

## **Whakawhitinga kōrero: Interdisciplinary video dialogues on sustainability**

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### **Introduction**

The learning and teaching resource *Whakawhitinga kōrero: Dialogues on sustainability*, entails a series of videos that introduce the SDGs as they relate to local and global sustainability challenges, with a prioritisation on addressing the place-based context. This resource was a staff-driven collaborative production of Victoria University of Wellington in New Zealand. It was developed in response to the need to educate students in holistic concepts of sustainability, encompass diverse interdisciplinary perspectives and reflect regionally and culturally-significant sustainability issues. The SDGs function as the framework for the videos and reinforce the inherent interdisciplinarity and interconnectivity of broad-reaching sustainability concepts – from poverty to climate action, and from gender equality to the requisite partnership for the goals themselves. Each video centres on one-to-two specific SDGs, addressed via dialogue between university staff, alumni, and local business and government representatives from across fields and sectors. The interjection of multidimensional viewpoints affords a democratic frame of reference for understanding the SDGs, and mirrors the complexity and universality inherent in the SDG framework. Within the place-based context, students are introduced to cultural concepts that foster an understanding of sustainability as they relate to Māori (the indigenous people of New Zealand) values, including: mātauranga Māori (indigenous knowledge of native New Zealanders), kaitiakitanga (guardianship, care and conservation of nature, people, and ideas), and whanaungatanga (the close relationships that are formed through collective experiences, as evidenced through the interdisciplinary and collaborative learning and teaching environment).

By inviting engagement through these lenses, students are given the opportunity to reflect on and identify with the wider challenges of sustainability through a more personalised and multi-faceted understandings. An interdisciplinary approach was selected as a means to offer an alternative to disciplinary-specific curricula that, while offering valuable expertise within a given subject, risks educating students according to a limited understanding of sustainability. The intention of developing this learning and teaching resource is to enable education on the SDGs to be embedded into existing and new courses, and to provide students with opportunities to learn reflexively through exposure to differing visions for sustainable development, including indigenous perspectives. Used in this way, the video dialogues support critical and creative thinking as well as dimensions of global competence. Based on student interviews and written

reflections, research regarding the impact of the video dialogues was collated with positive results. Critical success factors include increased engagement, critical thinking, and supported understandings of interconnectedness. This paper examines this case study inclusive of notable values, research findings, and challenges associated to the development and implementation of the video resource. It concludes with thoughts and reflections on enhancing the transformative potential of sustainable development education through the use of pedagogical tools and approaches that support students' critical openness to addressing sustainability concerns.

### **Interdisciplinary learning for sustainability**

University-level education has the capacity to effectively address sustainability concerns through specified disciplinary perspective, however, sustainability as a collective aspiration is, by nature, interdisciplinary. While there is limited research that compares the outcomes of disciplinary and interdisciplinary approaches to sustainability education in higher education contexts<sup>1</sup>, advocates of interdisciplinary sustainability curricula emphasize that responding to the interpenetrated nature of sustainability issues requires opportunities to bring together multiple ways of knowing. While university education prioritizes divergent ontological inquiry, applying this to institutional processes can be challenging. The complexities of organizational change, power-relationships, traditional institutional structures and economic pressures present substantial obstacles to interdisciplinarity<sup>2</sup>. Even for committed higher education institutions and individuals, bringing together academic and disciplinary insight across a university is replete with theoretical and practical challenge, particularly in terms of maintaining learning cohesiveness, continuity and depth<sup>3</sup>.

