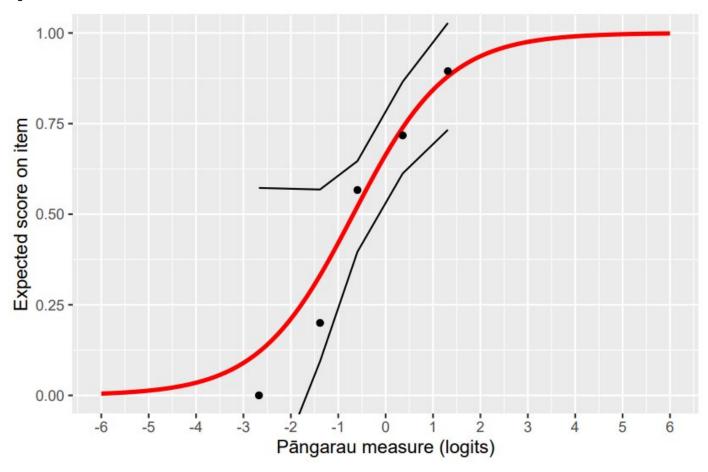


Figure 5 Item characteristic curve for item W1i

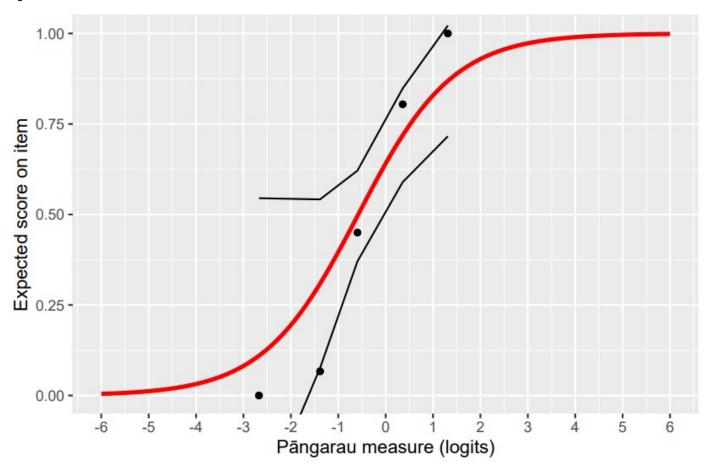


Figure 6 Item characteristic curve for item W1k

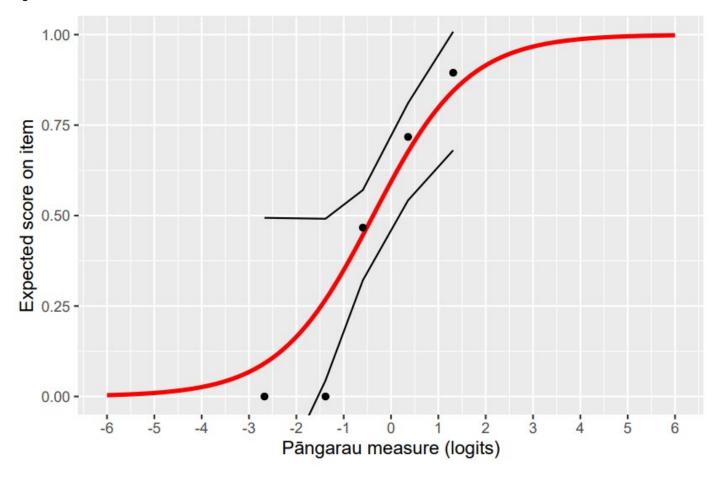


Figure 7 Item characteristic curve for item W1m

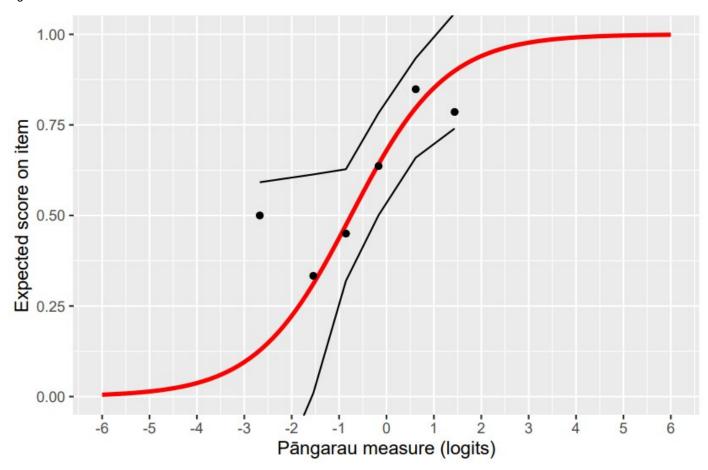


Figure 8 Item characteristic curve for item W1n

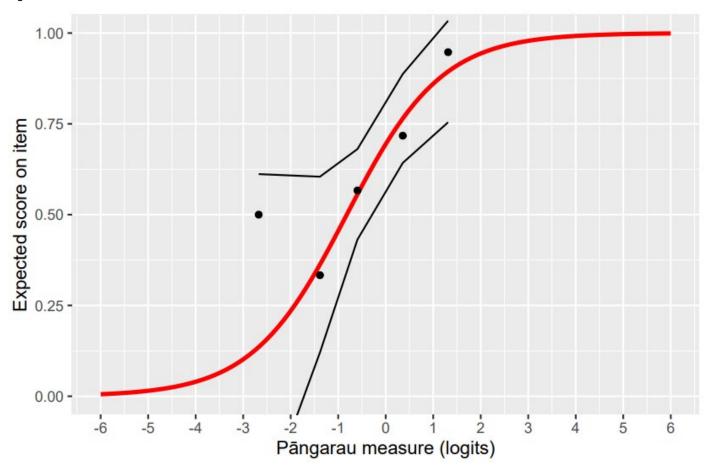


Figure 9 Item characteristic curve for item W2a

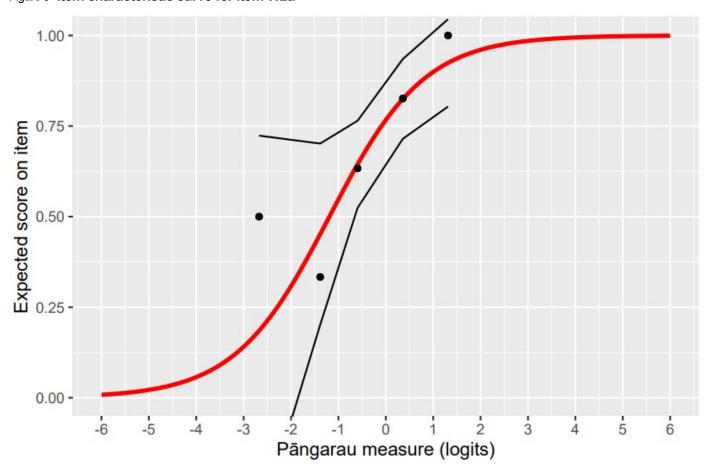


Figure 10 Item characteristic curve for item W2e.

