



## 2019 UTD Grant Projects Snapshots

### 2019 Project Titles (Snapshots Below)

- **A Robust Tool to Assess Numeracy Competency for First Year Students.** Associate Professor Boris Baeumer
- **Tailoring academic support for postgraduate distance education students in the Cook Islands and Pacific region for the Otago School of Medicine.** Dr Katharina Blattner
- **Micro-Credential for Skills-Based Accreditation.** Dr David Eyres
- **Adopting the Audio-Visual Essay as an Assessment Tool. A Pilot Project.** Associate Professor Catherine Fowler
- **UNESCO Cities of Literature Short Play Festive.** Associate Professor Hilary Halba
- **Developing and implementing four Flipped models to develop professional thinking during Early Learning in Dietetics lectures.** Associate Professor Joyce Koh
- **Haematology Classroom Flip.** Dr Sean MacPherson
- **Gamified approach in Medical Education.** Mr Vivek Perumal
- **Mental wellbeing of students in Health Sciences First Year. Stage 2: Measuring the impacts of the redeveloped course.** Professor John Reynolds
- **Borrowing, Adapting, and Remixing: Digital Humanities, Shakespeare, and Undergraduate Pedagogy Project (BARDS).** Dr Shef Rodgers
- **Creating community and achieving excellence in times of radical curriculum and departmental change: an evaluation study.** Ms Carla Thomson
- **Developing and disseminating guidelines for involvement of transgender community members in teaching trainee health professionals.** Associate Professor Gareth Treharne
- **A Bridge into Social Anthropology.** Dr Susan Wardell

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<b>Title</b>	<b>A Robust Tool to Assess Numeracy Competency for First Year Students</b>
<b>Project Team</b>	Associate Professor Boris Baeumer (PI), Dept. Mathematics & Statistics, Dr Chris Linsell and Mrs Andrea Knowles, College of Education
<b>Snapshot</b>	We developed and benchmarked an online tool that allows for the assessment of relevant numeracy competency. Previous studies have shown that achievement of numeracy competency at a level slightly higher than Step 6 on the TEC adult numeracy scale is a good predictor of success in introductory first year quantitative papers. The tool is designed to give feedback whether this level has been achieved. Our assessment consists of 20 contextualised questions on the topics of fractions, decimals, percentages, and ratios and proportions (~20- 30 min). Students are required to answer five randomised questions in each topic (calculator allowed). The tool is easily deployable, benchmarks well against the TEC Adult Numeracy Assessment Tool without the administrative overhead and privacy concerns. Comparing outcomes in MATH151 and STAT115 with assessment results confirms the test as a good predictor of outcome, allowing for timely and targeted intervention.
<b>Title</b>	<b>Tailoring academic support for postgraduate distance education students in the Cook Islands and Pacific region for the Otago School of Medicine</b>
<b>Project Team</b>	Dr Katharina Blattner (PI), Dr Mark Smith, Dr Rory Miller, Dept. General Practice & Rural Health; Dr Kiki Maoate, Associate Dean Pacific, Christchurch; Allamanda Faatoese, Dept. of Medicine (Christchurch); Dr Rosalina Richards, Director, Centre for Pacific Health; Frances Brebner, Pacific Regional Coordinator
<b>Snapshot</b>	This project concerns postgraduate students based in Pacific Island countries, studying in the distance-taught Rural Medical Postgraduate programme. The study aimed to explore the student experience, focusing on academic support. Methods included a document review and qualitative interviews. Immediate clinical relevance and applicability of a recognised generalist medical programme with rural-remote emphasis and delivered mainly at-a-distance, was identified as a major strength. While technologies posed some issues, these were generally easily solved. Main challenges related to the Pacific Country-based and distance-education nature of the students who cross education and health systems and national borders to study at Otago. Traditional support services and resources are campus focused and not always easily accessed. Study for individuals worked best when part of a Pacific in-country training pathway.

