Title: Transformative Prospects for Vocational Education and Training

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Abstract: (If required)

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The Paris Agreement, Pope Francis's Laudato Si and the Sustainable Development Goals give momentous recognition to the interdependence of humans and the biosphere and the need for systems of accountability for climate responsibility. Every sphere is affected: science, education, narrative and theory, graphs, weather disasters, biodiversity destruction all tell the story of the climate crisis. Pope Francis draws together these complexities in a simple and elegant statement referring to the planetary emergency as follows:

> It represents one of the principal challenges facing humanity in our day…We are faced not with two separate crises, one environmental and the other social, but rather with one complex crisis which is both social and environmental….to hear the cry of the earth and the cry of the poor."

The momentum of the Paris Agreement, the SDG's and Laudato Si give impetus to transformations in education to support pathways for transition to renewable energy and zero carbon economics.

Consideration of transformative education in this paper is grounded in a study on Vocational and Technical Education and Training done by the UNU Regional Centre of Expertise[1] (RCE Waikato) in collaborative partnership with Toimata Foundation for environmental and creative sustainability education. [2]

This chapter includes context specific reference to Aotearoa New Zealand and the recently completed study of pathways for young people leaving school to pursue their interests and abilities in work, training and employment.   The study includes Māori [3] and Pacific [4] students, teachers, community and organizational leaders. The focus is on students who have been inspired and engaged through a national programme involving environmental activities, climate action and leadership in schools and communities and who seek to continue to develop these interests and passions, in the world of work. The study was based on an identified gap of provision for vocational education and training for sustainability, and therefore included identifying what programme could be developed to meet this area of interest.

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[1] UNU RCE Network see: http://www.rce-network.org/portal/ and Response: www.response.org.nz

[2] Toimata Foundation is the leading provider of Education for 'creative sustainability' in Aotearoa New Zealand. Originally EnviroSchools, it has programmes in early childhood, primary and secondary schools. http://www.toimata.org.nz/

[3] Māori are the indigenous people of Aotearoa New Zealand

[4] Pacific peoples generally from the South Pacific nations come to Aotearoa New Zealand for work opportunities. Like Māori they are disproportionately represented in the negative social indices.

Interviews from students, transformative leaders and enterprises, gave insights into attributes of education and training which need to guide a systemic approach to education for sustainable societies in the vocational sector. Māori and Pacific participants enable us to include some of the issues for these indigenous peoples, and, with a Māori co-author, offer precepts of Māori and Pacific knowledge.

Policy and overall political, social and economic context are an essential lens for interpreting the provision for vocational education and training in the spectrum of support for the development of young people as their horizons open up, moving from school into the wider world.

Aotearoa New Zealand is a site of Indigenous knowledge systems, including those of both Maori and Pacific peoples, which, in a historical colonial context, sit alongside western knowledge systems. In particular, educational and employment issues for Maori and Pacific young people show persistent injustice in Education, Social and Economic policies because of the profile of marginalization and inequality which is directly related to historical colonial policies, in New Zealand, of land acquisition, education, health provision, and war which alienated Maori from land and resources.

For the paper, Technical and Vocational Education will be treated as a subset of education for sustainable societies (ESD). Generally education for sustainable development (ESD) and Education for Global Citizenship include awareness of environmental impacts of development, qualities of critical thinking, connection to people in other parts of the world and other life situations, and developing knowledge of how global markets impact on local economies, products and prices. Yet these wider attributes do not necessarily alter the fundamental orientation of education towards the individual – the individual of the liberal world-view underpinned by freedom, rights, rationality and individual self interest.

The knowledge systems of liberal education, for all their ideals, are part of an industrial system that is destroying the earth systems that sustain life as we know it (Royal 2003). With this in mind we bring attention to transformative principles which are different from the conventional democratic ideals of the individual and society and which are the basis for liberal, Deweyan ideals of a 'common life' (Harris 2009).

At the same time, liberal education was intended to expand horizons beyond the utilitarian focus on work and to widen students' interest in social concerns, and the history of education shows cyclic changes in emphases for liberal studies to industry-driven approaches (Harris p. 49).

> Liberal adult education was to "assist in the maturation of the individual as an individual—not simply as a factor in the economic equation or as a political citizen, but as a Man...more concerned with helping men *to be*, than *to be something"* (Harris, 2009, p. 47)

Peter Willis et al (2009) draw a distinction between sustainable development and 'social sustainability', and the knowledge development that is aligned with the economy, in contrast to knowledge that is transformative:

[Social sustainability] is knowledge that is concerned with making a better society as a whole, not simply a better livelihood for the individual (Willis, McKenzie, Harris, 2009 p.