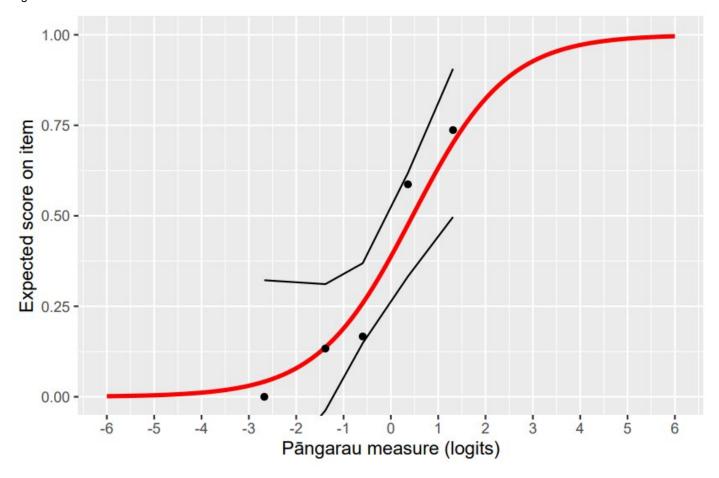


Figure 11 Item characteristic curve for item W2h

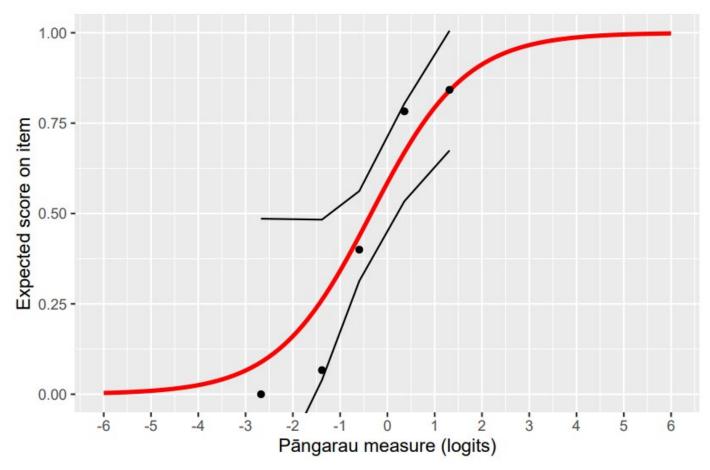


Figure 12 Item characteristic curve for item W2i

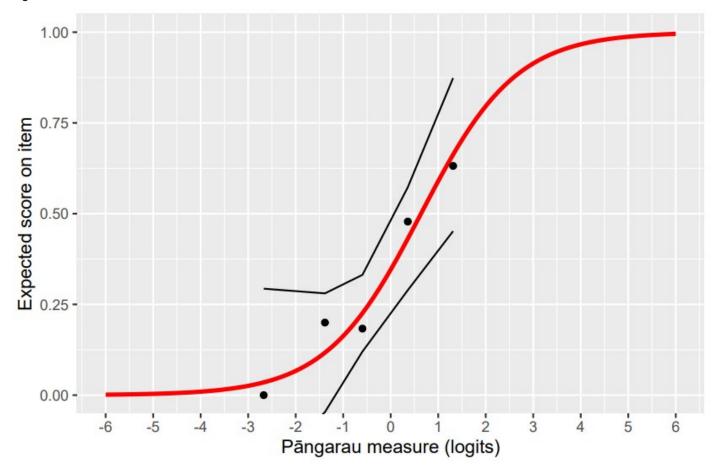


Figure 13 Item characteristic curve for item W2k

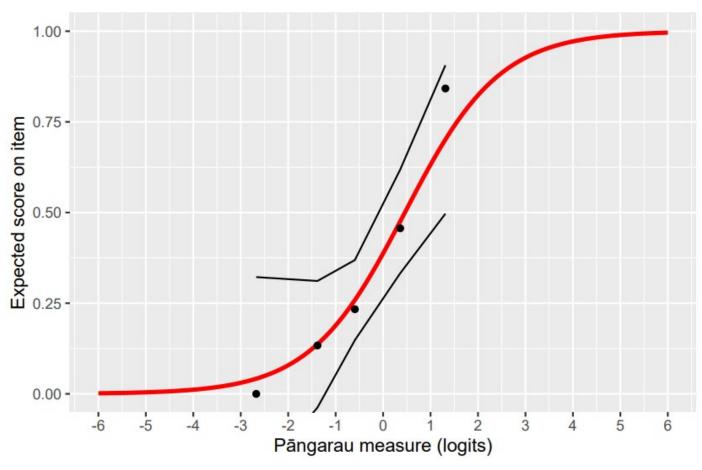


