Article

WĀNANGA KAIRANGAHAU: APPRECIATING RESEARCH AND CO-PUBLICATION

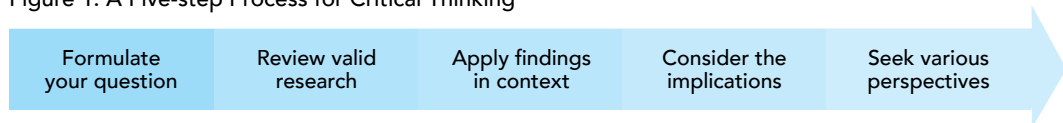## Marianne Cherrington, Christiaan Bredenkamp & Tavish Sehgal

ABSTRACT

The purpose of applied research is to inform action. Since our lives are built on the choices we make, critical evaluation, experiential learning and knowledge-sharing are developed competencies that ultimately transform our lives, our communities, and our future. The vision of Otago Polytechnic Auckland International Campus is to develop 'New Zealand's most employable graduates'; research capability and co-publication are meaningful, empowering and leverageable mechanisms in that pursuit. This reflective paper explores the value of student research, from three different stakeholder perspectives, by reflecting on a student-lecturer co-publication pilot initiative and its evolution into 'Wānanga Kairangahau' (researcher workshops). Wānanga Kairangahau is a student-led process designed to evolve assessment research into co-research and co-publication at Otago Polytechnic Auckland International Campus. The aim is to encourage greater participation in research and enthusiasm for inter-disciplinary, scaffolded learning and knowledge sharing on campus and beyond. Researchers seek to understand the world around them and the complex problems of society. We find that activating our research and expanding our networks and fields of influence can break boundaries and transcend limitations. We consider how to build on our expertise and global fields of experience to build knowledge, create impact, and embolden aspirations. By empowering an active research culture, we explore opportunities, capabilities and revelations that arise from growing a strong collaborative research practice to create new possibilities that enliven bold, forward action for more sustainable innovation (Zhukov & Cherrington, 2020).

Keywords: Wānanga Kairangahau, researcher workshop, co-publication, co-research, employability, student-centred learning and teaching, research collaboration

INTRODUCTION

Applied research endeavours to find a "solution for an immediate problem facing a society, or an industrial/business organisation" (Kothari, 2017, p.9). This aligns with a five-step process for critical thinking (Agoos, 2016) that is vital for students, for research and for decision-making.

Figure 1. A Five-step Process for Critical Thinking

Formulate your question	Review valid research	Apply findings in context	Consider the implications	Seek various perspectives

Research is meant to be activated, as part of critical thinning and problems solving processes. We live in an era that is informed by social media, fake-news, and misinformation (Lazer et al., 2018). Consequential decision-making should be informed, knowledge-based and critically analysed. It should not be based on a whim, toss of a coin or twaddle. The skills involved in researching are invaluable; they elevate the person,

the organisation, and the networks we serve. Unfortunately, in the busy-ness of business, the value of assessment research is not always cultivated to leverage student-centred learning and sound student research.

At Otago Polytechnic Auckland International Campus (OPAIC), our global students face many hurdles towards employment; they are in a new country, the education system is often very different, English is likely to be a second language and they do not have networks towards employment that domestic students usually have. Hence, each assessment a student undertakes should be appraised as an opportunity to not only excel and attain a qualification. Research tasks can be developed and leveraged into projects, publications or portfolio pieces that support a dream job. Tertiary education providers and lecturers take a transformational lead to nurture and support this potentiality (Zaffron & Logan, 2011; Logan, et al., 2008).

In this reflective paper, we contemplate student-lecturer co-publication via a pilot initiative and its evolution into 'Wānanga Kairangahau' (Researcher Workshops). We begin by looking at the components of the pilot and focus on its iteration into a facilitative, student-led process leading to submissions as journal co-research publications with lecturers as advocates and mentors. The programme was designed to make a lasting impression and impact for both students and lecturers and to elevate behavioural change though the process of research (Cherrington, 2020). Feedback showed that the experience was very different for diverse participants, but valuable for all involved.

