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There is a growing shortage of Science teachers in New Zealand for the positions advertised. Increasingly schools are recruiting teachers from overseas. NZASE Science Communicator Heather Goodey converses with overseas trained teachers to not only learn from their experiences what incoming teachers might need to know to teach in NZ, but also what strengths and insights our overseas-trained colleagues bring to the teaching profession here.

New Zealand's education system is highly devolved, meaning that every state school manages themselves through a school board. Given that each school can independently determine the majority of operational decisions for their school, there is considerable variation on how they choose to structure Science departments and resource them. Therefore, the experiences of teachers throughout New Zealand are influenced by the different school types and the community they serve.

Here, four overseas trained teachers from a range of backgrounds and experiences highlight areas that any teacher new to the New Zealand secondary Science education system might find helpful to be aware of in advance. The common themes of advice to a teacher new to New Zealand are:

- Research the national assessment system National Certificate of Educational Achievement, NCEA before you start.
- Sport and cultural events are very important to New Zealand schools.
- New Zealand teachers are highly collaborative.
- Learning about the culture is an ongoing journey.

Research the assessment system NCEA

Some schools offer alternative assessment pathways such as International Baccalaureate (IB) and Cambridge (CIE). However, all state schools with Year

12 and 13 (Y12,Y13) must offer NCEA Level 2 and Level 3 (L2,L3).

National Certificate of Education (NCEA)

All the teachers interviewed agreed that the NCEA assessment system takes some time to understand, especially with all the recent changes. Kathrin, a Science teacher from the USA now teaching in Wellington, recommends asking lots of questions early on "You don't know what you don't know, right? You don't really understand how different the system (NCEA) really is. So, try to get ahead of that before you are in front of students."

Gemma, a science teacher from the UK with 6 years of experience in NZ, also expressed the challenges of NCEA and the credit system. She recounts one experience, "One of the students said, 'I'm not sitting organics because it's too hard' and it took me by surprise. That's very difficult to get your head around because in the UK you sit the exams whether you want it or not." However, she also notes that this experience changes from school to school.

NCEA fact file: (Disclaimer: the NCEA assessment is under review and some requirements may change)

- NCEA is a standards-based assessment with three levels - L1, L2, L3.
- To achieve NCEA at any level, students need to gain

a total of 60 credits at the level, and have met the NCEA literacy and numeracy requirements.

- Students receive one of 4 possible grades for each assessment: Not achieved, Achieved, Merit, Excellence.
- Each assessment is allocated a number of credits which should reflect the amount of knowledge and skill being assessed (2-6 credits). Students receive the same number of credits for a standard regardless of the level of attainment. For example, a student with an 'Achieved' grade and a student with 'Excellence' for the same standard receive the same number of credits.
- Assessments can be either internal or external. An internal assessment task is administered by the school and marked by the teachers with some samples sent to external moderation. The externally assessed standards are set and marked by teachers contracted to New Zealand Qualification Authority (NZQA) and in Science subjects are generally an exam style assessment at the end of the year.

Other NCEA fun facts:

- There is no need to complete a lower level before a higher level is taken.
- Most schools offer L1 in Y11, L2 in Y12, and L3 in Y13 but there is no requirement for the school to do so.
- Students can be studying at multiple levels between or even within subjects. For example, a Y11 course may include three standards at level 1 and one standard at level 2.
- A Science course can include standards from one science domain or across multiple domains: Science, Biology; Chemistry, Physics, Agriculture and Horticulture, Earth and Space Science.
- It is also possible to design a course that uses standards from multiple fields, for example, Science, Physical Education and Mathematics. These decisions are made by the school.

(This is further complicated by recent changes to Level 1 where standards are named after 2 domains.)

This leads to a large degree of flexibility in course design for schools but potentially a large variation in student experience across New Zealand.

However, every assessment system has positive

and negative attributes. Gemma spoke of the deeper understanding that students attain through the NCEA assessment system. "The level of understanding is huge because you have to actually understand what is being assessed. I like the depth that they go into. The UK education is knowledge-rich but its assessment processes are only surface-deep."