Figure 14 Item characteristic curve for item W2m

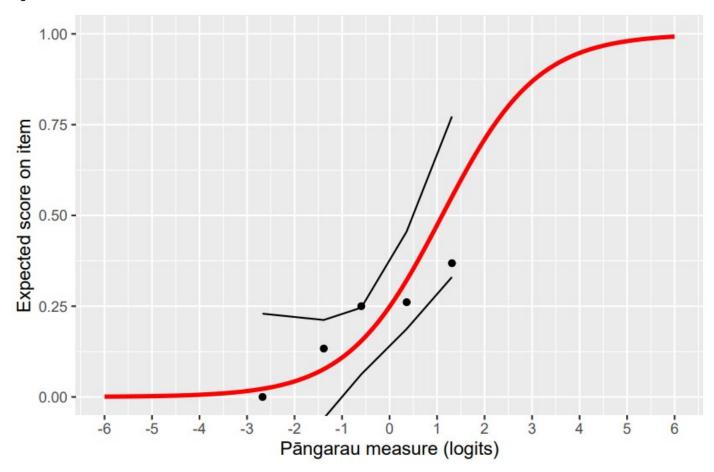


Figure 15 Item characteristic curve for item W2n

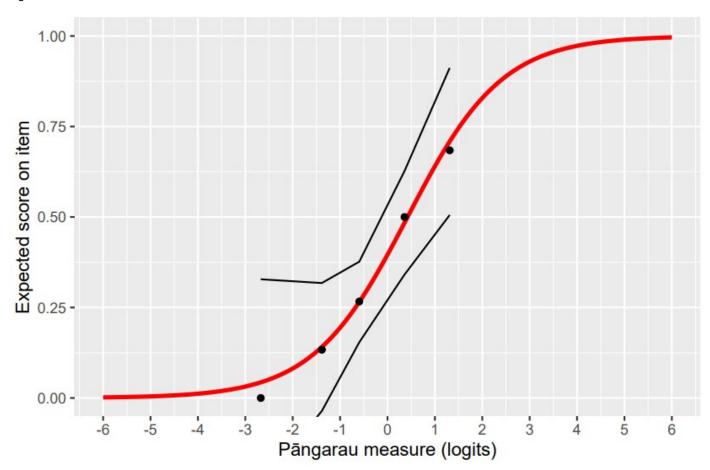


Figure 16 Item characteristic curve for item W3a

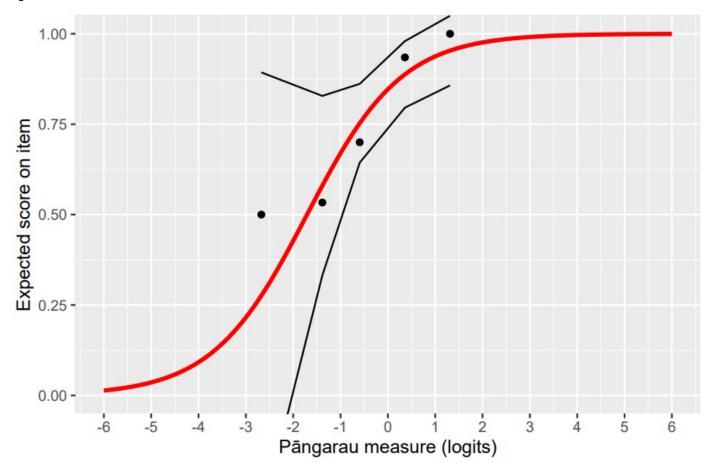


Figure 17 Item characteristic curve for item W3e

