

## # Editorial Preamble to Opinion Page

Michael R. Matthews

Issues related to the appropriate recognition of indigenous knowledge in school and university programmes, which are the subject of the following OP, have previously been examined in the newsletter.

In the [November 2019](#) OP, [Michael Corballis](#), [Robert Nola](#) and Elizabeth Rata outlined the central ontological, methodological and institutional differences between [Mātauranga Māori](#) (Māori knowledge of nature) and science. They argued that the two are not equivalent and that the first should not be included as science in school or university programmes. Nor should it be funded from the nation's competitive science research budget. Rather it should be funded from the humanities or social sciences budget.

In the [March 2022](#) OP, I described the [heated NZ national debate](#) occasioned by publication of a letter by seven University of Auckland professors (the so-called 'Defenders of Science'), to a national magazine, urging the separation of Mātauranga Māori from science [HERE](#).

The professors argued that the former should be taught, but in social studies, anthropology, or comparable programmes. They pointed out that parts of Mātauranga Māori, and its accomplishments, might have an illustrative, motivational, or pedagogical function in a science lessons, but cannot be the science lesson.

Within days of the letter being published, a petition demanding retraction and condemning the professors was signed by 2,000 NZ academics (including a Vice-Chancellor), school principals, teachers and graduate students. The gravamen of the petition was the charge that, contrary to the professors:

Mātauranga is far more than just equivalent to or equal to 'Western' science. ,,,

This is a major philosophical claim for which no evidence is provided or even mentioned. The petitioners depended upon an unstated, Kuhn-sourced, philosophical relativism. Something that has taken wide roots in New Zealand, and elsewhere [HERE](#).

Among other things, the professors were accused of was 'causing untold harm and hurt'. One, a professor of evolutionary theory, was removed from teaching as he was deemed 'unsafe for students'.

The controversy was not just national, but became international when disciplinary proceedings against three of the professors were instituted within the Royal Society New Zealand against three of the professors who were RSNZ Fellows – [Robert Nola](#), [Michael Corballis](#), [Garth Cooper](#). The last was the nation's most prominent, and internationally awarded, Māori medical researcher.

Pleasingly the charges were dropped. The three professors then resigned from RSNZ dismayed by its failure to defend the defenders of science. A less than glorious moment in the history of the RSNZ. The controversy has continued right through to the present. In the 4 March 2023 [issue](#) of *The Spectator* magazine, Richard Dawkins writes:

Origin myths are haunting and poetic, but they belong elsewhere in the curriculum. The very phrase 'western' science buys into the 'relativist' notion that evolution and big bang cosmology are just the origin myth of white western men, a narrative whose hegemony over 'indigenous' alternatives stems from nothing better than political power.

My own connection to the debate began thirty years ago when, in 1992, I was appointed the Foundation Professor of Science Education at the University of Auckland. At my first science faculty meeting, a motion was moved that completion of the Anthropology Department's course on Mātauranga Māori should satisfy the long-held requirement that all primary teacher-education students complete at least one science subject. I opposed the motion, arguing that, in New Zealand, there might be grounds for making Mātauranga Māori a compulsory subject for education students, but not in lieu of a faculty of science subject. The convincing educational and cultural arguments for the latter still stood.

The scientific tradition is simply unequalled in the knowledge of nature that it has produced ranging from details of the subatomic world to the structure and history of the cosmos, the self-

correcting critical procedures it has embraced, and the power that it has given humanity to deal with illness, pandemics and disasters of the greatest magnitude. Can any serious education be carried on without attention to science? And this attention can and should begin in primary school.

My objections notwithstanding, the motion to abandon the science requirement was carried. Consequently, the proportion of NZ primary school teachers with any knowledge of, and confidence about, science is vanishingly small. I published a book, [Challenging NZ Science Education](#), on the state of NZ science education in the mid-1990s. The problems I identified have only worsened. Likewise vanishing, is NZ's [once high standing](#) in international education assessments.

The educational, philosophical, cultural, legal and political dimensions of the New Zealand debate are mirrored in many other countries and provinces where there are vigorous traditions of indigenous knowledge. Importantly, and oft overlooked, most countries have competing, and conflicting, cultural knowledge traditions.

In New Zealand, the cohort of mixed-Asian ethnicity (15%) is almost the same as Māori (16%). Their cultural worldviews do not coincide. And neither coincide with much of the worldviews of the multi-racial, multi-religious European (Pakeha) cohort (70%). The last will include Special Creation, fundamentalist Christians. And Mormons. All these cultures have variously articulated worldviews and understandings of nature.

NZ has a significant [Hindu population](#) (nearly 3%), with Hinduism being is the country's second largest religion. Many Hindus embrace [Vedic Science](#) with its own distinct ontology and florid cosmology. The Indian nationalist BJP government finances Vedic science research and has established astrology chairs in university astronomy departments.