At Victoria University of Wellington, the enablers and constraints of 'top down' (senior management led) and 'bottom-up' (teacher driven) development of interdisciplinary sustainability curriculum have highlighted this challenge. In 2016, a newly-appointed Assistant Vice-Chancellor (Sustainability) (AVCS) was charged with leading a small but capable Sustainability Office and transforming the University's sustainability practices and outcomes. Among the AVCS' priorities was the establishment of a new sustainability course that was to be broadly accessible to all university students. The United Nations' Sustainable Development Goals (SDGs) were to provide the architecture for a multi-faceted approach to introducing sustainability and a vision for transformation "for people,

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<sup>1</sup> Sonya M. Remington-Doucette. "Assessing sustainability education in a transdisciplinary undergraduate course focused on real-world problem solving: A case for disciplinary grounding." *International Journal of Sustainability in Higher Education* 14, no. 4 (2013). <https://doi.org/10.1108/IJSHE-01-2012-0001>

<sup>2</sup> Walter Leal Filho, Schalk Raath, Boris Lazzarini, Valeria Ruiz Vargas, Luisa de Souza, Rosley Anholon, Osvaldo Luiz Goncalves Quelhas, Rema Haddad, Maris Klavins, and Violeta L. Orlovic. "The role of transformation in learning and education for sustainability." *Journal of Cleaner Production* 199 (2018): 286-295. <https://doi.org/10.1016/j.jclepro.2018.07.017>; Elona Hoover and Marie K. Harder. "What lies beneath the surface? The hidden complexities of organizational change for sustainability in higher education." *Journal of Cleaner Production* 106 (2015): 175-188. <https://doi.org/10.1016/j.jclepro.2014.01.081>; Kevin J. Krizek, Dave Newport, James White, and Alan R. Townsend. "Higher education's sustainability imperative: how to practically respond?." *International Journal of Sustainability in Higher Education* 13, no. 1 (2012): 19-33. <https://doi.org/10.1108/14676371211190281>.

<sup>3</sup> Jill L. Caviglia-Harris, and James Hatley. "Interdisciplinary teaching: Analyzing consensus and conflict in environmental studies." *International Journal of Sustainability in Higher Education* 5, no. 4 (2004). <https://doi.org/10.1108/14676370410561090>

planet and prosperity”<sup>4</sup>. It was felt that the SDGs provided a holistic context that reinforced the interconnectivity between sustainability challenges - including synergies and potential conflicts and trade-offs - and the need for awareness of their collective demands. The SDGs were understood as inherently interdisciplinary in scope and applicability, in that they are informed by, and call for further research across, multiple disciplines.

Despite being strategically important, the proposal that went forward for approval was rejected by a central university committee because the course had not secured an administrative ‘home’ within the institutional Faculty structure. Fortunately, spearheaded by a bottom-up approach, a small subset of the initial course developers saw the potential to recast the original course within a more conventional structure, while still allowing for interdisciplinarity. The resulting course, *Design Thinking for Sustainability, DSDN183*, took the form of a 100-level Faculty of Architecture and Design course that applied design thinking as a means to navigate complex sustainability challenges. The five-week course was offered during the Summer trimester where, through a blend of online and in-class engagement, the course considered sustainability through different perspectives, disciplines, spatial and temporal scales, and employed a student-led, project-based and reflexive pedagogical orientation. The course retained the original vision for an interdisciplinary framework scaffolded by the SDGs, but with Design as the anchor, as the learning outcomes indicate:

- Describe relationships between the Sustainable Development Goals (SDGs) according to local, national, and global sustainability contexts;
- Explain existing and future sustainability challenges from disciplinary, Māori and Treaty perspectives;
- Explain the principles of design thinking; and
- Apply design thinking in a collaborative process<sup>5</sup>

Embedding multiple disciplinary perspectives within the course design proved a particular challenge. While a cross-disciplinary, team-taught approach formed the initial vision of the course, this was ultimately deemed a financially unviable option by the university. A second iteration saw the course being reliant on guest lectures with representation from across the university, however, due to its schedule in the Summer trimester, this approach was logistically untenable. In considering alternative formats, the course developers decided that the medium of video could be utilized to support students to access interdisciplinary learning.

