

Professional Learning and Development Accreditation

The following summary of practice provides a personal profile and a summary of your expertise. This information will help schools, kura and Kāhui Ako choose a facilitator who best meets their needs.

Your Personal Profile

First name and Surname	Stephen Ross
Your iwi (optional)	
Personal statement	My roles in secondary education as dean of year 10 and year 11, teacher in charge of physics and head of science over a period of 15 years have challenged and developed my thinking and approaches around teaching and learning. In the 21st century information is in abundance and digital technologies empower learners and teachers like never before. How do we prepare learners for such a fluid and connected world? I am passionate about delivering experiences where learners' insights are actively sought and valued, where ethics and attitudes are critiqued and explored, where learners have agency to create their own successful outcomes and where opportunities exist to link learning across multiple disciplines. I am a lifelong learner and I love to share in the learning journeys of others.

Your Professional Learning and Development Practice

Science Capabilities and Nature of Science in the New Zealand Curriculum: My strength in understanding the science curriculum enables me to confidently support teachers to unpack the meaning behind the Nature of Science strands and their supporting Science Capabilities. As these are applicable to every science context strand in all levels of the New Zealand Curriculum document, I enjoy challenging teachers to reconsider their pedagogy and shift the focus from memorising content to using content knowledge in developing thinking skills and “ways of knowing.”

Active Learning: I work alongside teachers to help them develop a range of relevant learning activities that are hands on, require collaboration and creativity to solve problems and which call on communication skills and curiosity in order to increase engagement and which allow learners to make their own meaning.

Teaching as Inquiry: Ensuring that robust inquiry is a part of teaching and learning and is used when trialling or introducing new initiatives so informed evaluation can take place and evidence-based decisions can be planned.

Curating teaching evidence: I can support teachers to maintain a digital portfolio which provides evidence for teacher registration.

Blended Learning: Combining digital with physical, the real with the virtual, and using 21st century approaches involving digital technologies gives greater voice to ākonga and allows teachers to offer new pedagogies to engage and extend learners. Using the SAMR model as a guide, I can support teachers to redefine their pedagogy in contemporary New Zealand classrooms.

Future Focussed/21st Century Learning: I am experienced at assisting teachers to see how cross-curricular models of teaching and learning allow learners to unpack authentic issues in their communities, break them down into rich questions to inform project based learning, followed with a meaningful outcome or product where learners can demonstrate their learning and have an impact in their own world.

Digital Citizenship: Discussing how a school's values and tikanga can translate into safe online practices.

Professional Information

Qualifications

- Google Certified Educator Level 1 (Google, 2018)
- Certificate of Applied Practice (Mindlab Unitec, 2015)
- Graduate Diploma of Teaching and Learning (Christchurch College of Education, 2002)
- Bachelor of Science (Massey University, 1997).

Currently studying "Learn to Code by Making Games - Complete C# Unity Developer" online course through Udemey. The aims are to learn C#, develop a positive attitude to problem solving, gain an excellent general knowledge of game creation, learn how object oriented programming works in practice, be able to transfer knowledge to .NET, other languages.

Experience in the delivery of professional learning and development:

- Increasing learner engagement and progression in science through culturally responsive pedagogy and by forming relationships where I showed manākitanga and ako with ākongā .
- Trialling a range of literacy activities and digital technologies in science followed by sharing of these strategies with teachers.
- Planning and implementing cross-curricular future focussed curriculum.
- Facilitating collaborative co-construction hui with teachers to respectfully critique their learning practices and lead teachers to a place where they could extend themselves and iterate on prior experiences.
- Developing and progressing a curriculum based on Nature of Science and Science Capabilities, so learners are better equipped to deal with and critically consider new information.
- Conducting teacher observations based on Te Kotahitanga and Kia Eke Panuku models including unpacking of these observations and providing shadow coaching of teachers in order to move them from a traditional to a discursive style of teaching.
- Planning and implementing activities week programmes for junior learners with a STEAM (science, technology, engineering, arts and mathematics) focus including the use of AutoCAD software, laser cutting and 3D printing equipment.
- Providing practical science activities to primary learners in their schools so that they can use equipment and techniques not normally available to them.

Curriculum Design

- Experience with writing learning schemes for junior science, year 11 sciences and senior physics courses, including supporting literacy activities, practical activities and assessment, recording and processing assessment data and learner voice.

Networks

- I am an active member of the New Zealand Facebook pages for Primary Teachers, Physics teachers, Science Teachers, Chemistry Teachers, Biology Teachers and Mathematics Teachers.
- I connect with educators, services and I share my learnings on Twitter @Aratiatia1.
- Member of the New Zealand Institute of Physics Teachers.

Special Interest Areas

- In 2017 I presented at the NZCER Games for Learning Conference where I discussed the potential of LittleBigPlanet for learners to use visual coding/logic systems and construct games to demonstrate learning and as a platform for virtual STEAM challenges.
- Gamification and games for learning
- Developing education e-portfolios to collect evidence and reflection for teacher registration
- Digital technologies to enable and enhance collaboration eg Google Apps For Education, browser based apps.

- Creating video for use in flipped learning can demonstrate concepts and skills in a medium that is easy to watch, engaging and which can complement a variety of learning activities.

Examples of Practice (Summary)

Facilitating a school's science faculty transition to Science Capabilities and a Nature of Science focus in junior science.

I have lead a science department in unpacking science capabilities and seeking professional development on the Nature of Science to move away from a content-driven curriculum. Teachers' understanding of the capabilities grew and learning programmes based on siloed content strands were replaced with capability-focussed schemes of work. Teachers felt freed to become more culturally responsive and to teach to student interests when checklists of content knowledge were removed. Developing this programme in a sustainable way means that the department has abandoned summative content assessment and is continuing on their journey in science capabilities and Nature of Science where they are currently exploring ongoing formative assessment for progression.

Developing a cross-curricular Future Focus trial in junior high school subjects.

I worked closely with a colleague to propose and seek feedback on a cross-curricular approach to trial a 21st century learning model across year 9 and 10 classes. I delivered whole-staff professional development to unpack the proposal, shift thinking and challenge traditional attitudes to teaching and learning. Acting on teacher voice meant I could modify the PL plan and give support where it was most needed. Explaining the trial to learners meant their voice could be considered in the final inquiry which I presented to the staff at the conclusion of the trial. The school is now looking to 2019 and planning for significant school wide curriculum and systems change to embrace a future focussed education and increase learner engagement.

Promoting digital pedagogy growth in a school.

As an early implementer of digital technologies I was able to inspire and model digital pedagogies for staff at a traditional New Zealand school. I was able to discuss best practice as the Google Apps for Education suite was introduced as well as demonstrate how other digital technologies could give teachers new ways to engage with learners. This began within a learning area and expanded to include professional development for many teachers within the school. I could show learners the potential of these technologies and support them to see their learning from a new perspective.

Referees

Referee One

Referee Name	Peter Moyle, Principal, Taupo-nui-a-Tia College
Contact Number	07 376 1100 (school)
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Referee Two

Referee Name	Rod Forrest ,e-Learning Leader, Taupo-nui-a-Tia College
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