METHODOLOGY

As part of a Master of Professional Practice, a number of Campus Sustainability Initiatives (CSI), were evaluated for efficacy via stakeholder feedback. Both comparative and quantitative metrics were made regarding CSI participation (number and type) and outputs achieved (number and type); stakeholder feedback was also garnered and evaluated. Ethics approval was granted (application AIC85). The seven CSI are summarised as follows:

– Campus Sustainability Workshops kick-starting sustainability initiatives campus-wide.

– Student Research Forums highlighting excellent research across OPAIC campus.

– Sustainability Industry Open Days showcasing sustainability research linked to industry.

– Wānanga Kairangahau Workshops to leverage student research for publication.

– OPAIC journal submissions (JCS) kick-start OPAIC co-publishing/co-researching outputs.

– Student Sustainability Projects (SSP) Interdepartmental research/assessment projects.

– Projects for Sustainable Operations (PSO) sustainable practice in OPAIC operations.

Journal Campus Submissions (JCS), were borne out of the instigation of our OPAIC research journal. An Expression of Interest for the journal, triggered the research pilot in the two weeks between term one and term 2, 2021.

The JCS pilot evolved into the first Wānanga Kairangahau, where Otago Polytechnic SCOPE and Junctures journals were targeted as sources for publication. From that WK feedback, the second WK was held, targeting the New Zealand Population Conference for submission. These WK led to presentations as OPAIC Student Research Forums (SRF) and Sustainability Industry Open Days (SIOD) and a Campus Sustainability Workshop (CSW).

WK were improved iteratively and extended to off-campus journal/ conference submissions; they then linked our Industry Project and Internship Project research and another CSI, Projects for Sustainable Operations (PSO), with more research publications. The seven-fold CSI approach scaffolded and leveraged efforts and feedback from all CSI was discussed.

From stakeholder feedback, and building on the re-establishment of Student Research Forums (SRF) and Sustainability Industry Open Days (SIOD), Wānanga Kairangahau was organically and continually improved using a Plan-Do-Check-Act (PDCA) process (Sangpikul, 2017) from a pilot research workshop to multiple four-stage, student-led roll-outs.

Key results and reflections from the WK roll-outs are summarised in this paper; three key reflective perspectives are provided from the Wānanga Kairangahau facilitator (a senior student), from the students as participants of the workshops and from lecturers, who acted as co-sponsors/ co-publishers/ co-researchers with students.

ENCOURAGING RESEARCH ON CAMPUS

At OPAIC, lecturers are required to be research active and industry current. It is good practice. It is also an opportunity to lead and role model a higher standard and expectation for our students which will help them navigate their coursework, and build an interconnected pathway within their qualification. Ultimately, students gain the confidence to network and successfully bridge from education into employment aligning study and lifegoals. Project work, internships and applied research are an OPAIC forté and can be part of that conduit.

Following two conference-style OPAIC events including a Student Research Forum (SRF) and Sustainability Industry Open Day (SIOD) in term five 2020 and in term one 2021, respectively, lecturers identified that excellent student research was presented but not galvanised into something more. Coincidentally, OPAIC was instigating a campus research journal; co-research/ co-publication aligned well, but the term was vague or without context for students and hung as an empty signifier (Laclau & Mouffe, 2002; Fairclough, 2003). Therefore, during term break, ten students were shoulder-tapped for the co-research/ co-publication pilot. Only five attended and our first submission due date for abstracts was less than three weeks away.

A CO-RESEARCH/ CO-PUBLICATION PILOT

We began by assessing the research of the students who were interested in an opportunity to publish. This was work on top of regular study responsibilities and assessments, but by selecting top student research for the pilot, some of the effort would be mitigated. Two of the students selected were keen to publish research connected with their coursework. Another student had a strong propensity for research and was identified to lead the pilot follow-up. The final two students were Information Technology (IT) alumni students, completing an inter-departmental campus emissions mitigation internship project and publication was part of their brief. Their reasons for participating were to augment their tertiary education by anticipating industry expectations. They were focused on relevant employment. They felt attending workshops and seminars was a priority in bridging the classroom-to-job gap. This ethos had been developed while studying IT at OPAIC, where they were encouraged to 'be agile' and explore software and cutting-edge technologies. They had learned the process of conducting research on their subjects with mentorship to arrive at conclusions after careful investigation, experimentation, and simulation. They felt research workshops promoted passionate interaction and active participation, to improve student skills, expertise and build better relationships with professionals in the field. These two students were enthusiastic to go above and beyond work assigned; they were keen to learn about the latest information and new skills relating to relevant subject topics. They had a genuine desire to discover and learn about new subjects.

