

Implementing an interdisciplinary Masters of the SDGs

Glenn Banks, Professor, Massey University
Regina Scheyvens, Professor, Massey University
Samantha Leonard, PhD, Massey University

g.a.banks@massey.ac.nz

r.a.scheyvens@massey.ac.nz

s.leonard@massey.ac.nz

School of People, Environment and Planning

Social Sciences Tower, 3rd Floor

Tennent Drive

Fitzherbert

Palmerston North, 4474

New Zealand

Tackling sustainability challenges requires changes in public perceptions, values, attitudes and behaviours, and the right conditions for these changes to happen. Arguably, education is the most important tool to reshape worldviews and values and has enormous potential to address the sustainability challenges facing humanity (Kioupi & Voulvoulis, 2019). Due to their extensive reach and widespread influence as authorised centres of knowledge production, higher education institutions present a significant medium through which socio-ecological and economic sustainability challenges can be tackled (Alghamdi, 2018; UNESCO, 2014; Shava, Makokotlela & Hebe, 2020). Universities play a critical role through their generation and dissemination of knowledge, promotion of sustainability values and through capacity building of future leaders' knowledge, skills and competencies required for sustainability (Shava et al., 2020). There is, therefore, a need for higher education institutions to critically evaluate the competencies of their graduates and reformulate their course content, pedagogies and assessment practices towards sustainability where appropriate (Lotz-Sisitka, Agbedahin & Hlengwa, 2015).

Developed during 2019 and first implemented in 2020, the MSDGs is a genuine interdisciplinary Masters Programme, which aims to equip students with SDG-related skills including anticipatory abilities, normative, strategic and collaborative skills, critical thinking, self-awareness and integrated problem-solving capabilities. The Masters programme incorporates core theoretical and practical subjects with interdisciplinary specialisations. This structure provides students with a common core understanding of sustainability and the SDGs, an opportunity to specialise across in their chosen field and an applied practical element incorporating theory and practice of the SDGs. It can be studied full or part time, on campus or by distance, offering flexibility to both domestic and international students.

The following paper is written in response to the call for practical solutions for interdisciplinary approaches to teaching Sustainable Development in Higher Education. We offer the model of Massey University's Masters of Sustainable Development Goals (MSDG) as an example of an innovative example of delivering education for the Sustainable Development Goals (SDG). We present an analysis of the process followed by Massey University from inception to implementation, as an example of a forward-thinking approach to delivering post-secondary education aimed at equipping students to work in SDG related fields. The paper highlights how key challenges were overcome,

provides insight into the pedagogies used and explores innovative assessment options which give students the opportunity to work in teams on real-world sustainability issues.

Massey University's Masters of Sustainable Development Goals

The challenge of achieving the SDGs requires a new genre of professionals, who can confront dynamic and complex problems with innovation, creativity and inclusivity. Increasingly, civil society, government and the private sector will require people willing and able to work in ways that are true to the collaborative and inclusive aspirations of the global SDGs; including the importance of understanding content and context, the ability to embrace a diverse range of knowledge frameworks (mainstream, alternative and Indigenous) and the skills of measuring and monitoring progress towards the SDGs. Within this context, development professionals, particularly those educated in the Global North, are increasingly being challenged to practise their craft differently, to be effective and innovative, and to have a much more in-depth understanding of the roles they and other development actors play. Values and relationships are now critical to their work as are the soft skills of flexibility, respect, humility and ethics. In response, Massey University, New Zealand, introduced a Masters of the SDGs that aims to prepare students for work locally, nationally or internationally in the SDG-focussed world of the next decade.

The MSDG qualification represents a pivotal contribution to the development of highly relevant, thematic focused, interdisciplinary qualifications in which key transferable skills are developed through strong theoretical grounding and real-world application. Multidisciplinary in nature, this qualification seeks to actively utilise expertise across the University and is therefore not isolated to a single college. It is envisioned that in the coming years future subject specialisations will be added including economics, peace and security, education, agriculture and health.

