

Sustained Excellence in Tertiary Teaching General Category

Dr Heather Purdie

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"Earth is a dynamic and engaging classroom in which to teach students about interactions between people and the environment; real scales, real processes, real complexity."

Heather's father instilled in her a passion for the environment and her desire to teach was inspired by her own positive experiences. She has always been fascinated by glaciers, was captivated by her Geography teacher's explanation for rock-roundness, and later, during teacher training, was challenged to reflect on simple questions arising from subjects such as waste management.

Her teaching journey began while working as a park ranger for the Department of Conservation (DOC) at Aoraki Mount Cook. There, she developed and delivered school education sessions as part of their Learning Experiences Outside the Classroom (LEOTC) programme, in which she is still actively involved. Later, while working as a guide at Fox Glacier, she enjoyed creating interactive ways to teach people about glaciers and climate change.

"Geography is about relationships between te tāngata me te whenua (people and land). Through my teaching I aim to ignite (or re-ignite) this connection; I want students to get excited about the environment and to have a desire to understand the natural world for its own sake!"

Heather's approach to facilitating a connection with the natural world is to 'bring the outside in'. She creates interactive lecture experiences that encourage students to engage and process their experience. She uses practical experiments to encourage students to develop and modify hypotheses, before linking the outcome of the demonstration to its related theory. These in-class experiments complement Heather's experiential teaching philosophy. She believes she doesn't need to go outdoors to apply an experiential philosophy to teaching, but can also tap into her students' past experiences, stimulating engagement and, through this, learning.

Complementary to her experiential classroom is her use of pūrākau, or storytelling, as a teaching tool. Heather uses this technique because it is engaging, fun, and stimulates reflection and learning. She believes people are never too old to be told stories and draws on Māori legends as well as personal stories from her glacier guiding days. She incorporates her own research results into her teaching and, through her personal stories, illustrated with photos and videos, students can vicariously experience a journey to the glacier or mountain.

As a physical geographer, Heather teaches at a range of locations in New Zealand and Antarctica. As traditional approaches to field teaching which involve staff leading a group of students, doesn't align with her experiential teaching philosophy - because it limits the opportunity for problem-solving, evaluation and decision-making - Heather redeveloped her approach to field teaching and assessment. She now asks students to gather field evidence and to classify the landform themselves, stimulating critical thinking and problemsolving.

Prior to 2014, Heather ran field trips on Fox and Franz Josef Glaciers. However, as these have receded further up-valley, foot access has ceased and Heather has had to adapt her teaching to this changing environment. In 2015, she developed a field trip to a local ski-field, which also includes interaction with ski-field snow safety officers who, through their own stories, provide important links between theory and real-world application. She also presents videos taken during her own research - which capture the sounds and feel of the glacier - in lectures and online. She now hopes to use a 360° camera to create virtual glacier field trips for those students who are unable to participate in them. Such is her reputation for being a dynamic and effective field teacher, Heather has been asked to contribute to study-abroad programmes run by Sheffield University, England and Macquarie University, Australia.

Heather creates assessment items that are varied in style and provide opportunity for students to reflect and improve. She developed a 3-part video assessment that is a mixture of group and individual work, and based on a real-world scenario or a topic of the students' choosing. Peers, tutors and lecturers assess the 3-minute group videos, with the top videos shown and voted on by students and staff during a 'grand final'. Heather's approach to assessment at graduate level focuses on developing activities with real-world application, creating experiences that will assist students with future employment.

A particular interest of Heather's is fostering an understanding of Māori culture and in 2018 she received the College of Science Kaupapa Māori Award in recognition of her sustained commitment to improving bicultural competency. In 2015 she worked on the University's College of Science working group, Te Ohu Pūtaiao, tasked with undertaking a bicultural stocktake. As a result of this, she helped develop a new 100-level course designed to explicitly address bicultural competence in the science curriculum, and was invited to contribute to a workshop on Culturally Responsive Pedagogy.

In 2014, Heather completed a Post Graduate Certificate in Tertiary Teaching (PGCTT), building on knowledge and skills established during earlier teaching training (Graduate Diploma in Teaching and Learning). She is a Fellow of the Higher Education Academy and, as well as often being highly nominated as Lecturer of the Year, she was awarded the New Zealand Geographical Society President's Teaching Award in 2015 and a University of Canterbury Teaching Award in 2018.

Outside of her academic work, Heather is a valuable resource in the community. In 2016 she was invited to join the reference group that oversees the LEOTC programme run by DOC at Aoraki Mount Cook. In 2015 she worked with DOC to redevelop visitor interpretation panels at Franz Josef Glacier and she continues to provide science communication support to glacier tourism operators. She also maintains linkages with secondary school teachers, running workshops for students about glaciers and climate change and is a collaborator in an Ako Aotearoa-funded research project Bring Your Own Device (BYOD) to field class: Integrating digital and community mapping in field-based coursework, which helps students shape their own fieldwork futures.

"To really care for our environment we not only need to understand it, but also feel connected to it. 'Bringing the outside in' is one way in which I foster that connection..."



















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