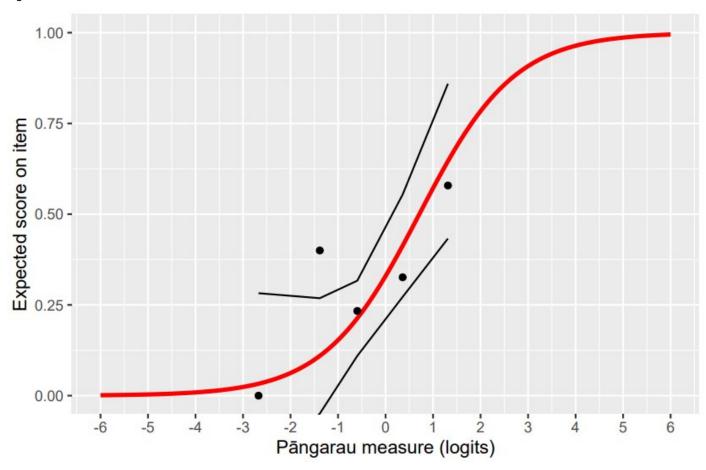


Figure 18 Item characteristic curve for item W3h

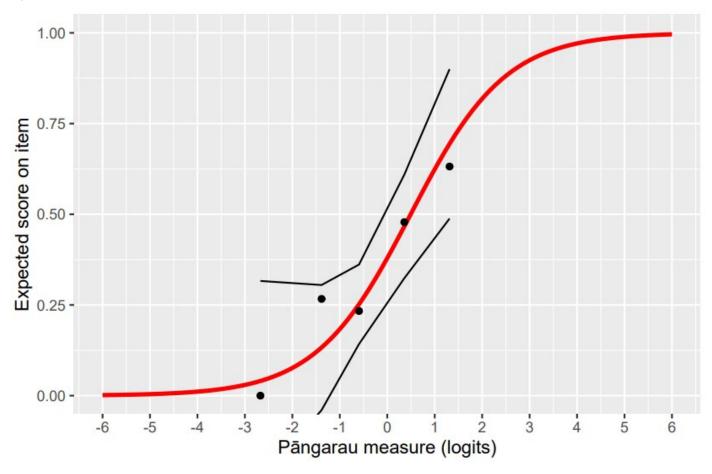


Figure 19 Item characteristic curve for item W4a

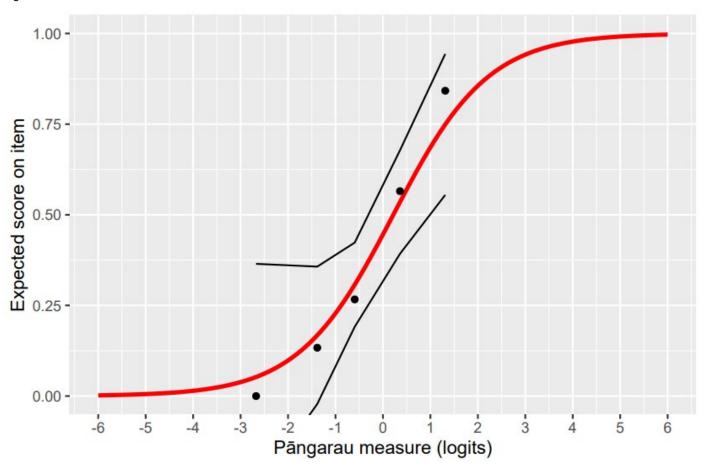


Figure 20 Item characteristic curve for item W4e

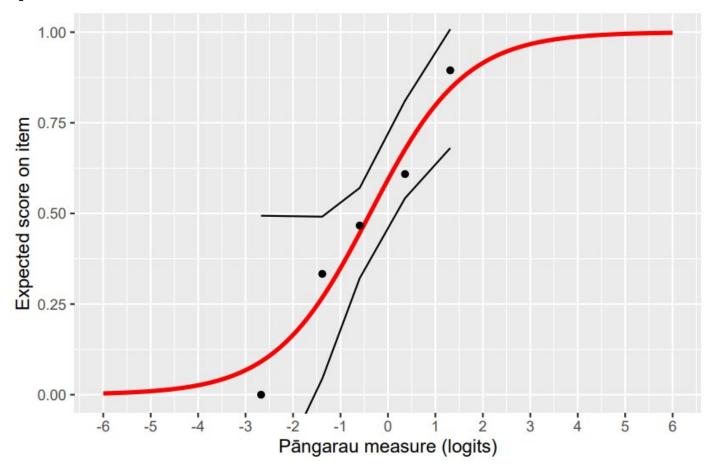