Chris, a teacher from South Africa says that in Physics, he really liked the mix of internal and external assessments and felt overall the students left school with a good education. Kathrin also appreciates how there are fewer disruptions from standardised assessments than she experienced in the USA and Sweden. "Not having the emphasis on the standardised assessments multiple times a year has been wonderful. There would be entire weeks when you are not teaching. You might start a topic and then have to pick it up a week and a half later. You would start a topic and say, well, we'll pick up with that in a week and a half when I see you next. "



Netball [College Sport Media]

Sports and cultural events are very important to New Zealand schools

New Zealand schools have a high priority on sports and cultural events. Gemma shares one encounter in her first weeks teaching New Zealand, "I remember saying to a girl if she was leaving my lesson to go to a netball trial, I was going put her in detention. I was like, no, you're not going. You're here to learn. You're not here to play netball." Gemma quickly learnt that there is a balancing act between class and sport and notes this is similar to her experience at other New Zealand schools.

Kathrin also has observed the greater priority put on school sports and cultural events, "I do notice that

there are a lot more sports and cultural related activities that tend to disrupt the learning here than I guess I was anticipating." She recommends that teachers need to become flexible to accommodate the various activities whatever they are, like haka competitions, sasa competitions and sporting events.

New Zealand teachers are highly collaborative

Chris is grateful for the sharing and collaboration of staff. He notes, "Because of the lack of guidance from the curriculum I would not have survived in the beginning without other teachers' resources." Kathrin also adds, "I feel like it's a lot more siloed teaching in the US whereas here it's trying to make sure everything's feeding into everything else and everyone's working cooperatively for the overall success of the school and not just the grade they teach."

Sakshi Gupta from India expresses how important support is to new teachers - "Who you work with really matters. You need to learn how the school system works from scratch. You don't have the experience of being a school student here, so you have lots of new things. So, support is important."

Gemma found the teaching culture contrasted with her experience in the UK. "What I like about New Zealand is that you are trusted. It's a high-trust model and you are trusted to do your job. People are here to help you. But also, you do have to ask because Kiwis can be quite reserved."

Learning about the culture is an ongoing journey

Chris has only been in the country for a short time and is still trying to understand the culture. He notes, "I have tried to read up and understand the cultural aspect of Māori and learn about the politics and history, but where I am teaching I feel there aren't a lot of Māori students. So, I find that my exposure hasn't been so high and I am still getting my head around it."

Gemma also felt it depended a lot on the community you were in. Having now taught in different parts of New Zealand she recognises how important Māori culture is to her community. "I don't feel stupid saying 'kia ora' to my students. I feel much happier. The fact that you get a proper welcome, a pōwhiri when you start a new school is

amazing. In the UK, I felt you were lucky if you got spoken to nicely on your 1st day."

Sakshi appreciates how in New Zealand schools students' prior experiences and backgrounds really matter. She explains how this has changed how she teaches. "Using examples and contexts that relate the learning to students' experiences and more activities is a big change from how we teach in India. I now include these two ideas in my teaching."



*Image by Richard Shihamau, ASB Polyfest 2008 Wesley College
Tonga Group*

Some key differences between New Zealand-trained teachers and OTTs

One theme that was echoed by the overseas-trained teachers was how in New Zealand we teach across the full age range and content. Chris noted how in New Zealand teachers spread out their teaching across the year levels so there is more prep and a larger teaching load.

Kathrin spoke of how the greater breadth of subject knowledge led to greater collaboration but less time to focus on individuals' preparation time, as time was split between preparing new content and preparing lesson material for specific learners. "So, if I was teaching the same Year 9 lesson three times a day to three different groups of students I'm really more focused on this particular group of students, and thinking about what nuance can I bring into this? How can I really adapt the reading for that particular group of students? Or how can I do this one particular activity differently for that one particular group of students? I feel like when you're teaching Year 10, Year 11, Year 13, I'm more just trying to get through the content and focused more on just kind of meeting the needs of them all." But she recognises that this comes at the expense of many positive aspects in the New Zealand system and having that

large overall view of each student's education and greater collaboration from more teaching staff.

Final thoughts

During these conversations, the teachers also shared some of the more positive aspects they have discovered from living and teaching in New Zealand, alongside a few “kiwisms” that recent arrivals to New Zealand might relate to.