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	Sustained success for this cohort of students needs both innovative support solutions and internal and external stakeholder engagement and collaboration.
<b>Title</b>	<b>Micro-Credential for Skills-Based Accreditation</b>
<b>Project Team</b>	Drs David Eyers (PI), Steven Mills, Lech Szymanski (AIs), Dept. of Computer Science; Mr Matthew Jenkin (Research Assistant)
<b>Snapshot</b>	<p>In this project, we investigated using digital badges—a form of micro-credential—to attest that learners have successfully mastered technical skills. We presented initial work examining digital badge standards and micro-credentials at the eResearch NZ 2019 conference.</p> <p>We curated teaching resources for the Git version control software, and have released a technical report that compares popular online resources. We then designed our own interactive teaching module, released as open source software. The project also led to the creation of teaching material for the Docker tool, which can help effect reproducible research practices. Our open source Docker teaching resource is under incubation as a Software Carpentry lesson.</p> <p>We tested integrating the issuing of digital badges into the COSC360 summer semester paper and documented a process for teaching staff to use in future. We also surveyed students regarding their interest in, and views about the usefulness of the digital badges issued to them.</p>
<b>Title</b>	<b>Adopting the Audio-Visual Essay as an Assessment Tool. A Pilot Project.</b>
<b>Project Team</b>	Associate Professor Catherine Fowler (PI) and Mr Bernard Madill (Assistant Research Fellow), Dept. Media Film and Communication
<b>Snapshot</b>	<p>What impact can a production-based assignment - the audio-visual essay - have upon improving students' critical media literacy competency? First year students for Film and Media papers are enthusiastic media users (of Instagram, YouTube, Facebook, twitter) yet widening exposure has not equated to deeper understanding of or improved ability to communicate with, create and evaluate images. By introducing a new mode of assessment – the audio-visual essay – our objective is to provide students with opportunities to use digital editing tools to reflect upon media in a critical way and thereby improve their critical media literacy competency. Analysis of three sets of questionnaires are inconclusive about the general question of whether improvements did indeed take place. However the completed audio-visual essays do suggest an improved level of critical media literacy competency than was evident in students' initial assignment, which was a presentation.</p>
<b>Title</b>	<b>UNESCO Cities of Literature Short Play Festive</b>

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<b>Project Team</b>	Associate Professor Hilary Halba (PI), Professor Stuart Young (AI) and Mr Nathaniel Ridley (Research Assistant), Dept. of Music, Theatre & Performing Arts
<b>Snapshot</b>	<p><b>Aims of Project:</b> The project’s aim was to investigate the design and delivery of a model for experiential learning and reflective practice – including the deployment of appropriate assessment tools – that is specific to the performing arts and that bridges the “knowledge-practice gap”, particularly in relation to event management, production management and dramaturgy. The vehicle for the project was the 2019 UNESCO Cities of Literature Short Play Festival, but the model may be applicable to other tertiary teaching contexts and the creative arts more widely.</p> <p><b>Methods:</b> We designed and delivered Special Topic papers, whose strategies included mentoring by professionals and peer-mentoring, and the fostering of collaboration, self-directed learning and self-reflection. We used both qualitative and quantitative tools to measure and analyse the students’ experiences.</p> <p><b>Key Findings:</b> The evaluative tools yielded a range of findings, including the students’ perception of the course’s “un-university-like-ness”; the students’ recalibration of perceptions of the relative importance of different theatre skills; and recognition of the connection between the course and career opportunities.</p> <p>The students experienced a strong sense of accomplishment as a result of their contribution to the Festival. The project also extended the relationship between the University and Dunedin UNESCO City of Literature.</p>
<b>Title</b>	<b>Developing and implementing four Flipped models to develop professional thinking during Early Learning in Dietetics lectures</b>
<b>Project Team</b>	Associate Professor Joyce Koh, Higher Education Development Centre; Nikki Scott, Minako Kakaoka and Angie Lucas, Dept. of Human Nutrition
<b>Snapshot</b>	In this project, four lecture topics in the Master of Dietetic programme were redesigned using flipped learning. This was to enhance students’ engagement in professional thinking during curriculum time for lectures through experiential learning, case-based learning, cultural interviews, and collaborative learning. These lessons were implemented with 32 Early Learning students. Pre and post study surveys found that flipped learning significantly enhanced students’ perceived confidence for practicing the associated dietetic skills with large effect sizes. Content analysis of student learning artefacts showed that students developed personal heuristics for Subjective Global Assessment, cultural skill, cognitive reasoning strategies for rationalising ethical action, and clinical understanding of small bowel disease interventions. Students felt involved, engaged, and responsible for their own learning during