A four-stage co-research/ co-publication pilot process was created and followed with a pre-meeting task, learning topic meeting and draft exercise, with homework (Figure 1). Interestingly, we realised each student could isolate assessment components into several journal submissions, so milestone deadlines were mapped out.

Table 1. Four stages of the Co-research/Co-publication pilot.

	STAGE ONE	STAGE TWO	STAGE THREE	STAGE FOUR
Pre-meeting:	Bring research & keywords	Check due dates	Check template	Find gap or novel focus
Learning topic:	Journal targets	Paper structure	Citations & referencing	Body of topics
Draft exercise:	Draft abstracts	Draft introduction	Literature review	Draft a conclusion
Homework:	Author biography, ORCID	Get lecturer/ sponsor	Check images & copyright	Proof-reading & submit

The first stage, began with brief introductions. The research focus of each student was discussed and linked to journal targets. An abstract was drafted for the first submission. Exemplars and a template-form for abstracts were used, but a one-size-fits-all approach was fraught; some of the submissions were 'scientific', some reflective, and some theoretical. It was tricky and confusing drafting abstracts on the spot, but the discourse and frustration were invaluable! Some international students may feel isolated, struggle and may be wary of asking for help. A lot of learning occurred during the workshops. Homework before the next stage was to confirm keywords, create a research biography and get an ORCID number (a persistent digital identifier for scholarly researchers). Each student was advised to secure a lecturer as a supportive sponsor co-publisher, or co-researcher. We communicated and uploaded shared documents via a Microsoft Teams page.

The second stage was focused on drafting the introduction and setting the structure of the submission. Deadlines for submissions were looming; abstract deadlines were ten days away. Students were in term break, but lecturers were marking and moderating, so students were tasked with securing a lecturer to sponsor their submission.

The third stage was a literature review with source-based citations and referencing. Copyright issues and ethics were reviewed. The depth of scholarly sources tended to need enrichment to ensure a supportive and logical train of thought. Homework was to draft the literature review and develop the novel focus of the submission and to liaise with the lecturer/sponsor.

The fourth stage was to checklist progress with draft conclusions and a Question and Answer (Q&A); dialogue on 'eye-appeal', bullet-points and diagram pointers ensued. Homework was to compete the submission with proof-reading to submit on time. All students were behind scheduled milestones.

The student pilot feedback was generous and constructive. There were some obvious issues.

Overall, communication should have been more well-defined, notably regarding the structure of the pilot as a process towards submission. Other structural issues could be easily resolved.

The pilot was a successful just-in-time iteration, four abstract submissions were accepted for our OPAIC journal, and six new submissions were underway. There were other possible journals for our students to submit to; the pilot was well underway and was modified for re-release as a full-fledged student-led research workshop.

WĀNANGA KAIRANGAHAU – STUDENT-LED RESEARCHER WORKSHOPS

The structured feedback from the pilot came from students and lecturers, and this included:

– clearer description of the pilot process to prepare students for output expectations.

– a visually clear process with homework and milestones was asked for by stakeholders.

– face-to-face sessions were best, adding online or 'own pace' sessions was actioned.

– between term delivery did not suit some students, but in-term might be too arduous.

– each session should last less than one hour with additional time for side discussions.

It was vital to make improvements from the pilot to streamline the next workshop process. The reflective feedback from students regarding the pilot included:

– small group sessions were very appealing to students, discussion informed learning.

– sessions were tailored to meet a variety of needs - a bonus for face-to-face students.

– the pilot complemented and extended students' curriculum-based learning.

– being selected for the workshop pilot gave students a new and exciting opportunity.

– students learned from their peers, who had experience and knowledge to share.

One student stated that they felt 'as a new bee into the professional world', that the working 'environment is highly competitive, and to survive, one must attend as many workshops as possible to stay tuned in or ahead of the competition'. They were enthusiastic about the pilot.