Figure 21 Item characteristic curve for item W4h

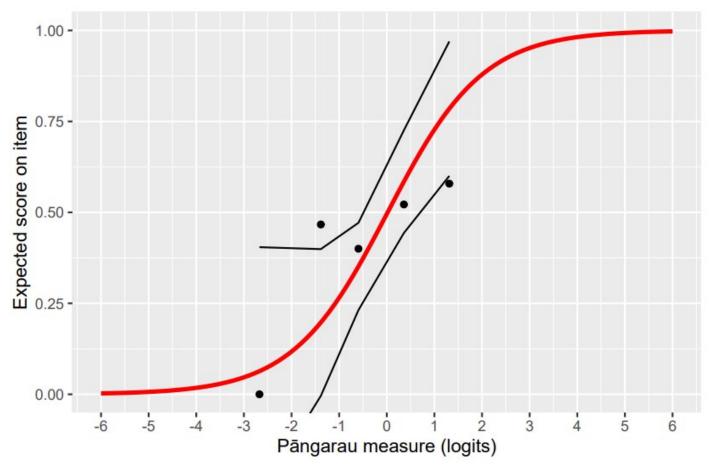


Figure 22 Item characteristic curve for item W4i

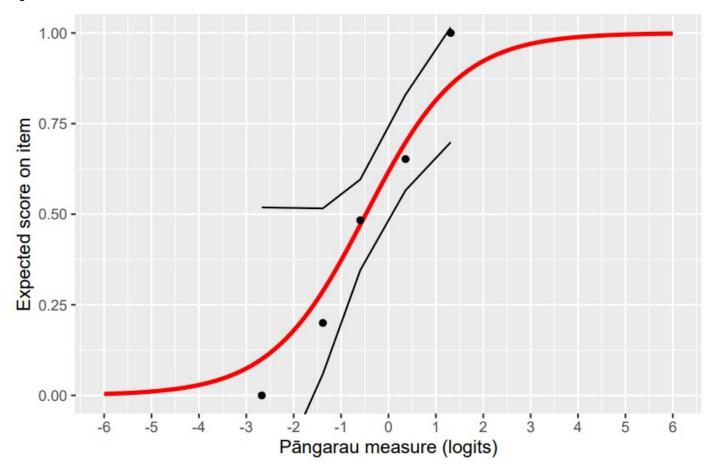


Figure 23 Item characteristic curve for item W4k

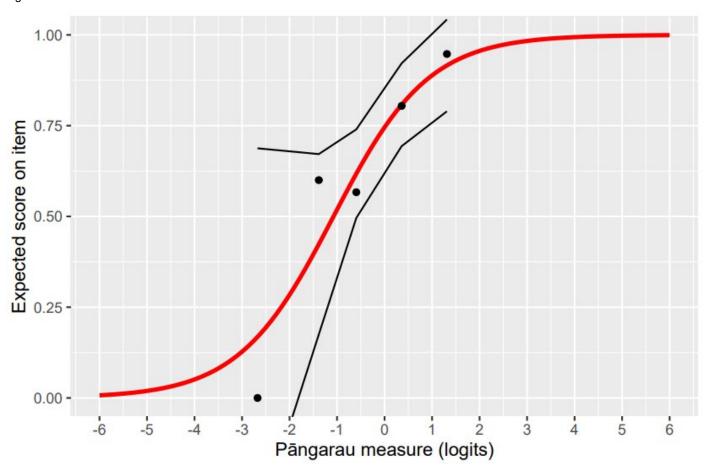


Figure 24 Item characteristic curve for item W5a