### **Whakawhitinga kōrero: Dialogues on sustainability**

A bespoke resource was designed and produced to facilitate blended learning through synthesizing in-class and online educational activities. The resource, *Whakawhitinga kōrero: Dialogues on sustainability*, entailed a series of 14 videos that introduced the SDGs as they relate to regional, national, and global sustainability challenges.<sup>6</sup> The Māori term ‘whakawhitinga kōrero’ means dialogue and discussion. This term stems from the Māori word ‘whiti’ which translates to cross over, swap or exchange but, in

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<sup>4</sup> UN SDSN Guide (2015): 6, accessed 16 July 2019, <http://unsdsn.org/wp-content/uploads/2015/12/151211-getting-started-guide-FINAL-PDF-.pdf>.

<sup>5</sup> “DSDN183”, accessed 16 July, 2019, <https://www.victoria.ac.nz/courses/dsdn/183>.

<sup>6</sup> “Whakawhitinga Kōrero: Dialogues on sustainability”, accessed 16 July 2019, [https://www.youtube.com/playlist?list=PLV\\_dlHiN2dYDhSCYMkaotRT9LKJu7jBPC](https://www.youtube.com/playlist?list=PLV_dlHiN2dYDhSCYMkaotRT9LKJu7jBPC)

another sense, 'whiti' can also mean 'to shine'. With both interpretations in mind, the videos shine a light on the importance of dialogue, both in person and on screen, as a key pedagogical approach to teaching sustainability. The video series served as the dominant source of online content for the course where it functioned to complement project-based learning, and supported internationally recognized dimensions of global competence, including:

- the capacity to examine issues and situations of local, global and cultural significance
- the capacity to understand and appreciate different perspectives and worldviews
- the capacity and disposition to take constructive action toward sustainable development and collective well-being<sup>7</sup>.

The videos support student's engagement in sustainable development in multiple ways: Firstly, they embed an interdisciplinary approach to the introduction of the principles of sustainability by presenting diverse perspectives through dialogues between pairs of academics, local representatives from business and government sectors, and university alumni. This affords a democratic frame of reference in understanding the SDGs and mirrors the complexity and universality inherent in the SDG framework. Importantly, through the dialogues, students are exposed to conflicting attitudes and viewpoints on topics of sustainability and are invited to consider and develop personal positions.

Secondly, in addition to the dialogues, a layer of animated content is introduced within the videos to support the student's understanding around the connectivity and interdependence between the goals, and to clarify complex concepts as they are raised. For example, in the first video, an icon associated to SDG 1 appears as the two participants initiate their conversation about poverty as a sustainability challenge. As the conversation evolves, additional icons (in this case, for SDG 2: Zero Hunger, SDG 3: Good Health and Well-being, and SDG 6: Clean Water and Sanitation) appear, linked to the icon representing SDG 1 by branching dashed lines. As more complex concepts on the topic of poverty are raised, simple hand-drawn images appear that depict the concepts narrated. The drawings are accessible and friendly, affording a means to convey challenging ideas in a non-threatening, easy to digest format.

In supporting a place-based context, the dialogues thirdly prioritize locally-relevant sustainability challenges and successes as they relate to the SDGs. Although the dialogue participants were not asked to follow a prescriptive direction, they were asked in advance of recording to reflect on the relevance of their assigned SDG(s) in the context of Wellington and New Zealand. Through this place-based, contextualized lens, students were afforded with avenues of identification in understanding how sustainability and the SDGs relate to them personally. Many of the dialogues drew connections between sustainability, indigenous knowledge, and cultural values, including addressing specific considerations as they apply to New Zealand's Māori population and constitutional context.

Lastly, participants were also asked to share examples of their everyday sustainable actions, and to suggest strategies for the adaptation of sustainable behaviors. The exemplification of personal actions in the local context afforded realistic examples for students to follow. The fact that the participants included a diverse mix of university staff,

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<sup>7</sup> OECD. "Preparing our youth for an inclusive and sustainable world: The OECD PISA global competence framework." (2018): 7-8, accessed 29 July, 2019 [www.oecd.org/pisa/Handbook-PISA-2018-Global-Competence.pdf](http://www.oecd.org/pisa/Handbook-PISA-2018-Global-Competence.pdf)

local representatives from the business and government sectors, and alumni demonstrated a broad applicability of sustainable actions, and empowered students through leading by example.