It must be acknowledged that it is reductive to categorize educational attainment as only for individual self interest. The benefits of education and employment are to families and to society as a whole. However self interest relates to the emphasis on self interest in neoliberal economic theory, which has its counterpart in education and all associated social systems.

For the 21st Century the scope of limitless horizons of economic development and technological innovation are juxtaposed with the exponential impact of human and technical invention on the biosphere to the extent of unraveling the fabric of life as we know it.

Life is sustained in the narrow band of about 2 degrees of temperature variation as understood in earth systems science (Steffan et.al. 2015). As science opens our understanding of human impact on planetary ecosystems, we are compelled to take account of human ethics as part of the sustainability agenda, as expressed the aspirations of the Sustainable Development Goals. Goal Four, Quality Education on Inclusive and equitable quality education, lifelong learning opportunities for all and ethics, and Goal Thirteen enjoin us to urgent action on climate change.

In contrast to liberal economic values which have defined education, we take transformative education to be aligned with climate responsive ethics, and transitions to low carbon. These include attributes of accountability and participative decision-making, public good benefits and relational values. These are qualities of responsibility, a well recognized orientation for sustainability which is rarely expanded upon. The intention in this paper is to identify indicators for assessing transformative attributes of sustainability, on the premise that transformation involves the capacity to venture into uncommon ground, to encounter different knowledge frameworks and contested interests, with capacity for synchrony as well as difference and distinctive knowledge systems, for understandings of wellbeing that are attuned to resilience and communitarian vitality rather than utilitarian consumer values. Transformative education will be referenced to a new accord with nature.

Ethics, philosophy and clarity of values are important for sustainability and citizenship (Davidson 2012, Garratt and Piper 2012, Giles 2015, Royal 2003). Davidson's eloquent contribution on a philosophy of 'practical reason' is an example of moving beyond the confines of rationality as the basis of standard education, to bring forward the creative dialectic between life experience, reason, emotion, and spirituality for learning, embracing the more complex dimensions of material life and practice.

Transformative and ethical orientations will be the basis for sketching provision for vocational education that builds on the knowledge and skills developed in schools, alongside an impetus for work-place and systemic transitions. Most of the snapshots of vocational enterprises (as opposed to government programmes) are environmentally oriented, and this is often the ground for transformative learning. The scope of vocational education for sustainable societies is wide, and needs to be open to the full range of options, such as technical expertise for sustainability as seen in

the stellar Enspiral Network enterprise in New Zealand[5], energy transitions as is championed by Generation Zero[6], agriculture, manufacturing, fishing and industry sectors

Ambition and Questions for Sustainability and Vocational Education

The scope of vocational education and training is often proposed as inclusive of broad goals of personal development and citizenship, 'education for life', as well as on specific pathways to employment (Harris, 2009; Davidson, 2012). This corresponds with learning and engagement that is broader than training for employment, which can be associated with the move Education for Sustainability and Education for Global Citizenship (EGC): Such knowledge is for life-competencies.

> EGC involves formal, informal and nonformal education that envisions to "reach, inspire and engage learners to focus efforts on equitable, peaceful and sustainable social, economic and ecological solutions to interconnected local and global challenges", develop the "understanding of learners to be part of a global community respecting planetary boundaries", "enhance responsible citizenship within local and global contexts", and goes "beyond the acquisition of knowledge and cognitive skills, to transforming the way people think and act individually and collectively." (Cupino 2016)

Education for Sustainable Development, and the Sustainable Development Goals[7] are invested with a plethora of transformational and aspirational interpretations, such as access to affordable, quality, technical, vocational and tertiary education for all women and men, in Sustainable Development Goal Four. While these Goals are shaped by the integrating impetus of sustainability[8], criticisms include that there is no definition that supports policy development (Davidson 2012). Ashish Kothari offers a penetrating analysis of the business-as-usual growth agenda in the Sustainable Development Goals, and the proposition of an erroneous focus on poverty to evade the real cause of the ecological and climate crisis, which is acquisition of wealth (Kothari, Demaria and Acosta, 2014).

Systems that serve the concentration of wealth and affluence for a small minority in developed countries is the most elusive dimension of transformational change. The same mal-distribution of wealth is also mirrored in developing countries. Addressing poverty and rights to education, health and housing without addressing wealth and its distribution evades the real cause of inequality. There is a lack, or need or entitlement underlying such rights, and their implementation has to be met through a corresponding duty of solidarity.