Currently, the MSDG structure is a 180 credit Masters degree, with four 120 credit subject specialisations (Business and Sustainability, Disaster Management, Environmental Sustainability, Global Development). In Part One (Figure 1) of the degree two 30 credit 700-level courses (an existing course 131704 Sustainable Development and a new course 131709 Sustainable Development Goals in Practice) will together form the qualification core. The remainder of the degree is made up of one of the four proposed new subject specialisations, each comprising 60 credits of 700-level (Level 8) subject courses (all of which currently exist). Part two is comprised of a 60 credit, 800-level (Level 9) course: 131.810 Sustainable Development Goals Practicum.

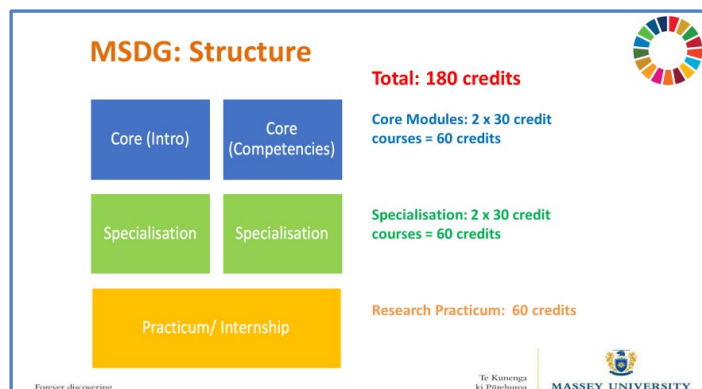


Figure 1: MSDG Structure

Theoretical Framework

In response to the need for ‘theorising change and developing praxis-orientated models of change that can be used to fast-track and support ongoing transformation of higher education programmes’ (Lotz-Sisitka, Agbedahin & Hlengwa, 2015:17), Schrage and Lenglet (2016:96) developed a theory-based framework for assessing the mainstreaming of education for sustainable development. The pursuit of analysing a project occurring within the complex and dynamic nature of formal education (Connell and Klem, 2000), requires a multifaceted approach, sensitive to a variety of factors such as: the way education is understood by instructors or administrators, the nature of the change proposed, the practices targeted for change and the wider administrative or institutional context. To capture this complexity, this framework (Figure 2) combines a set of three theoretical lenses: a theory of change (TOC), a theory of human capability (THC) and a theory of transformative learning (TTL).

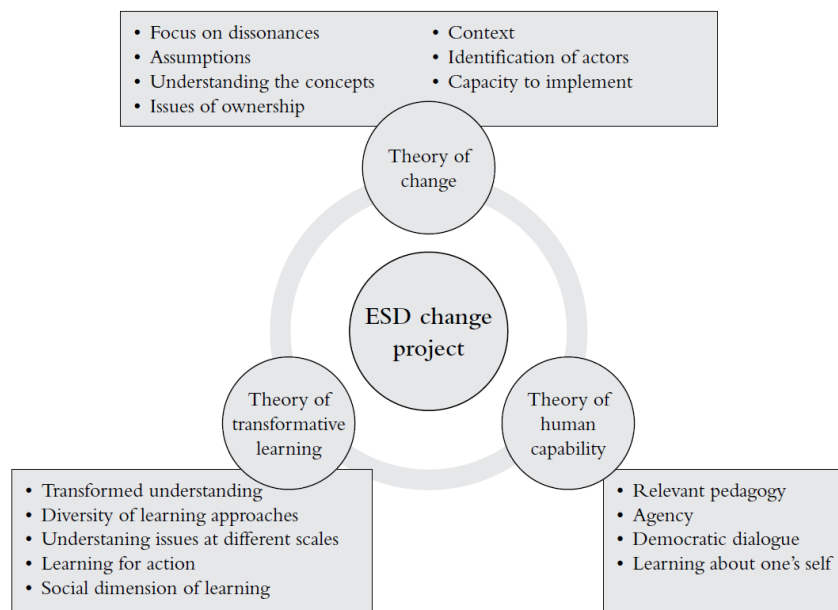


Figure 2: Theory-based framework for assessing mainstreaming ESD initiatives

Source: Schrage & Lenglet, 2016:96

Table 1 below further elaborates on the use of the framework as an analytical tool for mainstreaming education for sustainable initiatives in higher education.