It is also important to note that the video resource was explicitly linked to the course learning objectives through an online assessment task. A weekly reflective journal exercise required the students to write a summary of 150-500 words for each video assigned over the week. The reflective journals addressed a loose set of questions regarding how the SDG related to the students, the other SDGs, and the New Zealand context.

### **Educational outcomes of the video resource**

Following the trialed introduction of the video resource as part of *Design Thinking for Sustainability*, a small-scale study was conducted with all 18 students enrolled in the course about the educational outcomes of the use of the videos. The students were invited to submit their reflective journals after the course was completed and/or take part in a focus group interview about how they used the video dialogues to learn, the strengths and weaknesses of this teaching tool, and how the videos could be used in future courses. The Course Coordinator (one of the co-authors of this paper) did not participate in the focus group discussion or have access to the data until after the final grades were released. Five students agreed to participate in the focus group interview and provide their assignments, and another student agreed to provide their assignment only. Across both data sources, a directed content analysis<sup>8</sup> was employed, using the analytic constructs of interconnectedness and interdisciplinarity, critical thinking and polyvocality. We were also interested in how the videos may have inspired *personally responsible* (individual), *participatory* (collective) and/or *social-justice oriented* (focused on a deep understanding of the structural underpinnings of issues) actions for change<sup>9</sup>.

An initial question in the focus group interview revealed a range of motivations that led the students to enroll in the course, including 'needing the points' (n=3), the course's connection to workplace learning (n=2), and having enjoyed a previous course with the lecturer (n=2). While one student stated that they felt familiar with the SDGs, three out of the five participants were interested in the course because they were less familiar with this framework. One student reflected that:

I felt quite bad as before coming into this course I really didn't have any interest or knowledge towards sustainability in general and had no idea what the SDGs were or that they existed. As an architecture student I knew that we do need to become better sustainable architects which pushed me to take this course. I was instantly dreading it because I felt almost ashamed of my lack of knowledge towards the topic. (Aheli)

Regardless of their starting point, it was striking that the students' perception was that the course had significantly amplified their understanding of the SDGs and sustainability issues. While it is difficult to assess the role that the video dialogues alone played in this, all the student commented positively on this pedagogical tool. The students felt that the

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<sup>8</sup> Hsiu-Fang Hseih, and Sarah E. Shannon. "Three approaches to qualitative content analysis." *Qualitative Health Research* 15, no. 9 (2005). <https://doi.org/10.1177/1049732305276687>

<sup>9</sup> Joel Westheimer, and Joseph Kahne. "What kind of citizen? The politics of educating for democracy." *American Research Journal* 41, no. 2 (2004). <https://doi.org/10.3102/00028312041002237>

video dialogues were supportive of their assignment work, found them to be more engaging than print media, and especially liked the way they could be used flexibly within their independent learning time. The local contextualization of the dialogues and their conversational style significantly supported the students to access the concepts and debates by making global issues seem less overwhelming, presenting the issues as possible for the students to address, and inviting their own responses. Tying the videos to an assessment task provided the students with a strong purpose for viewing. Aheli commented that the written reflections particularly enabled her to “create a personal connection to them [the SDGs] while also thinking about the larger scale”. Another student, Richard, said that his favorite part of the journaling was “seeing the different chemistries between different people, and how this affected the shape of the conversations they had”.

All the students clearly understood the interconnected nature of SDGs and were able to provide multiple examples of this, drawn from the videos. They found the animations within the videos that highlighted connections between the SDGs very helpful. However, the students much more strongly emphasized seeing the interconnections between the SDGs in the videos than the role of interdisciplinary thinking. A somewhat latent and ambivalent understanding of interdisciplinarity was evident in two suggestions: (i) that other Faculties could take up responsibility for particular SDGs and (b) that a series of issues-centric rather than SDG-led videos should be created. While these are not necessarily mutually exclusive suggestions, it was notable that the students perceived the videos as being relevant to their own and other disciplines rather than as supportive of interdisciplinary approaches.