Kathrin has embraced morning tea and really enjoys taking time to know her colleagues as people and making connections. “I don't have to only talk to my colleagues about work. I can have time where I go down, I make myself a cup of tea, I can breathe. We can talk about, you know, our children and the books they're reading. And what did you do over the weekend? I've really enjoyed that aspect of the culture here.”

Sakshi has enjoyed the practicals and how safe she has felt in New Zealand, but she does miss the options of street food she grew up with in India. Chris says that his family's all-time favourite aspect of living in New Zealand is the ice cream which he thinks should come with a health warning, he says, “It's insanely good and we eat too much of it!”

Gemma gives two examples of Kiwisms that make her laugh. “Yeah nah” like well, is it yes or is it no like what is it? I still struggle. Like what do you mean? Is it

yes, or no?” She also recounts one common accent problem, “One of my Year 11 students asked me for a pen. But I heard 'pin'. So, I was like, why do you want a pin? Honestly, for about 5 minutes I was asking. ‘Why do you need a pin?’ and he replied, ‘Miss a pen, a pen.’ Finally, I realised it was actually a pen and they wanted to write something down. Gemma finished by summing up her family's overall experience in New Zealand as “a genuine positive environment.”

Useful links:

- https://www2.nzqa.govt.nz/ncea/about-ncea/#e1158_heading1
- <https://ncea.education.govt.nz/>
- <https://workforce.education.govt.nz/becoming-teacher-new-zealand/overseas-trained-teachers/learn-about-our-education-sector>

Regional science teachers associations for networking and regional events:

- <https://nzase.org.nz/about/regional-branches/>
- Science subject associations:** <https://nzase.org.nz/about/subject-associations/>

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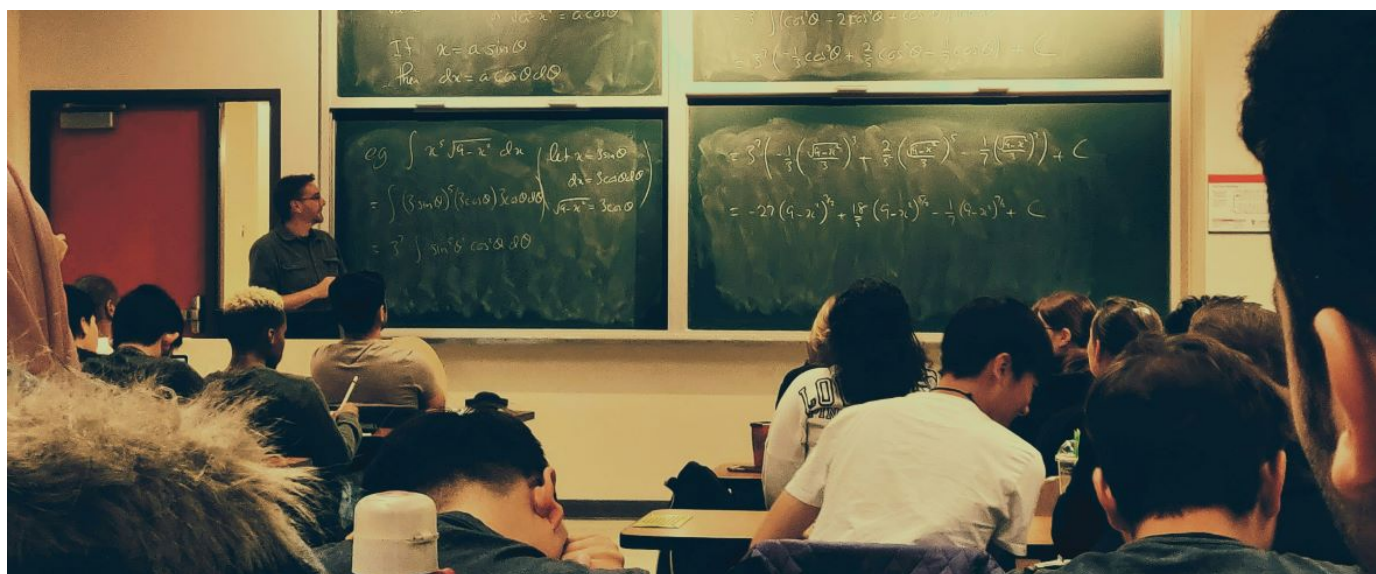


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