Table 1: The three lenses of the theory-based framework for mainstreaming ESD in Higher Education

	Theory of Change	Theory of Human Capability	Theory of Transformative Learning
Purpose	<ul style="list-style-type: none"> • understanding the conditions and processes that lead to the formulation and implementation of the initiative; • explaining how certain internal and contextual drivers are likely to affect its outcome. 	<ul style="list-style-type: none"> • how certain educational practices can lead to greater student agency • ‘democratic deliberation’ between the teacher and the students allows them ‘to identify basic capabilities and culturally valued functioning’s in the communities in which they practice’– in short, to create agency - through the articulation of improved pedagogy, curriculum and assessment frameworks. 	<ul style="list-style-type: none"> • how certain ESD-related practices can lead towards a new understanding of complex, interconnected and wicked sustainability issues. • emphasis on a critical, problem-based and reflective practice of education • Learner-centred, participatory, and interactive. • It involves, group deliberation and group problem solving’
Analysis Elements	<ul style="list-style-type: none"> • Context • Long-term change • Sequence of events • Assumptions 	<ul style="list-style-type: none"> • Relevant pedagogy • Agency • Democratic dialogue • Learning about one’s self 	<ul style="list-style-type: none"> • Transformed understanding • Diversity of learning approaches • Social dimension of learning • Understanding issues at different scales

Analysing the MSDGs

Theory of Change

a) Context:

The creation of this Master of Sustainable Development Goals, as a taught masters programme, is directed at addressing perhaps the most pressing imperative facing humanity and the planet; sustainability. Focused through the lens of the Sustainable Development Goals (SDGs), this degree represents a cross university collaboration on addressing the three main elements of the SDGs; ecological sustainability, societal sustainability and economic sustainability. It also presents a unique opportunity to showcase Pacific and Indigenous paradigms of sustainability as alternatives to dominant western paradigms.

b) Long-term Change:

The creation of a Master of Sustainable Development Goals is of significant strategic importance to Massey University and directly relates to the Strategic Plan of the institution in terms of teaching methodology, community engagement, internationalisation, fostering government and industry relationships and the nurturing of University practice and leadership in the area of sustainability. It also presents a unique opportunity to showcase Pacific and indigenous paradigms of sustainability as alternatives to dominant western paradigms.

Furthermore, given the growing attention of the global tertiary sector in becoming change leaders in the area of sustainability, this programme will grow internal capacity within Massey further supporting sustainability endeavours by the University. Like the degree itself, sustainability measures focus on economic sustainability, societal sustainability and ecological sustainability. Within the tertiary sector globally numerous sustainability protocols exist that emphasise the need for tertiary providers to incorporate the meta-narrative of sustainability into all aspects of their teaching and learning, research, operational realities, and community education. As Massey is a member of the Sustainable Development Solutions Network it is hoped that with the development of this qualification, internal capacity will grow to support institutional goals and recognition of Massey as a change leader in the area of sustainability.

c) Sequence of events:

Internal consultation: Consultation across the institution was extensive. Extensive discussion occurred within the College and across the University notably involving the office of the DVC Māori, Pasifika directorate, and the Colleges of Science, Business, Health and Creative Arts. Those discussions were incredibly helpful in framing the notion of sustainability and its relevance to both the educational landscape and the wider Massey community. Extensive consultation has also occurred with the Director of Sustainability.

External consultation: Discussions were held in relation to the proposed qualification with a range of external parties and stakeholders, internationally and nationally. These include networks established during a recent trip to Latin America by Professor Banks; colleagues at University of the South Pacific (USP) in Fiji; Australian colleagues at the Research for Development Impact Conference at La Trobe University, and finally, in the Netherlands, the Wageningen University in the Netherlands. In addition, networking with local stakeholders such as PNCC, Whanganui City Council and central government agencies were instrumental.

d) Assumptions:

In responding to a changing development landscape, development practitioners will require relationship management skills allowing flexibility, resilience and adaptability when working across a variety of teams and with a variety of actors. In addition, understanding their own and others' values is also seen as a critical skill for development practitioners. Development practitioners need to have people skills and to work in different cultural settings that can be very politicised. They should understand how to work effectively across cultures. This includes dealing with prejudices, including your own, and strategies to deal with that. A combination of good soft skills such as relationship building and values, and technical skills such as monitoring and evaluation have long been the markers of successful development professionals, even if the focus in professional development education has historically been the latter (Leslie et al., 2016).