When asked about the extent to which the videos supported their critical thinking, the students strongly emphasized the polyvocal nature of the series of dialogues. The convivial, open-minded conversations were particularly appreciated because they felt less threatening - to the extent that the students called for more debates of this nature within the videos. To them, perspectival differences are a fact of sustainability issues but need to be debated with intellectual humility and empathy. They felt that the videos had opened up conversations about important topics that were sometimes contentious within the class. The videos reinforced the idea that, because there are no simple solutions, appreciating new and/or different perspectives was important. The students felt that the non-directive nature of the videos provided a valued opportunity to reflexively engage with the ideas and arguments presented in the videos, that is, to use them as a counterpoint to their own perspectives. For Milos,

The fact that the videos were showing two people having a discussion allowed me to form my own views and reflections on the SDGs. As we know that there isn't a straightforward answer to these wicked problems, having a discussion rather than a video that 'teaches', made it more engaging as well as providing me with the necessary space to think.

The students strongly equated this feature with the credibility of the videos. Emlin expressed this as:

Their opinions, that are not necessarily being presented as right or wrong, helped you engage and made it credible as well because they're not telling you that this is how you should be thinking for sustainability, they're just voicing their opinions and making it open that you can voice your opinion too.

In sum, the focus group participants strongly connected the videos to critical thinking dispositions or traits especially intellectual autonomy and fairmindedness.<sup>10</sup> However, the students were less likely to question what was presented in the videos, such as the assumptions, implications or points of view. The students struggled to identify perspectives that were missing from the videos, one suggestion being that a male perspective could have enhanced the discussion about Gender Equality (SDG5). Their other observation was that Māori perspectives were more evident in relation to some SDGs. They commented favorably on the organic inclusion of Māori perspectives and were interested in learning more but not if such perspectives were 'forced' into each video. One student, Aheli, recognized that there may be different perspectives in relation to sustainability but did not explore these deeply in her reflective journal. Another, Milos, questioned the efficiency of volunteering and then provided a counter-argument in relation to enhancing good health and well-being (SDG3) and creating sustainable cities and communities (SDG11). A third student, Bess, demonstrated the strongest levels of criticality in her writing, particularly through questioning Western assumptions about what constitutes a 'good' quality of life and the cultural relevance of the SDGs for indigenous communities. This student also most strongly engaged with Māori perspectives, across multiple journal entries.

The student's reflections on the links between the video dialogues and sustainability actions indicated that the wider course had opened up a level of personal awareness and that the use of the SDG framework had drawn attention to the urgency for change. It was particularly encouraging that the videos had supported everyday conversations with family and friends and offered encouragement for small personal changes. Overwhelmingly, the students emphasized the importance of personal responsibility for change (citing actions such as re-evaluating their own transport options and patterns of consumption) and the need for participatory, collective change. Richard, for instance, noted that:

Half way through the video, SDG 17 is brought into focus - Partnership For The Goals - relating to collective action, that climate change for instance is not going to be solved by one person, it is something that needs to be worked on together.

The students emphasized social-justice oriented action to a much lesser extent. In one instance, this form of participation was regarded with concern: "this leads to a strong-willed but perhaps narrow-minded 'sustainability activists' that may cause conflicts with other 'activists' with varying priorities" (Milos). One student, however, emphasized an imperative for democratic political engagement to bring about change:

Change is currently happening too slowly and individually and as the public, we need to put pressure on governments. Governments respond to what people are demanding to keep their own party in power so if local communities across the nation demand better public transport systems, bicycle/scooter/skateboard spaces, more windmills and solar panels to make electricity cheaper than the change will come (Bess).