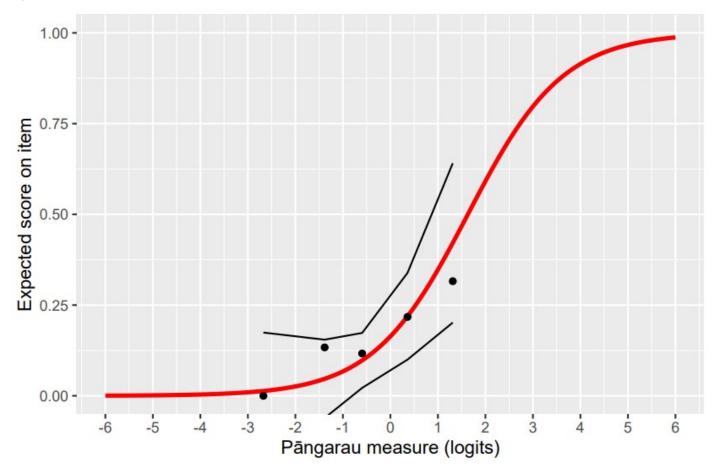


Figure 25 Item characteristic curve for item W5e

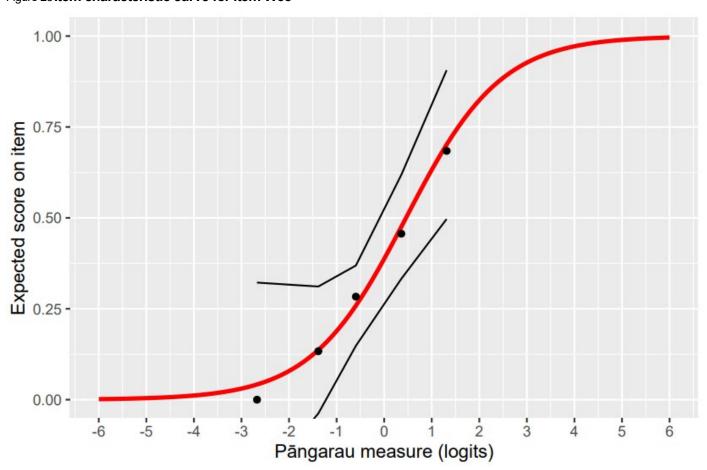


Figure 26 Item characteristic curve for item W5h

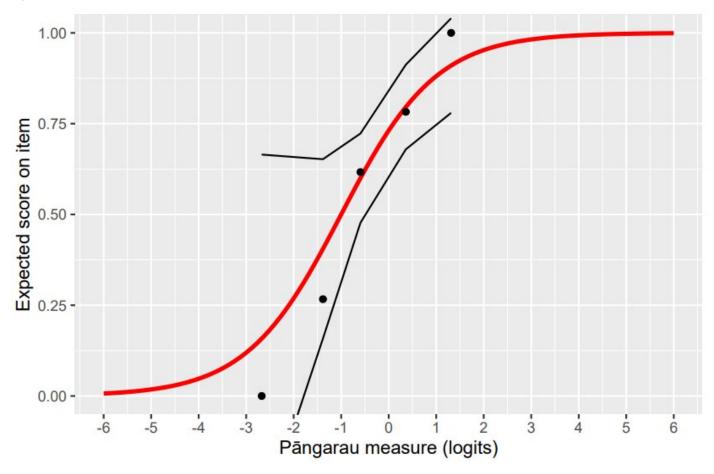


Figure 27 Item characteristic curve for item W5i

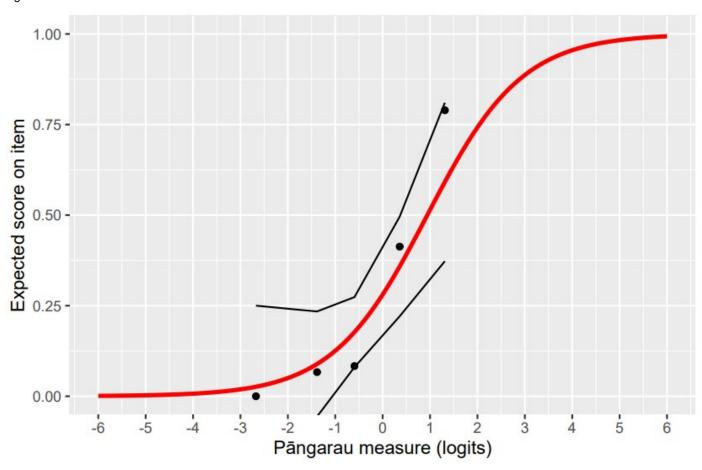