Education and policy that addresses climate and inequity requires a systemic approach, which will mean constraint to over-exploitation and wealth is therefore more resisted by the privileged with

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[5] www.enspiral.com

[6] www.generationzero.org

[7] http://www.un.org/sustainabledevelopment/sustainable-development-goals/

[8] Sustainability can be defined as "maintaining the capacity of ecological systems to support social and economic systems" (Berkes et al 2003, p.2).

vested interests and power. Duty or responsibility is a much less articulated side of ethics and justice, yet our interdependence and the common cause of the climate tilt the scales towards solidarity responsibility as the cutting edge of transformative sustainability.

The tremendous challenge of transformative education can only be considered in tandem with engagement with whole of system approaches and/or holistic approaches, which is characteristic of an indigenous perspective. Transitions to sustainable societies mean moving ahead with the 'green economy' with policy pathways to low carbon energy, and to align skills development with job opportunities. In other words, there needs to be a systemic   integration of skills development with the various sectors of the new decarbonized economy (UN Decade of Education for Sustainable Development, 2014, Ch.4, p. 102.). This means that all

> TVET [Technical and Vocational Education and Training] systems need to prepare their learners for being responsible and well-informed producers and consumers, and for being able to act competently, creatively and as agents for sustainability in their workplaces and in society at large. (ibid p. 107)

The assumption of TVET reorientation to address not only the development of skills, but also the expectation of 'TVET learners becoming agents of change themselves' (ibid) that can influence change in the workplace and community needs further consideration, to take account of socio-economic influences and power relations in the workplace (Coll, Taylor and Nathan 2003).

Education in Unsustainable Societies

Vocational Education and Training need to be analysed in the context of policies of economic growth in a high carbon economy which rely on market ideology and commodity values without policies for transitions to sustainability in economic or education policy. Similarly, policies to address youth unemployment are not in settings of whole of system policy for transitions to low carbon. In New Zealand they are situated in a context of targeted programmes, which can be identified in the Better Public Services government statement,[9] to minimize the most severe ends of disadvantage, and to mitigate against the long term costs of poor educational outcomes, and associations of poverty with poor health, crime and unemployment (Ref).

The educational profile of school achievement and of young people 'Not Engaged in Education, Employment or Training (NEET) gives a clear indication of the position of Maori and Pacific Island youth populations in New Zealand[10]. While 81% of 'European' school leavers attained a minimum level school qualification[11] compared to 61% Maori and 68% of Pacific students. The NEET

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[9] https://www.beehive.govt.nz/feature/better-public-services
[10] http://www.mbie.govt.nz/info-services/employment-skills/labour-market-reports/maori-labour-market/maori-in-the-labour-market-fact-sheets/maori-dec-2015/neet. Retrieved 18th March 2016.
[11] NCEA Level 2 National Standards.
http://www.educationcounts.govt.nz/__data/assets/pdf_file/0009/148851/National-Standards-Achievements-Results-2014.pdf. Retrieved 20th March 2016

information sketches a similar inequity: in December 2015, 9% European 16-18 year olds were classified as NEET, while 20% Maori and 16% Pacific young people were in this category[12]. These figures are the ground from which inequality becomes embedded and expands (Marriott and Sim, 2014)

We see that young people with aspirations to contribute to sustainable societies are caught in a contradiction between this commitment and the need to fit in with employment in a society focused on economic growth. New Zealand's overarching economic policy is to double farm exports by 2020. Currently, 47% of New Zealand emissions are in the agriculture sectors, and there are few policies to transform agriculture. At this stage, agriculture is excluded from our carbon emissions assessments, and from New Zealand's Nationally Determined Commitment under the Paris Agreement. Youth horizons may be with the former, while employment opportunities are with the latter.

Government and Council initiatives for post school vocational training generally match individuals with economic growth patterns, and with utilitarian goals in education and employment, along the lines of political economic priorities (Skilbeck 2002). This is echoed in the real alarm of Aiden Davidson, Pierre Calame and many others with the perpetuation of unsustainability in the education system

> The central narrative of ESD—namely, that learning by doing sustainable development can be harnessed to universal principles, guided by the transcendent hand of values and applied in science and technology—is inherited uncritically from instrumentalist epistemologies themselves deeply implicated in unsustainable forms of development. Reasserting the hegemony of scientific knowledge and technological efficiency, agendas for ESD cling to the instrumentalist hope that science and technology will be the well- behaved servants of good intentions and lofty aspirations. They thereby perpetuate a modern history of imagining progress as techno-scientific flight from the past; a flight that aims, paradoxically, to reclaim a state of original human innocence (Davidson 2009, P. 72)

Calame (2015) argues the need for education to complement political and economic responses to address climate change and the global crises:

> This is why education should be at the forefront of concerns. Our current education model is too often based on separating things instead of connecting them: separating thought and action; separating different fields of knowledge; separating values from techniques; separating abstract knowledge from knowledge formed through experience; separating the past, present and future.