### **Video dialogues as a mechanism for critical openness?**

Although the students' feedback suggests that the video resource played a positive role in their understanding of the SDGs and sustainability issues, their comments also highlight potential avenues for improvement. A first is that the resource may have

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<sup>10</sup> "The essential dimensions of critical thinking," Foundation for Critical Thinking, accessed 16 July, 2019, <http://www.criticalthinking.org/pages/critical-thinking-where-to-begin/796>

benefited from further representation of diverse perspectives to support the course learning objectives. In particular, the inclusion of additional Māori perspectives could have better connected to the emerging literature on the contribution of Indigenous knowledge to sustainability and the SDGs. This would assist in conveying local sustainability contexts and reinforce the importance of Indigenous voices in the sustainability discourse for the enhancements they provide<sup>11</sup>. This would also facilitate a connection to three aspects of the SDG framework: the inclusion of Indigenous peoples as one of the SDGs' nine major groups, their human rights basis, and their focus on "achieving balance between people and the environment"<sup>12</sup>.

Another issue related to representing diverse perspectives is that the thread of each dialogue was – to a certain extent – shaped by the post-production editing process whereby the director/editor of the videos determined which material to keep or cull. Although the editing process was driven by the parameters and objectives assigned to the learning and teaching resource, subjective influence is unavoidable. This recognition illuminates the need for collaborative oversight in the creation of resources such as *Whakawhitinga kōrero: Dialogues on sustainability* in which polyvocality is a central theme.

A second potential avenue for enhancement relates to the videos support for students' critical thinking. As the students indicated, the conversational style of the dialogues - whereby participants engaged in an organic exchange of ideas and opinions - enabled them 'space to think' about their individual perspectives and, from this, to construct personalized viewpoints around sustainability issues. This dimension of learning underpins a key aspect of global competence whereby globally competent people effectively combine knowledge about the world with critical reasoning in forming their own opinion about a global issue<sup>13</sup>. The recognition that perspectives and behaviors are shaped by multiple influences is an important aspect of this competency. However, the structure attributed to the discourse may have benefited from showcasing participants engaged in additional divergence, expressed as an opportunity to facilitate greater critical thinking. In retrospect, the discussions may have erred on the side of convivial and the animations possibly inadvertently reinforced notions of connectedness between ideas, rather than productive disjunctions. That the students placed less emphasis on interdisciplinarity suggests that, in particular, further consideration could be given to the different epistemic perspectives that each participant was bringing to the discussion. While each participant title (noted on the screen at the beginning of each video) included their discipline or organization, it was interesting that the students did not directly pick up on this. A specific discussion prompt may have explicitly surfaced these perspectives

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<sup>11</sup> Carl Folke. "Traditional knowledge in social-ecological systems." *Ecology and Society* 9, no. 3, (2004): 7. <http://www.ecologyandsociety.org/vol9/iss3/art7/>; Rosemary Hill, Chrissy Grant, Melissa George, Catherine J. Robinson, Sue Jackson, and Nick Abel. "A typology of indigenous engagement in Australian environmental management: Implications for knowledge integration and social- ecological system sustainability." *Ecology and Society* 17, no. 1 (2012). <http://dx.doi.org/10.5751/ES-04587-170123>; Giorgia Magni. "Indigenous knowledge and implications for the sustainable development agenda." *European Journal of Education* 52, no. 4 (2017). <https://doi.org/10.1111/ejed.12238>; Mandy Li-Ming Yap and Krushil Watene. "The Sustainable Development Goals (SDGs) and Indigenous Peoples: Another Missed Opportunity?" *Journal of Human Development and Capabilities* (2019): 1-17. <https://doi.org/10.1080/19452829.2019.1574725>.

<sup>12</sup> Yap and Watene, "The Sustainable Development Goals," 5.

<sup>13</sup> OECD. "Preparing our youth"



and encouraged the students to consider the relationship between particular perspectives and the disciplines represented.