Theory of Human Capability:

a) Relevant Pedagogy

Based on our consultations with development agencies and stakeholders over the last decade, the literature on teaching and learning in development studies, and the forces that are influencing development management into the 2020s, we have discussed a set of competencies that support the kind of values-based, ethically informed and practice-

orientated pedagogy that we are working towards at Massey. These competencies are interpersonal relationships, understanding and reflecting on values, decolonising ways of understanding development and relevant technical skills for development practice.

b) Agency

The overall aim of the MSDGs is to give an advanced grounding to graduates of any discipline in the theory, practice and application of the Sustainable Development Goals. This includes the ability to discuss and critically analyse Indigenous paradigms as alternatives to dominant theoretical constructs in the application of the SDGs to real-world problems.

Congruent with this aim, the desired graduates will be able to:

- Demonstrate advanced ability to establish appropriate, collaborative working relationships with professionals practising in the sustainable development space
- Exhibit advanced ability to understand and apply the tools and approaches utilized in the theory and practice of sustainable development under the framework of the SDGs.
- Critically evaluate the success or otherwise of particular SDGs in their application to particular real-world problems
- Display a sophisticated understanding of alternative frameworks for the successful application of the SDGs
- Conduct research on and analyse the sustainable development work undertaken by a specific organisation
- Reflect critically on multidisciplinary approaches to the SDGs, their interaction to one another, and their application to complex real-world problems

c) Democratic dialogue

It is envisioned that this course will introduce students to Māori and Indigenous approaches to sustainability along with multi-disciplinary theoretical frameworks, and the interrelation of the SDGs. A key component of this second core course will be to demonstrate how practitioners, both inside and outside of Massey, have been using the SDGs in a variety of settings and ways, and to develop common core competencies across a cohort of students. One way in which to develop such competencies is the development of on-line/virtual/digital case studies that give a strong international flavour to the course.

To teach the competencies of interpersonal relationships and relevant technical skills, for example, we set up assignments in ways that require group work (a fundamental competency for many development roles), mirror some of the skills that development practitioners require in their day-day practice, and test crosscultural and interpersonal skills. As a significant proportion of Massey's students' study at a distance, groups work virtually, and a group will, for example, include students living at a range of locations, both national and international. They must – among other things – negotiate language and cultural differences (English not being the first language of two members of the group), varied professional backgrounds and time zones.

d) Learning about one's self

In the New Zealand context an awareness of your own world view refers also to understanding the role that the Treaty of Waitangi plays in shaping and defining

development interventions in Aotearoa/New Zealand as well as internationally. To introduce the competencies of understanding and reflecting on values and decolonising ways of understanding development in our classroom teaching (which we do mainly via block courses ranging from three to five days), we encourage students to reflect on their positionality and their past experiences, and to consider issues confronting a range of potential partners in development programmes. Awareness of these issues can assist future development workers to be more sensitive and considerate in their cross-cultural communications.

Theory of Transformative Learning

a) Transformed understanding

In our development studies programme at Massey, we are still grappling with the best way to embed the competency of decolonising ways of knowing and understanding development in respect to Te Tiriti. In our courses, students learn about issues facing Indigenous peoples around the world, and how it is valuable to draw from Indigenous (including Maori) knowledge to inform development practice: for example, around sustainable and alternative development.

This qualification presents Massey with a unique opportunity to both showcase and model alternative paradigms of sustainability to those traditionally applied within Western paradigms. Expanding through to Indigeneity, it is our intention for this qualification to provide a strong te tiriti platform that can act as a clear model for the practical and successful application of the Sustainable Development Goals.

In discussion with Te Putahi a Toi, it is clear that strong desire exists for engagement of Māori through both the core aspects of the course and also the subject specialisms offered. With the engagement of key Māori and Pasifika staff in the core component of the qualification the learning outcomes of the qualification, we endeavour to encourage continuous engagement. Future development leading to this qualification as a national showcase of Indigenous approaches to the Sustainable Development Goals is a key aspiration. The existence of the qualification will itself fulfil an important role as catalyst for the growth of a strong Māori and wider Indigenous foundation to this qualification and its subject specialisations.

b) Diversity of learning approaches

The assessment arrangements for this programme seek to utilise best practice in terms of pedagogical effectiveness at postgraduate level. As such courses such as the Practicum seek to provide significant student support whilst leading students through the learning experience in constructing a research report of real-world focus. No extra or dedicated support from that provided by Massey's current student focused systems is needed for the operation of assessment across the programme.