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http://www.educationcounts.govt.nz/statistics/maori-education/maori-in-schooling/participation-and-attainment-of-maori-students-in-national-certificate-of-educational-achievement Retrieved 18th March 2016.

[12] http://www.mbie.govt.nz/info-services/employment-skills/labour-market-reports/maori-labour-market/maori-in-the-labour-market-fact-sheets/maori-dec-2015/neet Retrieved 18th March 2016.

On this account, transformation means integration, appreciating how everything is connected, how all forms of life are ecologically inter-related (Berkes, Colding and Folke 2003). This thought resonates with the Māori and Pacific principle of ako. Ako is reciprocal learning. Ako is driven by cultural, spiritual as well as collective concepts, motivations and aspirations involving training, learning by osmosis, doing, observing, practicing, reflecting, consulting and visioning and hope (Thaman, 1988; Vaioleti, 2011). Learning in Pacific and Māori communities was stratified. Tiatia (1998) talks about Pacific societies expecting everyone to know and perform their role. Traditionally skills and knowledge for roles were taught between generations by way of non-formal, informal, non-formal including apprenticeship. The ultimate goal of Ako for Pacific people is to live harmoniously in a sustainable relationship with others, the environment and their God(s) (Vaioleti, 2011).

Education and Responsible Societies

In order to provide a frame of reference for education in sustainable societies we bring an unfamiliar voice to the table of education. This Levinasian voice is a touchstone for transformative ethics and values; it offers a transformative form of subjectivity, or identity, and a transformative orientation for communitarian societies.

The selection of subjectivity, or identity, and community here is simply to take two 'areas' at the heart of education – the individual, the human person and their role in, and contribution to society. The brief considerations are simply to recognize the double dimension of transformation in individuals, and communitarian, or solidarity processes.

A Levinasian understanding of ethics is relational, accountable and other-centred. Emmanuel Levinas seeks an alternative to the violence within the dualistic self-other/ subject object system, often characterized as system of separation and mastery (Martin 2016, Hoskins, Martin Humphries 2013). The relational capacity of the human person is sourced in our interdependence and a growing awareness that all forms of life share a common destiny. The relational quality can be suppressed by the individual notions of the self, which have become embedded in westernized societies. Levinasian ethics is a mode of encountering the Other person in their uniqueness, not as the other of me (the mode of identity formation). It is where the difference of the Other is respected and upheld; a face-to-face relation mediated by putting the Other before self. It is practiced in welcome, in hospitality, in sharing bread and water, possibly to an extent of sacrificing self-interest. Here, identity does not come from self assertion, or self fulfillment, rather from the fulfillment of responsibility. It is a relation which does not assume to know the Other, but is expressed in a willingness to be taught, to listen, to respond (Zhao 2016).

These alternative, corrective ethics have remarkable affinity with the indigenous reference of Maori and Pacific Peoples where obligation, hospitality and face-to-face engagement extends to direct forms of (democratic) governance, are foundational. These are explored further on, for their contextual significance, and for their relevance to the quest for more deeply founded transformative education and work. Indigenous protocols of hospitality and kinship with of all forms

of life offer a reference for education and a custodial world view as means to reconcile economy with ecology and biophysical earth systems.

These ethics for interdependence with attention to resisting the objectification of the other person is an ethics at the micro scale which flows through into systems of thought, policy and practice in education, work and other spheres. Separation is inherent in identifying an Other as 'poor' or 'lacking' education, and carries the risk of objectification rather than solidarity. The ethics of responsibility involves modalities of practice and performance in the material, sensible world that resonate with experiential learning which is so central to ESD. In can be readily seen that ethics means to take action, to commit, to be engaged.

> The original themes of philosophy [proceed] from giving radical attention to the urgent preoccupations of the moment….To think is no longer to contemplate but to commit oneself, to be engulfed by that which one thinks, to be involved. This is the dramatic event of being-in-the-world. (Levinas 1996 pp. 3-4)

Fulfilling such an ethical demand may not be possible all the time, in everyday reality, but our 'exposure' to the Other, and solidarity convey a primary relational orientation of our situation which is relevant thinking about education for sustainable societies and vocational education.