NZ has a robust Muslim population (50,000+) spread across many ethnicities. Islam has its own distinct worldview and ontology. And it has a long history of cultivating [Islamic science](#) and natural philosophy both of which are taught and funded in many Muslim countries. The

worldview accommodates entities such as [Jinn](#) that are active in nature and daily life.

In NZ there might be upwards of twenty local, non-Western knowledges. Across the world there are thousands of local or indigenous knowledge traditions about nature. These are documented in [multi-volume encyclopedias](#).

In all international cases, the question of whether indigenous knowledge, or lore, is science, how much of it is scientific, how much is antithetical to science, and whether the particular local knowledge should be funded, taught, promoted, and staffed in science departments—have arisen.

That there are overlaps, that science can learn from indigenous traditions, and that there is pedagogical value in contrasting one with the other—is not contended. But this does not make both science. Informative lessons for everyone can be drawn from the NZ debate and policy history.

New Zealand is a textbook case of the requirement to combine philosophy of education and philosophy of science in the determination of national education policy. More is the pity that the first discipline, along with all other foundation subjects (psychology, history, sociology), has largely disappeared worldwide from teacher education. Consequently, education is prey to whatever might seem a good idea at the time. It is left prone to faddism – behaviourism, constructivism, technologism, managerialism, economism, jobism, pragmatism, student-centeredism, and whatever other *ism* is currently popular. Too easily education takes the shape of the last political foot that trod upon it.

Many have convincingly argued for the importance of [philosophy in teacher education](#). I have argued that the [liberal tradition in education](#) provides countervailing perspectives and resources for teachers and administrators. This tradition needs to be much more energetically embraced in New Zealand.

## # Opinion Page: Open Letter to New Zealand Prime Minister Opposing the Inclusion of Mātauranga Māori as Science in the School Curriculum

ELIZABETH RATA, PETER SCHWERDTFEGER, DAVID LILLIS AND RAYMOND RICHARDS

**Elizabeth Rata** is a professor of sociology in education and a Fulbright Senior Fellow. She is the Director of the Knowledge in Education Research Unit at the University of Auckland. She was an English teacher and member of the Auckland Runanga which campaigned for [Kura Kaupapa Māori education](#) (Māori language immersion schools). Her research is in two main areas: the connection between knowledge and democracy, and how a knowledge-rich curriculum is aligned with the best teaching methods from New Zealand's progressive tradition.

**Peter Schwerdtfeger** holds a chair in theoretical chemistry at Massey University New Zealand, he is Director of the Centre for Theoretical Chemistry and Physics, is the Head of the New Zealand Institute for Advanced Study, and is a former president of the [Alexander von Humboldt Foundation](#).

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**Raymond Richards** is a Research Associate and retired senior lecturer in history at the University of Waikato. He graduated from the University of Waikato before earning his PhD in History at the University of California, Santa Barbara. His book *Closing the Door to Destitution* (Penn State University Press, 1994) was nominated for five awards in the United States. His biography of Sir Geoffrey Palmer, *Palmer, the Parliamentary Years* (Canterbury University Press, 2011) was nominated for a NZ Post Book Award.

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Dear Prime Minister Hipkins,

We, the undersigned, draw your attention to two major problems in the Ministry of Education's Curriculum Refresh policy and in the associated NCEA qualification reforms. These problems were created during your tenure as Minister of Education and can only be solved by calling an immediate halt to the radical initiatives causing the problems. Because the matter is of such urgency, this letter is an open one and will be made public.

**The first problem** is the fundamental change to the purpose of New Zealand education contained in the Curriculum Refresh document, [Te Mātaiaho: The Refreshed New Zealand Curriculum: Draft for Testing, September 2022](#).

**The second problem** is an effect of the first. It is the insertion into the curriculum of traditional knowledge, or [mātauranga Māori](#), as equivalent to science.

### **Problem 1: Changing the purpose of New Zealand education**

Since the 1877 Education Act, the purpose of education has been to build our nation upon the accumulated knowledge of humanity. The intended benefits of this universal education system are numerous. Six generations of New Zealanders are educated; a robust economy is developed; stable democracy is secured through secular institutions – all enabling the social cohesion of a multi-ethnic population with different backgrounds but united in its commitment to our nation.

The Curriculum Refresh has abandoned this goal of unity. Instead, the democratic idea of the universal human being upon which the education

system was founded is replaced with a localised system that classifies children into racialised groups with, as the Curriculum Refresh states, ‘diverse ways of **being**, understanding, knowing, and doing’. (Our emphasis).

The ‘[Kaupapa Statement](#)’ that guided the Curriculum Refresh development makes this revolutionary new purpose perfectly clear:

We are refreshing the New Zealand Curriculum (the NZC) to better reflect the aspirations and expectations of all New Zealanders. The refresh will adorn our ākonga with a 3-strand whenu (cord). This korowai will be layered with huruhuru (feathers) representing who they are, who they can be, their whakapapa, and their connection to our whenua (lands). The whenu tying it together is made up of whānau (family), ākonga, and kaiako (teachers) working as partners to use and localise the NZC.