The final 60 credit component is a research practicum with students identifying an agency, corporation or institution that is working towards, or looking at working towards, policies or practices guided by the SDG framework in their area of specialisation (subject). Co-supervision of the practicum with a representative of the organisation is also a possibility along with a commitment to supervision across programmes in an effort to advance a multi-discipline, whole-of-university approach to the programme.

c) Social dimension of learning

Students come with different starting points in terms of knowing about and doing development. For example, some may have been working in the development space for years and are looking to cement this experience with a formal qualification, whereas others might hold a professional qualification such as nursing or teaching and be looking to make the shift into the development sector. Undoubtedly some groups face challenges in accommodating the differences of group members, and they typically learn as much from the process of producing their group assignment as they do from the content they are covering.

d) Understanding issues at different scales

We support the view that development studies education needs to adapt to a new focus on values, communication and the importance of relationships in development interventions. At the same time, research and theory is pointing to the need for development to be delivered 'locally' with development managers from the Global North acting as facilitators and brokers in support of grass-roots interventions led by the Global South. Technical skills such as the development of monitoring and evaluation and results frameworks remain critical and are still highly sort after by global development recruiters. These sorts of technical skills should, therefore, not be neglected in development management education. With growing inequality within countries, it makes sense that development managers have the capacity to reflect on their worldview and the inequality that exists in their own country. The localisation agenda, and the concomitant demand for development management capacity in the Global South calls for more innovative responses from tertiary institutions in the Global North. Geographically (though not geopolitically) located 'down under' in the Global South, and with much to learn from the Indigenous people whose lands we occupy, Australia and New Zealand development studies programmes potentially have more space to think creatively and come up with different approaches than do those programmes located in North America and Europe (Leslie et al., 2016).

Key Lessons Learnt

Some of the key insight which we have gained from our current experience, and which will be the focus of our presentation, are summarised in the table below:

Table 2: Key Lessons' learnt between 2019 and 2020

Category	Key insight gained
Interdisciplinary structure	<ul style="list-style-type: none"> • Interdisciplinary approaches to the SDGs are both essential and achievable • The programme's host college, must have a dedicated staff member to champion the process, providing leadership, management, coordination and administrative oversight over the programme as a whole • EFT shares create motivation and benefits for the specialisations. • Buy-in from College leadership level is essential, especially between colleges offering the various specialisations • Proactively breaking down silo's
Specialisations	<ul style="list-style-type: none"> • Each specialisation needs a specific staff member who buys into the programme and is committed to the success of their specialisation • It is essential that the Specialisations don't consider themselves "doing a favour" for the host academic department. Specialisations need to commit to the programme due to their own interest, commitment and benefit. • Clear outline of roles and responsibilities • Don't force it
Students	<ul style="list-style-type: none"> • Allow admission for any bachelor's degree (non-specific) • Allow flexibility for working students (part-time / full-time / distance – campus) • Their experience and knowledge is a significant strength of the programme • Allow second semester intake – International students
Content	<ul style="list-style-type: none"> • Importance of alternative and Indigenous frameworks • Mix of soft skills and hard skills • All specialisation courses must have specific reference to the SDGs within the course content • Justice, positionality and power • Transformed understanding
Pedagogy	<ul style="list-style-type: none"> • ESD approaches • Participatory • Constructivist approaches • Diverse • Collaborative • Democratic dialogue • Increase student agency
Marketing	<ul style="list-style-type: none"> • Students attracted by SDG focus – professional links • Conferences / workshops • Pointed and general • Use of scholarships to attract attention • Online sustainability forums

Conclusion

The SDGs face challenges on 'how' the macro level aspirations, collected through multiple rounds of global consultation, will be translated into everyday community, organisational, sector, societal and educational life. The challenges include workforce market demand to develop cadres of workers with the requisite "new diplomacy" skills to translate, implement, monitor, and report not only on the SDG progress, but also on how to monitor and implement them in everyday health, education, and workplace settings. Diverse disciplines and professions have a role to play in meeting these challenges.

