



Briefing Note: Meeting with Dr Bobbie Hunter and Dr Jodie Hunter

To:	Hon Jan Tinetti, Associate Minister of Education		
Cc:	Hon Chris Hipkins, Minister of Education		
Date:	18 July 2022	Priority:	High
Security Level:	In Confidence	METIS No:	1291044
Drafter:	Campbell Birch	DDI:	9(2)(a) [REDACTED]
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Messaging seen by Communications team:	No	Round Robin:	No

Purpose of Report

The purpose of this paper is to provide supporting information for your meeting with Dr Bobbie Hunter and Dr Jodie Hunter on 21 July 2022. This includes an update on Developing Mathematical Inquiry Communities (DMIC) and the Maths Strategy.

Summary

- You are meeting with Professor Bobbie Hunter and Associate Professor Jodie Hunter on 21 July 2022 and your office has requested information to support this hui.
- Bobbie and Jodie Hunter are co-leaders of Developing Mathematical Inquiry Communities (DMIC), a Ministry-funded professional learning and development (PLD) initiative which focusses on equitable, culturally responsive pedagogy for maths teaching and learning.
- They would like to discuss the Maths Strategy with you, as well as initiatives that are supporting maths learning in Aotearoa New Zealand schools. They also wish to discuss the importance of children having an opportunity to achieve in maths and maintain a strong cultural identity, particularly given the impact that progress in maths has on learners' future pathways and outcomes in wider life.
- 9(2)(g)(i), 9(2)(j)
[REDACTED]
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[REDACTED]
[REDACTED]

Proactive Release

Agree that the Ministry of Education proactively release this Briefing as per your expectation that information be released as soon as possible. Any information which may need to be withheld will be done so in line with the provisions of the Official Information Act 1982.

Agree / Disagree



Christine Dew
Senior Manager
Te Poutāhū | Curriculum Centre

18/07/2022



Hon Jan Tinetti
Associate Minister of Education

21/07/ 2022

Background

1. Professor Bobbie Hunter and Associate Professor Jodie Hunter are well-established experts in maths education and co-leaders of Developing Mathematical Inquiry Communities (DMIC) in New Zealand. DMIC is a Ministry-funded professional learning and development (PLD) initiative which focusses on equitable, culturally responsive pedagogy for maths teaching and learning. It supports teachers to engage ākonga in reasoned mathematical practices within collaborative 'communities of mathematical inquiry' – i.e., group problem-solving.
2. At your upcoming meeting with them, on 21 July 2022, Bobbie and Jodie would like to discuss the Maths Strategy with you, as well as initiatives that are supporting maths learning in Aotearoa New Zealand schools.¹ They also wish to discuss the importance of children having an opportunity to achieve in maths and maintain a strong cultural identity, particularly given the impact that progress in maths has on learners' future pathways and outcomes in wider life.
3. As requested by your office, this paper provides supporting information for your meeting, including information on DMIC and the Maths Strategy and Action Plan.

Developing Mathematical Inquiry Communities (DMIC)

4. The DMIC programme was initially developed over fifteen years ago through collaboration with a group of teachers in an Auckland school setting with a predominance of ākonga Māori and Pacific learners. The delivery of DMIC has stood against a landscape of persistent inequities and a pattern of decline in maths achievement documented in national and international studies [METIS 1255456 refers].
5. DMIC has been funded by Te Tāhuhu o te Mātauranga | The Ministry of Education (Te Tāhuhu) since 2015 and is a significant part of our current PLD investment directed specifically to supporting maths teaching and learning.
6. Due to budget, Te Tāhuhu holds two separate contracts with Massey University for delivery of DMIC PLD, which together total \$4.85m p.a. These contracts each have distinct service specifications and reporting requirements, and are managed out of two separate business groups within Te Tāhuhu:
 - a. The DMIC contracts funded from the 'Quality Teaching and Learning' PLD appropriation as part of our national PLD offering are managed by Te Poutāhū | Curriculum Centre. In December 2020, Professors Bobbie and Jodie Hunter signed a PLD contract renewal on behalf of Massey University to cover 126 schools at \$6.1m over two years (\$3.05m p.a.). The renewed contract contains mutually agreed increased reporting and monitoring requirements, including quarterly meetings.
 - b. The Budget 2019 initiative 'Improving and Accelerating Outcomes for Pacific Learners' provided additional funding of \$7.2m used to establish another DMIC PLD contract, managed by Te Puna Kaupapahere | Policy. This contract provides funding for up to 50 schools in Auckland to receive a more intensive provision of the DMIC initiative over four years (\$1.8m p.a.).

¹ 'Maths' is used as a generic term encompassing the areas of numeracy and all aspects of Mathematics & Statistics covered in *The New Zealand Curriculum* (NZC).