The four-stage pilot was completed in just over two weeks. Its imperfections were welcomed as a means of improving Wānanga Kairangahau, its second iteration, just six days later. The pilot had been designed to be handed on and to be student-led; a student from the pilot was identified to lead and was now mentored to be a Wānanga Kairangahau facilitator and to follow yet improve the pilot process. A student-centred learning and teaching (SCLT) style was now a key feature (Din & Wheatley, s. 14, 2007) although there was no clear consensus on what that might mean in practice, or common understanding of SCLT features or indicators (Gover, Loukkola & Peterbauer, 2019); (Dakovic & Zhang, 2020).

RESEARCH WITHIN A STUDENT-CENTRED LEARNING AND TEACHING MILIEU

In this new iteration, Wānanga Kairangahau, evolved with the implementation of SCLT in a collaborative way to build mutual inspiration, exchange, and institutional learning. SCLT held a promise of self-efficacy and engagement by building student needs, diversity, agency, and tailored learning trajectories (Klemenčič, 2017). The aim is to foster deeper learning processes and outcomes for students to become self-directed, lifelong learners (Hoidn, 2019; 2020). It would be fascinating to explore the 'SCLT in-class', 'SCLT out of class', and 'SCLT as an organisational mindset' evolution via Wānanga Kairangahau iterations (Fink, 2013).

There was excitement when Wānanga Kairangahau students realised they would be working together in the four workshops and a journal or conference paper submission would result. From the outset, the plan was that each student would target a particular publication.

– All materials used were on the Microsoft (MS) Teams page.

– The process template was refined with our new student leader/ facilitator

– Feedback and personal reflective experiences were used by the leader/ facilitator

– Simplification and refinement of the process for SCLT was nurtured.

– Discussion and interaction were highlighted, so that difficulties could be unpacked.

Lecturers did not attend the pilot but sometimes 'popped into' the workshop sessions. Online, lecturers created a supportive persona; it was hoped student momentum and a research movement could be launched and upheld to further augment an SCLT supportive approach.

CLARIFYING EXPECTATIONS – RESEARCH AS A PROCESS

Wānanga Kairangahau began again, with an 'abstract structure' as a conduit and pathway through the writing process. Yet again, students were caught off guard because we had not clearly stated what would be expected from them. It was felt that writing a first draft, then discussing progress/ issues at the workshop would help students find direction in their work.

Discussions seemed to have been one of the most valuable elements of these workshops. OPAIC students are taught, and expected to understand fundamental research principles such as referencing, finding good scholarly sources and articulating research methodology. This expectation creates a vacuum of silence; students can be too shy to ask questions. Speaking with a fellow student about common research principles put the students at ease. This environment made it easier for them to reach out and ask the 'dumb questions' that they otherwise might not have. It clarified gaps in learning for everyone involved.

The evolving format gave students the freedom to ask what was expected for academic writing and convey their current practices. Students may try to offer the 'right answer'; this is especially true with when conducting research. The workshops also provided a safe space to confess 'research transgressions'. For example, in friendly and open discussion, students stated they were sometimes citing sources without reading them and relied primarily on web articles. This was suspected by lecturers. It was valuable that students stated the main reason for not using the OPAIC research database of peer reviewed articles was because they did not like the experience of using the platform. They stated that they would rather use Google Scholar as it was a familiar user experience, even if it gave lower quality sources than the OPAIC research platform.

REINFORCEMENT LEARNING

The idea of a learning system that is aspirational, that adapts its behaviour in to capitalise on a special environmental signal is at the core of Reinforcement Learning (Sutton & Barto, 2018). Wānanga Kairangahau was using 'calls for papers' to elevate existing student research.

Assessments and classrooms can make it more challenging to provide adequate support for students to cultivate their individual researching and writing skills (Andrade, 2019). Added difficulty arises if English is a second language and where technical or scholarly formats are required; therefore, a lecturer or sponsor was strongly advised. The workshops were creating access to a true understanding of students' research and writing methods.

Lecturers typically assess skills via assessments, but the process and methods were unfolding within the workshop discussions with lecturers invited to 'drop in' and 'drop out' so as not to stifle the milieu. Another bonus was that workshops were now during the lunch hour and were recorded (a common practice after the COVID-19 pandemic lockdowns) and life on Teams. Students were made aware and agreed to the recording. The best part was students were at ease throughout the workshops and largely forgot about the recording aspect. Afterwards, students could attend online or 'catch up' or listen again to recordings. It was also a way to allow lecturers to be a part of the workshops, gather insight and provide suggestions to the facilitator without scaring the students.