The development and implementation of the Masters of Sustainable Development Goals faced many challenges, specifically due to Institutional norms and practices, which were not geared towards interdisciplinary ways of delivering education at this level. Among others, these included breaking down 'silos', fostering visionary partnerships within Massey University, stakeholders outside the university and gaining support from the broader New Zealand tertiary sector. Despite these challenges, we have designed and implemented an interdisciplinary Masters programme, providing students with advanced grounding in the theory, practice and application of the SDGs. We hope that through sharing our experience, challenges and insight, that we might play a part in increasing capacity for further research, collaboration for and implementation of interdisciplinary approaches to SDGs in higher education.

REFERENCES

- Connell, J.P. & Klem, A.K. (2000). You can get there from here: Using a theory of change approach to plan urban education reform. *Journal of Educational and Psychological Consultations*, 11(0), 93–120.
- Hoffman, A.M. (2006). The capability approach and educational policies and strategies: Effective life skills education for sustainable development. <http://www.unece.org/fileadmin/DAM/env/esd/EGC/Relevant%20materials/ADFCAPABILITYARTICLE.doc>.
- Landorf, H., Doscher, S. & Rocco, T. (2008). Education for sustainable human development: Towards a definition. *Theory and Research in Education*, 6(0), 221–236.
- Leslie, H.M., Banks, G., Prinsen, G., Scheyvens, R., & Stewart-Withers. (2016) Complexities of developmental management in the 2020s: Aligning values, skills and competencies in development studies. *Asia Pacific Viewpoint*, 59(2):235-245
- Lotz-Sisitka, H., Agbedahin, A. & Hlengwa, A. (2015). 'Seeding change': Developing a changeoriented model for professional learning and ESD in higher education institutions in Africa. In H. Lotz-Sisitka, A. Hlengwa, M. Ward, A. Salami, A. Ogbuigwe, M. Pradhan, M. Neeser & S. Lauriks (Eds), *Mainstreaming environment and sustainability in African Universities: Stories of Change*. Grahamstown: Rhodes University Environmental Learning Research Centre.
- Sen, A. (1989). Development as Capabilities Expansion. *Journal of Development Planning*, 19(0), 41–58.
- Shava, S., Makokotlela, M.V. & Hebe. (2020) Role of SDGs in Reconceptualising the Education for Sustainable Development in Curriculum in Higher Education in South Africa. *Scaling up SDGs Implementation, Sustainable Development Goals Series*, 169 – 178
- Sullivan, H. & Stewart, M. (2006). Who Owns the Theory of Change? *Evaluation*, 12(0), 179–199.
- UNESCO. (2014). *Shaping the future we want. UN decade for sustainable development. Final report* (2005–2014). Paris: UNESCO.
- Vogel, I. (2012a). *Review of the use of 'Theory of Change' in international development*. https://assets.publishing.service.gov.uk/media/57a08a5ded915d3cfd00071a/DFID_ToC_Review_VogelV7.pdf, visited on 16 January 2017.
- Vogel, I. (2012b). *ESPA guide to working with Theory of Change for research projects*. <http://www.espa.ac.uk/files/espa/ESPA-Theory-of-Change-Manual-FINAL.pdf>.
- Wals, A. & Corcoran, P.B. (2006). Sustainability as an outcome of transformative learning. In J. Holmberg & B.E. Samuelsson (Eds), *Drivers and barriers for implementing sustainable development in higher education. Education for sustainable development in action*. Paris: UNESCO.
- Wals, A. & Jickling, B. (2002). Sustainability in higher education: from doublethink and newspeak to critical thinking and meaningful learning. *Higher Education Policy*, 15(2), 121–131.
- Wals, A. (2007). Learning in a changing world and changing in a learning World: Reflexively fumbling towards sustainability. *Southern African Journal of Environmental Education*, 24(1), 35–45.
- Wals, A. (2010). Mirroring, gestaltswitching and transformative social learning. *International Journal of Sustainability in Higher Education*, 11(4), 380–390.