Figure 28 Item characteristic curve for item W5k

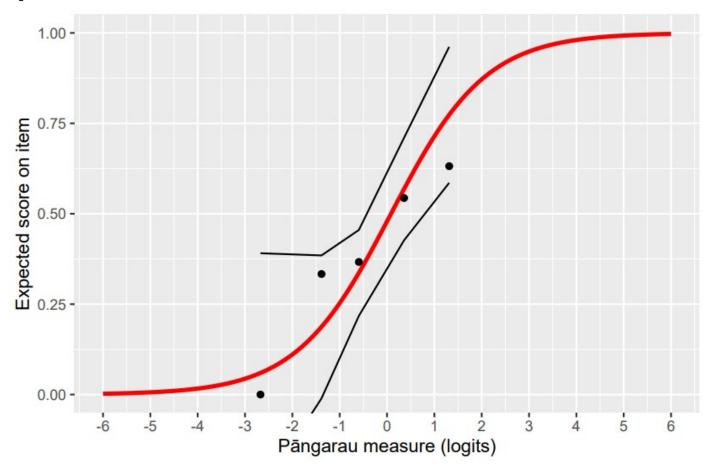


Figure 29 Item characteristic curve for item W5m

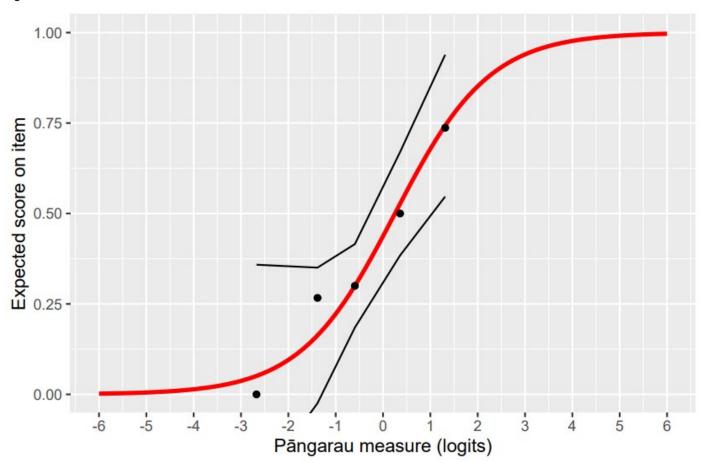


Figure 30 Item characteristic curve for item W5n

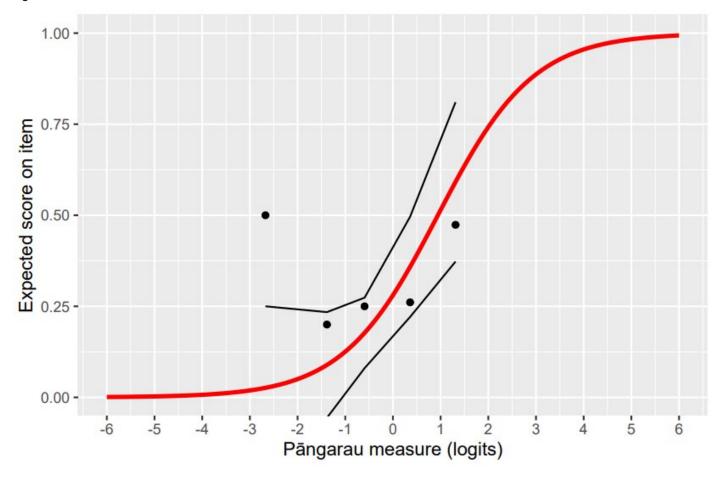
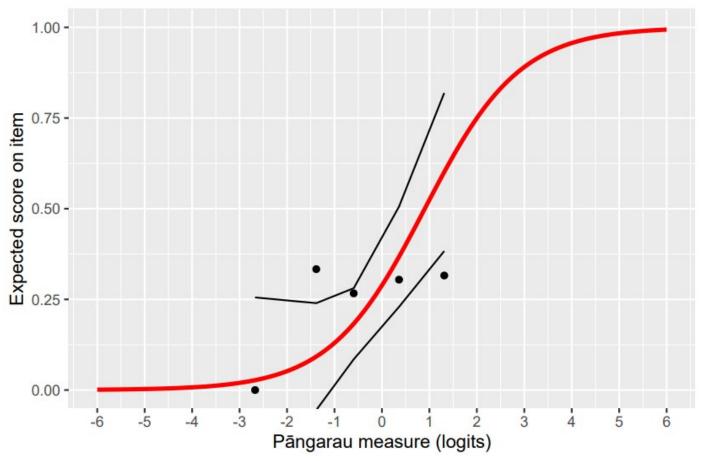