A further support for students' criticality relates to the debate in the literature that has centered on the differences between Western and Indigenous ways of knowing related to sustainability<sup>14</sup>. It has been noted, for example, that the "persistent and intimate relationships" that Indigenous people have with their surroundings contrast with "Western sustainability's anonymous and ephemeral market-based consumer relationships"<sup>15</sup>. Interestingly, the students that engaged with Māori perspectives tended to do so in a positive and unquestioning manner.

A third consideration with regard to improving the videos relates to the ways in which change was envisaged. It is perhaps unsurprising, given the prevalence of neoliberal discourses, that students emphasized the individual (and, to a lesser extent, collective) sustainability actions that they and others could engage in. Again, we suggest that a specific discussion prompt could have highlighted the political dimensions of sustainability action, particularly in relation to the mandate that New Zealand universities are given to act as critic and conscience of society. It could have been valuable for students to learn, for example, how each of the participants conceived their research or organizational contribution to a national and global debate on sustainability issues.

A fourth consideration relates to strengthening the relationship between the video dialogues and their application to design thinking. The introduction to sustainability and the SDG framework according to varying contexts, including local, national and global scales, reflects the pattern of convergence and divergence that is at the heart of the design thinking process<sup>16</sup>. While the structure of the videos inherently supports these modes of cognitive thinking, this attribute was not explicitly illuminated in the video resource or to the students enrolled in DSDN183. Likewise, just as design thinking is pursued as an iterative and non-linear process<sup>17</sup>, this process is mirrored in the SDGs whereby the means of implementation does not follow a prescriptive path<sup>18</sup>. It was salutary to note that, within the focus group discussions and reflective journals, none of the students articulated how the videos contributed to their design thinking. This may have been an artefact of the interview questions and journal prompts, however it was notable that the students tended to position the video dialogues as information, albeit encompassing differing perspectives, rather than as material to think with, *within* the design process.

## Conclusion

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<sup>14</sup> Fikret Berkes. "Sacred ecology: traditional ecological knowledge and management systems." (Philadelphia and London, Taylor & Francis, 1999); Jay T. Johnson, Richard Howitt, Gregory Cajete, Fikret Berkes, Renee Pualani Louis, and Andrew Kliskey. "Weaving Indigenous and sustainability sciences to diversify our methods." *Sustainability Science* 11, no. 1 (2016): 1-11; Kekuhi Kealiikanakaoleohaililani and Christian P. Giardina. "Embracing the sacred: an indigenous framework for tomorrow's sustainability science." *Sustainability Science* 11, no. 1 (2016): 57-67.

<sup>15</sup> Kealiikanakaoleohaililani., and Giardina. "Embracing the sacred," 59.

<sup>16</sup> Tim Brown. *Change by design: How design thinking transforms organizations and inspires innovation*. (New York, U.S.A.: Harper Business, 2009).

<sup>17</sup> Brown, *Change by design*.

<sup>18</sup> UN General Assembly. "Transforming our world: the 2030 Agenda for Sustainable Development." (2015), accessed 29 July, 2019, <https://sustainabledevelopment.un.org/post2015/transformingourworld>

This paper has explored the role that the video resource *Whakawhitinga kōrero: Dialogues on sustainability* played within a course that aimed to harness interdisciplinary, a place-based context, polyvocality, and design thinking to address sustainability challenges and the SDGs. We have contended that the critical, creative and collaborative nature of design thinking holds considerable potential to address the uncertain and perspectival nature of sustainability issues. Located within this conceptual and pedagogical framing, the video dialogues fulfilled a function that is arguably less typical of content-driven sustainability learning resources. That is, they offered a mechanism for students to engage with a holistic and synoptic view of sustainability concerns, and at the same time opened a window to the plural and contested nature of this landscape. Perhaps most vitally, the open-ended, respectful and quietly challenging nature of the videos achieved this in an invitational manner. The videos invited students to consider their own perspectives and experiences, engage in dialogue with peers and family, and consider how they could take action for change. There is, without doubt, further scope for enhancing this pedagogical resource. However, we suggest that this use of video dialogues within a design course offers fertile transformative potential in relation to encouraging students' critical openness to sustainability concerns.

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