7. 9(2)(j) [REDACTED]

Update on delivery of DMIC

8. The current DMIC PLD allocation model allows the DMIC team, in collaboration with regional Te Tāhuhu staff, to recommend schools for DMIC PLD. The DMIC team are contracted to deliver PLD to 126 schools but are currently engaging with 149 schools and over 1,400 teachers.
9. In December 2021, the DMIC team supplied a comprehensive annual report that showed trends captured through teacher observation and student wellbeing and engagement surveys.
10. The report notes a trend towards increasing uptake in higher decile schools. Of the 140 schools participating in the DMIC programme across the country that Te Tāhuhu holds information on, 55% are decile four and lower, 29% are decile seven or above, and 41% have less than 10 Pacific learners. Of the schools new to DMIC PLD in 2021, 43% are decile seven and above.
11. 9(2)(g)(i) [REDACTED]

The Maths Strategy and Action Plan

12. You publicly announced the Literacy & Communication and Maths Strategy in March 2022, noting that detailed action plans would be released later this year [METIS 1281489 refers]. We recently informed you we are working towards you releasing the Literacy & Communication and Maths Action Plan in August 2022 and that we will provide you with further advice on this in July 2022 [METIS 1289232 refers].
13. The Maths Strategy has been developed to strengthen teaching and learning in maths and lift progress and achievement outcomes along the English medium education pathway, from early learning to secondary school. Maths allows children and young people to fully participate in learning opportunities across the curriculum, access great education and post-school pathways, and realise their aspirations for their lives.
14. Actions in the Maths Strategy align with and advance work underway to refresh *The New Zealand Curriculum* (NZC). They also support key strategies and plans that are guiding change across the education system, including the Statement of National Education and Learning Priorities, Ka Hikitia – Ka Hāpaitia, the Action Plan for Pacific Education, and the Early Learning Action Plan.
15. In June 2022, we provided you with an overview of the components of the curriculum and assessment package in Budget 2022 [METIS 1287759 refers]. This included initial information about how the Literacy & Communication and Maths Strategy will be implemented, with indicative timeframes and an overview of delivery highlights.
16. A key early focus for the Maths Strategy and Action Plan is developing an evidence-informed common practice model. Aligned to *Te Whāriki* and the NZC, the common practice model is designed to introduce greater coherence and consistency in

leadership, teaching, and assessment for learning approaches for maths, along the learning pathway. The common practice model responds to what we heard clearly from educators during targeted engagements for the Maths Strategy and Action Plan – a desire for more guidance and support to help them deliver high-quality maths learning experiences that better meet the needs of diverse ākonga.

17. We know there is wide variation of maths learning opportunities and approaches to teaching maths. The common practice model will provide quality-assured guidance for teachers and leaders, making it easier to grow and spread inclusive and effective maths teaching approaches across the workforce (including evidence-based alternatives to harmful streaming and grouping practices). The common practice model will be embedded across a range of resources and services provided by Te Poutāhū and through our PLD supports, as well as eventually underpinning Initial Teacher Education (ITE) provision.
18. Te Tāhuhu will be developing the draft common practice model in Terms 3 and 4, 2022, and progressing this mahi in close alignment with work taking place on the NZC refresh. In Terms 1 and 2, 2023, we are planning wider collaborative development of the common practice model and consultation with the sector and key stakeholders, including ITE and PLD providers [METIS 1287759 refers].
19. The direction and content of the common practice model has not yet been established. It will be developed collaboratively and reflect sector experiences and the latest research findings. As we proceed, there will be opportunities for people to be involved, and the common practice model will be informed by national and international research on effective teaching practices, including for culturally and linguistically diverse ākonga.
20. Both the Literacy & Communication and Maths Strategy and Hei Raukura Mō te Mokopuna (te reo matatini and pāngarau strategy) contain recommendations to strengthen PLD. As part of finalising the strategies, we noted that we would be reviewing existing Te Tāhuhu investments in curriculum-aligned PLD to improve impacts and support delivery of the strategies [SWC-21-MIN-0211 refers]. Further advice will be provided to you.
21. As we move forward it will be important that the maths PLD offerings we fund provide the sector with access to PLD which is closely aligned to the common practice model for maths, as well as with the wider direction of the Maths Strategy and Action Plan and the refresh of the Mathematics & Statistics learning area.

Contributions to the curriculum and assessment work programme

22. Te Tāhuhu values the work of Professor Bobbie Hunter and Associate Professor Jodie Hunter and the contributions they have made to the development of the Maths Strategy and Action Plan.
 - a. Dr Jodie Hunter was a member of the Royal Society Te Apārangi Mathematics Expert Advisory Panel which provided independent advice on refreshing the Mathematics & Statistics learning area of the NZC and the direction of travel for the Maths Strategy and Action Plan [METIS 1271858 refers].
 - b. Dr Jodie Hunter also participated in the Mathematics in Early Learning Hui in April 2021, while Dr Bobbie Hunter was a participant in the Mathematics and Statistics Evidence and Challenge Hui in March 2021. Insights from both hui informed the development of the Maths Strategy and Action Plan.

- c. Both Bobbie and Jodie were present for the launch of the Literacy & Communication and Maths Strategy at the National Library of New Zealand in March 2022.
23. The Maths learning area of the NZC is being refreshed this year and Dr Jodie Hunter is a member of the Ohu Mātanga (team writers) contributing to this mahi [METIS 1279179 refers]. This writing group has direct input into the curriculum content currently being developed for the refreshed Maths learning area, the numeracy progression across learning areas, and the pedagogical guidance for the teaching and learning of numeracy, mathematics and statistics.
24. Research published by Bobbie and Jodie is contributing to the evidence base informing the draft curriculum content and direction for the refreshed Mathematics & Statistics learning area. 9(2)(f)(iv)
25. Research published by Bobbie and Jodie is also likely to inform the common practice model, alongside other evidence and findings.

Key Risks and Next Steps

26. 9(2)(j)
27. During 2023 we will be designing and procuring maths PLD support that is aligned with the common practice model. This will support teachers and leaders with the shifts in capability and knowledge when the common practice model is implemented in 2024.