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	flipped learning. Flipped learning also helped tutors to strengthen the linkages between lesson objectives and student outcomes. Suggestions for departments and teaching staff seeking to implement flipped learning are discussed.
<b>Title</b>	<b>Haematology Classroom Flip</b>
<b>Project Team</b>	Dr Sean MacPherson, Dept. of Pathology; Ms Rachel Anson and Mr Lloyd Walker, Medial Production Unit; Prof Tim Wilkinson, Mr Anthony Ali and Mr Scott Hallman, Education Unit, University of Otago (Christchurch)
<b>Snapshot</b>	<p>The flipped classroom method is increasingly popular, thought to promote higher-order thinking, and an effective means of increasing engagement and motivation. This project examined the feasibility of such an approach within the undergraduate haematology course for medical students in Christchurch.</p> <p>We introduced flipped classroom sessions to replace two lectures, and compared this component with the rest of the course. We looked at feasibility, student feedback and whether this might provide a viable solution to reduced lecture theatre capacity in the future.</p> <p>Videos on lymphoma and myeloma were produced in Dunedin with the Media Production Unit, and provided as an online resource for students prior to a team-based learning tutorial. Video content was peer reviewed before release. Students and tutors provided feedback after the sessions.</p> <p>Conclusion: The flipped classroom method is both feasible and popular. Videos provide a lasting resource, useful for revision and available across campus for future widespread use.</p>
<b>Title</b>	<b>Gamified Approach in Medical Education</b>
<b>Research Team</b>	Dr Vivek Perumal (PI) Dept. of Anatomy, University of Otago; Mr Sambit Dash (AI), Dept. of Biochemistry, Manipal University, India
<b>Snapshot</b>	<p>The aim of this project is to explore gamification, a novel and emerging educational approach, on undergraduate medical students. The project involves design and development of an online educational game on the human nervous system, monitor student engagement with the game, and evaluate its impact on learning outcome. The game is currently available to use for medical students from the two participating universities (Otago and Manipal).</p>
<b>Title</b>	<b>Mental wellbeing of students in Health Sciences First Year. Stage 2: Measuring the impacts of the redeveloped course.</b>

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<b>Project Team</b>	Professor John Reynolds (PI) Dept of Anatomy; Dr Shyamala Nada-Raja, Senior Research Fellow, Centre for Pacific Health; Dr Jo Oranje, Assistant Research Fellow, HSFY Programme and Mr Paul Garbett
<b>Snapshot</b>	This two-stage project aimed to evaluate the impact of a learning environment intervention on the mental wellbeing of Otago's Health Sciences First Year (HSFY) students. In 2018, we gathered baseline data on the wellbeing of HSFY students. In 2019, we implemented changes to the HSFY programme (an intervention) to enhance the student experience and manage the impact of the programme on wellbeing. In Stage 2 (this grant), data was collected from the 2019 cohort and was compared to the 2018 baseline. Following an identical methodology to the 2018 study (also funded by a CALT grant), a mixed methods approach included three online assessments of mental wellbeing across the academic year ( $n = 572$ ) and focus groups in each semester ( $n = 20$ ). Results and findings have been generated and were presented to the HSFY Strategic Management and Curriculum Committees (the former was chaired by the Vice-Chancellor). Further meaningful analysis is continuing, as the large datasets have revealed many foci that warrant further investigation. Publications are being drafted.
<b>Title</b>	<b>Borrowing, Adapting, and Remixing: Digital Humanities, Shakespeare, and Undergraduate Pedagogy Project (BARDS)</b>
<b>Project Team</b>	Dr Shef Rogers, (PI), Drs Michael Cop & David Large (Research Fellows) and Ms Nicola Cummins (Teaching Fellow) Dept. English and Linguistics
<b>Snapshot</b>	The BARDS project created a digital tool for students to read, edit, and adapt Shakespeare. It aimed to improve literature students' ability to read seminal literary texts critically and to participate in the process of adaptation, setting a foundation for their subsequent literary studies. BARDS responded to the Cycle 5 Academic Audit's statement 4.1: "Universities should use processes for monitoring and enhancing students' engagement with their study and learning." Digitally recreating or creating stories (i.e. students simultaneously edited and created their own edition and adaptation) has been recognized as helping young learners engage their study (Robin 2006 and 2008; Sadik 2008; Smeda, Dakich, and Sharda 2014; Yang and Wu 2012). As close reading has been thought to improve literacy as well (Boyles 2013; Fang 2016; Fisher and Frey 2014 and 2015; Wertz and Saine 2014), BARDS responded to statement 4.4: "Universities should use processes for identifying and assisting students at risk of under-achieving."
<b>Title</b>	<b>Creating community and achieving excellence in times of radical curriculum and departmental change: an evaluation study</b>