The refresh will ensure that the NZC reflects **diverse ways of being, understanding, knowing, and doing**. It helps us inclusively respond to the needs of individual ākonga, who are at the centre of all we do. Ākonga will be able to see their languages, cultures, identities, and strengths in what they learn at school. This will empower ākonga to go boldly into an ever-changing future and contribute to local, national, and global communities.

This vision will primarily be realised by kaiako and school leaders, in partnership with iwi and their school communities. However, it will be important for all New Zealanders to be part of this journey and help create multiple pathways towards equity and success for all ākonga. (Our emphasis.)

## A racialised curriculum

After classifying children racially, the Curriculum Refresh embeds this identity categorisation. We are to be recognised in the education system as either Māori or not. Yet the reality is that modern individuals choose which identity matters to them, a choice informed by personalities, capacities, interests, goals, family, communities and heritages, and likely to change during the lifespan as circumstances change. At school we share the identity of pupil and student.

In contrast, the culturalist ideology now informing education policy places our identity as an ethnic one, a view that risks perpetuating fixed racial

stereotypes. More seriously, it links culture to race, a link justified by the belief that how individuals think, behave, and relate to others is pre-determined by their genetic ancestry.

This race-culture link is seen in the Kaupapa Statement that ‘*Ākonga will be able to see their languages, cultures, identities, and strengths in what they learn at school*’. It is a pre-modern race ideology that will destroy our modern future-oriented education system and should be seen for the revolution it is.

## Problem 2: The effects of radical change

The second problem to which we draw your urgent attention is the effects of this radical transformation of New Zealand education. They include ‘culturally responsive pedagogies’ – the idea that diverse way of ‘being, knowing, understanding and doing’ require different learning approaches.

An example of this is the misguided belief that Māori- and Pacific-heritage children learn better in groups. Literacy too is under attack by those seeking to ‘decolonise’ reading and writing – see a contribution to the New Zealand Association for Research in Education [HERE](#)

## The knowledge equivalence error

We draw your attention specifically to the effect on the curriculum caused by the false claim that traditional knowledge and modern science are equivalent (mana orite). This is damaging, not only to science education within New Zealand but to our nation’s international reputation.

The damage occurs in two ways. First, the interweaving of mātauranga Māori across the science curriculum forces a comparison between the two knowledge systems in ways that do justice to neither. Traditional knowledge has its own value and purpose and belongs in curriculum subjects such as social studies, geography, and literature. But it is not science and does not belong in the science curriculum.

Second, the NCEA Reform and Curriculum Refresh bring pseudoscientific ideas into science due to the poor transposition of some concepts from mātauranga Māori. For example, the [NCEA](#)

[Chemistry & Biology Glossary](#) introduces the idea of *mauri* as a relevant concept in biology and chemistry. It defines *mauri* as:

The vital essence, life force of everything: be it a physical object, living thing or ecosystem. In Chemistry and Biology, *mauri* refers to the health and life-sustaining capacity of the *taiao*, on biological, physical, and chemical levels.

[Vitalism](#), the idea of an innate ‘life force’ present in all things, has surfaced in many cultural knowledge systems, including European, but has been soundly refuted and is not part of modern science. Inserting *mātauranga Māori* into the science curriculum will, not only lead to confusion in our schools and for our students, but will destroy our nation’s reputation for quality science.

A scholarly account of the difference between *mātauranga Māori* and modern science which compares the properties of each knowledge type, their differences, their relationship, methods and procedures for their development, and policy implications is available on pages 13-21 of the November 2019 [HPS&ST Newsletter](#).

### **Halt the Curriculum Refresh**

Asserting that the [Treaty of Waitangi](#) is ‘a fundamental component of our constitution’, Te *Mātaiaho*: the Curriculum Refresh’s radical goal is to ‘foster the next generation of Te Tiriti partners by moving beyond the rhetorical notion of “honouring” Te Tiriti to giving effect to it’ (p.5).

But the status of the Treaty is subject to unresolved political contest. It is undemocratic to engineer a revolutionary constitutional change through the educational curriculum.

We ask for the restoration of an academic curriculum and qualification system based on the democratic principles of universalism and secularism; a system that enabled generations of New Zealanders to acquire the universal knowledge of humanity.

Such curriculum was the reason for the nation’s successful education system that has lasted nearly one hundred and fifty years. The transformative Curriculum Refresh will undo the principles and practices that made such success possible with dire consequences for New Zealand’s future.

Prime Minister Hipkins, the Curriculum Refresh and the NCEA Reforms were developed on your watch as Minister of Education. It is, therefore, incumbent on you to repeal them before irrevocable damage is done to our country. As Prime Minister, you are certainly in a position to do so.

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