Wānanga Kairangahau was providing better student support in general and delivering specific guidance to students. It is doubtful that in a normal classroom setting, a lecturer would be able to have similar access to this true unfiltered understanding provided by students. The relationship between a student and lecturer is ultimately different to that of a fellow student. A valuable, fragile level of trust within workshop students was emerging.

COMMUNICATING A VISION AND A PATHWAY

Attendance dropped off dramatically after our second workshop. This was due to a variety of factors, but significantly, the third workshop occurred right after the abstract deadline. Many of the students felt that it was not worth continuing with the workshops either because they did not submit an abstract on time or were unsure whether their abstract would be accepted.

It was evident that using (MS) Teams and 'bulk emails', while quick and easy, may not have always been a good channel of communication. Wānanga Kairangahau will always work best with small groups of students, committed to each other's success. The facilitator must be vigilant as to 'where researchers are' in the research process to keep alert to target journal key dates. It is valuable to have a supportive sponsor or co-researcher to be engaged to keep momentum moving positively.

Great care must be taken, and time allocated to communicate to students the process and multitude of publishing opportunities available to them. They should not be distraught if their first attempt is not accepted as planned; this is part of the learning process and submissions are routinely rejected (Dwivedi et al. 2022). Wānanga Kairangahau should be framed as research improvement workshops; students can join to improve their overall research skills. The aim should be to take students through the entire publication process using previous research, to rework it into something that could be submitted for publishing. Student will improve research skills but ultimately may not attain a published paper. Publishing is an aim and a gratifying bonus to those students whose abstracts are chosen by selected journals.

Another improvement to the overall workshop structure was better communication around timeframes and overall expectations. This included defining the process better as well as what was expected from students and what they could expect to learn in each workshop.

Part of the pilot workshop was that there was a loose structure; it was meant to be a small-group joint learning experience. The Wānanga Kairangahau structure was planned before the workshops began in a PDCA process; it was meant to evolve as the process adapted to meet student needs within their research journey and as external factors presented themselves. Another challenge faced was when students missed a workshop or two; students expected to be brought up to date on what had happened in previous workshops but in actuality, students were expected to get back on track using the workshop recording. Firm workshop dates were needed. Wānanga Kairangahau is a process of focused, four-stage workshops with the 'best, most responsible students' 'lifting their game' personally, professionally to develop their careers. To that end, an unattended third workshop was recorded on MS Teams along with accompanying resources to keep the process moving forward. This was like hitting a reset button. Fully communicated, the final wrap-up Q&A workshop was well attended.

ONGOING WĀNANGA KAIRANGAHAU

Without specific journal submission outlets until the end of the year, it was tempting to defer the second Wānanga Kairangahau student-led researcher workshops till the end of the fourth term, but momentum would have been lost. Also, many of the pilot students had identified several target journals. Continuity was vital. Between term three and four, another Wānanga Kairangahau was launched. Students from the initial pilot who had other journals to target were invited to attend, but new students were also shoulder tapped by lecturers. Perhaps one student will be mentored into a facilitator role for upcoming Wānanga Kairangahau.

A new goal was that a conference would be targeted. OPAIC SRF promote research presentations and SIOD promote research posters. Also, opportunities may exist for students to submit to industry specialist magazines or other forms of industry facing resources. These outlets may become more popular as our 'industry project' students become more aware of the Wānanga Kairangahau ethos. The connection to industry, as well as project work, was always a WK component feature. Wānanga Kairangahau is meant to

be part of a larger group of OPAIC Campus Sustainability Initiatives, designed to shift focus and build networks to communities, business/ industry and employment, aligning with the overarching OPAIC vision of New Zealand's Most Employable Graduates.

In an ongoing effort to align applied management students with information technology skills, the Wānanga Kairangahau process is promising. Nascent technologies can assist decision-making in applied management contexts; it is crucial to be technologically confident when addressing business issues that will transform the future world of work (Pace et al., 2020).