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<b>Project Team</b>	Ms Carla Thomson (PI), Professors Sheila Skeaff and Caroline Horwath, Dept. of Human Nutrition
<b>Snapshot</b>	<p>This project, which was informally dubbed ‘the belongingness project’, was instigated after a period of staff downsizing and curriculum change in a university department. The project ran alongside teacher development and community re-building efforts, and aimed to evaluate and inform these efforts. The project used group concept-mapping sessions, one-to-one interviews, a feedforward questionnaire and observations of professional learning sessions to collect data.</p> <p>We identified a number of benefits and challenges associated with involving participants in the co-construction and delivery of an professional learning programme. The major findings have to do with necessary conditions for teacher professional learning, suggesting that these conditions include extended time for opportunities to learn (6–24 months); participation in a professional learning community that provides opportunities to engage in ongoing, teaching-focused professional learning initiatives; and external expertise. The research outcomes include a template for staff development concept mapping activities, a conference paper and a departmental seminar.</p>
<b>Title</b>	<b>Creating community and achieving excellence in times of radical curriculum and departmental change: an evaluation study</b>
<b>Project Team</b>	Associate Professor Gareth Treharne (PI), Dept. of Psychology; Associate Professor Lynley Anderson, Bioethics Centre; Dr Charlene Rapsey & Ms Louise Perman-Beres, Dept. of Psychological Medicine; Dr Althea Gamble-Blakey, Otago School of Medicine
<b>Snapshot</b>	<p>Transgender people experience considerable health inequities but transgender healthcare receives limited coverage in health professional training programmes internationally because teaching staff feel they lack the background to apply their teaching expertise to this issue. In this project we developed a set of best practice guidance for involving transgender community members in teaching for trainee health professionals based on past literature and existing data from nine focus groups with teaching staff and transgender community members. After surveying stakeholders to confirm the guidance was appropriate we ran a workshop on applying the guidance via the Higher Education Development Centre that was attended by teaching staff across a range of health professional training programmes. We also conducted a focus group with teaching staff who were planning on applying the guidance, which indicated benefits of the guidance and ways of overcoming personal, hierarchical and systemic barriers to teaching about transgender healthcare.</p>
<b>Title</b>	<b>A Bridge into Social Anthropology</b>

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<b>Project Team</b>	Dr Susan Wardell (PI), Professor Ruth Fitzgerald & Dr Greg Rawlings, Dept. Social Anthropology
<b>Snapshot</b>	Current practices at New Zealand tertiary institutions see many students entering Social Anthropology papers at upper levels, with no previous experience in the discipline - providing challenges for both students and staff. We aimed to conduct research towards the development of an accessible kit of multimedia resources that students could use independently to 'bridge' themselves into social anthropology. We approached this by evaluating 182 existing publicly-available resources (i.e. videos, images/graphics, web pages), examining the layout of 13 introductory textbooks, and consulting students about their experiences and needs (via a focus group and two surveys). Alongside student feedback, literature on threshold concepts provided a theoretical anchor-point for assessing the pedagogical value of potential resources, and designing an effective structure in which to present these. We have now published a web-based draft of our kit, called 'AnthNav', with a small cohort of beta- testers providing positive overall feedback and suggestions for further development.