Figure 31 Item characteristic curve for item W5ng



Lara Beiert

From: Karen Chow < Karen.Chow@education.govt.nz >

Sent: Monday, 31 October 2022 3:09 PM

To: LN Pilot

Subject: Re: 2022 NCEA LitNum pilot: Release of results of first assessment event and next steps

Categories: Yellow Category, Green Category

All sorted - I messaged her directly (:)

Karen Chow | Learning Area Lead | ELSA Secondary Tertiary Operations and Integration

DDI

National Office Matauranga House

education.govt.nz

We shape an education system that delivers equitable and excellent outcomes He mea tārai e mātou te mātauranga kia rangatira ai, kia mana taurite ai ōna huanga



From: LN Pilot < Inpilot@nzqa.govt.nz> **Sent:** Monday, 31 October 2022 11:48 am

To: Karen Chow < Karen. Chow@education.govt.nz>

Subject: FW: 2022 NCEA LitNum pilot: Release of results of first assessment event and next steps

Hi Karen

This query came through the LiT Num Mailbox. Are you able to answer it? I am not familiar with PATm.

Regards Mary Jane

From:

Sent: Friday, 28 October 2022 2:50 PM To: LN Pilot < Inpilot@nzqa.govt.nz>

Subject: Re: 2022 NCEA LitNum pilot: Release of results of first assessment event and next steps

Hi

I have a question around determining student readiness to sit the Numeracy assessment. We currently use PATm data to see where our year 9 and 10 students sit.

In previous conversations/documents the PATm was also included as a way to assess students' readiness to sit the new Numeracy assessment, but there is now no longer any mention of it.

Have you looked at the value of PATm as a readiness tool in the way you have the e-asTTle?

Is there a reason the PATm is no longer mentioned?

Do I need to ask for my school to change the way we monitor improvement/curriculum level of students? Many thanks for your help

Numeracy Lead

On Fri, Oct 21, 2022 at 10:35 AM LN Pilot lnpilot@nzqa.govt.nz wrote:

Tēnā koutou,

Thank you again for your participation in the 2022 Te Reo Matatini me te Pāngarau | Literacy and Numeracy pilot. We appreciate your ongoing support as we implement changes to strengthen NCEA.

We cannot do this important work without you and acknowledge your commitment to enhancing Literacy, Numeracy, Te Reo Matatini, and Pāngarau.

Foundational skills boost learner engagement in their chosen subjects across the curriculum, open doors to jobs, and advance career opportunities later in life.

Today we have released the <u>results of the first assessment event</u> of the 2022 NCEA Te Reo Matatini me te Pāngarau | Literacy and Numeracy pilot as well as an evaluation report. The report includes a breakdown of results as well as insights and recommendations that have drawn on what you've told us.

We are working through the recommendations in this report so we can use it to enhance the standards, assessments, and support that will be provided in 2023. We have also released information on the actions we are taking now, both to strengthen the new standards and assessments as well as support schools and kura with the implementation of the standards. As part of this, we have also released the assessment activities and marking schedules from the June 2022 first assessment event. [Note: The unredacted version of the Common Assessment Activities will be available to teachers via their NZQA secure login in about a week's time.]

Literacy – reading Literacy – writing Numeracy Te Reo Matatini Pāngarau

The results show that there is more work to be done to support these important foundational skills. We remain committed to supporting what this looks like. We know that these skills support students' next steps in learning, life, and work. Foundational skills provide opportunities for learners to engage in their chosen subjects across the curriculum as well as in lifelong learning. They support students to participate in society and pursue career aspirations.

We have also released information on:

- the transition arrangements for 2023
- How to express an interest in using the new standards in 2023

In 2023, your school or kura will be able to enter students into the assessment. Students will be able to meet the NCEA literacy and numeracy requirements either through the new standards or through existing mechanisms. We thank you for your ongoing support. If you have any further queries, please do not hesitate to get in touch. Ngā mihi nui,

The NZQA and Ministry of Education Pilot team

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