Additionally, it was vital to align successful SRF and SIODs and dovetail them into Wānanga Kairangahau. They must align with the OPAIC employability vision as well as our Strategic Objectives for Sustainable Practice (Mann & Ellwood 2009) to embed sustainability in all that we do (Matthews, 2014).

– to develop sustainable practitioners.
– to model evidence-based sustainable practice in our operations.
– to encourage communities and businesses to embed sustainable practice.
– to ensure our actions benefit our communities.

Wānanga Kairangahau created value and leveraged our work, generating sustainable practices. They shift busy-ness into business. The value of tertiary education is not just in the learning or gaining the qualification, it is in the potentialities of the experiential networks. Research must be practiced and activated. It must be evidenced in our operations. But research must also be encouraged in our communities and businesses to be truly beneficial.

Wānanga Kairangahau has potential to group people who share similar points of view into a single forum and for lecturers and students to build inter-departmental relationships. Such platforms expand mindsets with disciplined research behaviours. Communities of practice (CoP) are beneficial, learning communities. Sharing common interests across subjects can leverage strengths and make the best use of available resources, resulting in symbiotic relationships (Goodwin, 2019). Moreover, CoPs tend to address issues faced by people within organisations, which can be beneficial in resolving a variety of issues. An unexpected benefit of Wānanga Kairangahau was to create a CoP.

Connected to the CoP, in this context, is Student Centred Learning (SCL), which is not the student action component in student engagement (Cherrington et al. 2021). The student agency component of Wānanga Kairangahau built "students' capabilities to intervene in and influence their learning environments and learning pathways" via SCL. (Klemenčič, 2017).

Students learn more effectively and efficiently in a learning environment that augments but is distinct from classrooms (Chawla & Cherrington, 2020). Students tend to research and learn on their own beyond academic syllabuses and 'textbooks'; it enhances optimism, effectiveness, and efficiency. The benefits and significance of Wānanga Kairangahau for students were enormous. They are necessary in higher education, where every aspect of study is relevant to the market and industrial standards and where students must bridge technical learning with real-world experience (Cherrington et al. 2020).

Wānanga Kairangahau had a publishing goal, as per the disciplinary cultures of academic researchers; student feedback was that WK can become a key driver of career progression. Academic publishing is more than just a technology - as a 'prestige economy', based primarily on symbolic capital generated by publications rather than direct financial rewards driven industry (Fyfe et al., 2017). The system underpins claims to new scholarly knowledge, and can have a significant impact on academic researchers in New Zealand Universities and Polytechnics, and networks worldwide (Ware, 2008). Co-publishing increases corporate enthusiasm and promotes on-going education and when published articles are shared organisationally, it can build a collaborative culture, with pride and respect (Ware, 2008).

Wānanga Kairangahau appreciate co-research and co-publication. They led our campus forward by 'listening to the future of our organisation' and appreciating the potentiality of our students to bridge their learning to their aspirational career goals.

CONCLUSIONS

Research must be purposeful, active, and engaging; it creates opportunities (Cherrington et al 2019). Research is collaborative, decisive, and transformative. Wānanga Kairangahau encouraged inter-disciplinary, scaffolded learning to generate SCLT/ SIOD and a research CoP to make our campus truly international.

By linking students and lecturers inter-departmentally, engagement and participation grew. Our best students obtained guidance and used critical thinking to find solutions to bolster their success. Participating in Wānanga Kairangahau built chains of networks; students said they were advancing in their professional lives. Communicating new research encouraged students to investigate nascent topics and to be inspired to conduct research with new learning. Students were motivated to publish their own research with proper guidance from lecturers, contributing significantly to education or industry sectors.

Wānanga Kairangahau was exciting, even from outset with the pilot programme. It was evident that there were students who wanted the opportunity to go the extra mile, improve their technical researching skills and to take their research further, eventually publishing in journals and attending conferences outside of the campus milieu. It will be important to use this student-led Wānanga Kairangahau to build momentum and a research movement within the broader context of campus SCLT and for a 'SCLT as an organisational mindset' revolution via installation of ongoing Wānanga Kairangahau.

The OPAIC Wānanga Kairangahau form strong and growing collaborative research practice to create new possibilities that enliven bold, forward action for more sustainable innovation.

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