We start with the interpersonal level, the face-to-face relation, as the ground of or source of societal practice, where other-centredness can be developed as a primary transformative relational quality. Other-centredness may be expressed in hospitality, in attentiveness and listening, and responding to need. It has emotional and spiritual dimensions with a transcendent quality of love. This is a relational ethic that includes accountability for short and long term consequences of actions, as far as it is possible to ascertain. It might refer to family relations, to employment ethics, to energy use, waste, the use of materials and our environmental footprint.

There is always capacity for responsibility at some level although this may vary according to capacity and resources. It might be as simple as joining with others to bring about change. The personal responsibility to become informed goes hand in hand with the development of knowledge for sustainable societies. A valuable body of work on face-to-face ethics in teaching and learning is to be found in the newly published Journal of *Educational Philosophy and Theory* (Zhao, 2016).

Educationwhich cultivates the relational self, attentive to the Other, and to wider social and environmental wellbeing, paves the way for social order of justice and an expanded view of humans as interdependent with nature.

The ethics of responsibility elicited by 'face' at the personal level is the basis for responsibility in the social arena. This is where advocacy for justice involves the disruptive interpolation of the 'prophetic' voice (Martin, 2016). The 'prophetic' role is the responsibility to represent situations of vulnerability, the precariousness of people, and of the planetary ecosystems, to expose destructive exploitation and the maldistribution of wealth and to act at local and global scales to redress climate change. Where the impetus for sustainable societies fails to engage with separations and

objectifications which underlie the human and ecological crisis, it becomes in effect a clip-on to the mainstream systems which are destabilizing the planet.

With an orientation of solidarity responsibility we turn first to Māori and Pacific frameworks, and to case studies which sketch initiatives and programmes, including Māori led initiatives. These provide a reference for identifying elements of transformative education and solidarity responsibility.

Context –Vocational and Training Opportunities in Māori and Pacific societies

The indigenous knowledge of Māori and Pacific peoples has been founded on a family (whānau) and village or kin related (kāinga) relationship enhancement model in which culture is practised and validated and accountability and support structures are important (Morrison, 2014). Within this framework, learning was purposeful and aimed at the acquisition of skills and knowledge to perform inherited roles dictated by the collective to which that person belonged, known as the kāinga (kin groups, family, can also mean place, village). There is a sense of spiritual interconnectedness with the land, rivers and seas ensuring a caretaker role (kaitiakitanga) which seeks to preserve and treat resources in a sustainable way.

Both Māori and Pacific educational success includes a regard for pedagogy. Pedagogical approaches in TVET require understandings and support from families, tribes and villages and transfer of knowledge based on culture, because culture counts. Informal discussions with stated aims such as the talanoa approach become important conduits and reference points towards successful outcomes (Vaioleti, 2006, 2011)

Fatongia is one's role, duty or obligation to family and community to ensure the above is achieved then tauhi vaa (the nurturing of respectful space) must be present to maintain a symbolic space between individuals, groups and with Gods. This is vital for harmony and good relationships.

Māori values arise from connection to tribal lands and waters essential for the survival and wellbeing of the people. Māori developed an ethic of care for the land, a spiritual interconnectedness which extends to other living and non living entities as stewards or guardians, kaitiaki. It is important that In fulfilling this role of kaitiaki that Māori express generosity to those who some to work on the land. This means that Māori must care for the mana (prestige) of each individual in the spirit of manaakitanga (generosity) (Morrison and Violeti, 2011; Royal 2003).

The themes of kainga, ako, manaakitanga, kaitiakitanga, fatongia, all testify to a worldview of a woven universe and to corresponding social, economic, environmental systems which encompass spiritual dimensions ((Royal 2003). They are distinctive, their central principles of intergenerational accountability, and localized, tribal forms of governance and accountability.

Indigenous governance can be regarded as a form of direct democracy because authority was not alienated to an over-arching authority removed from the tribal area, or region, as in Nation-State but negotiated and lived in the day to day of community life. Such an orientation opens the

possibility for localized responses, agreements, protocols, structures and solutions to be negotiated and for greater community engagement in their own governance (Hoskins, Martin, Humphries 2010 Indigenous systems convey an established and evolving wisdom which is evoked by some of the aspirations of sustainability, and as cultural traditions cannot be fully equated with corrective accounts of sustainability and their remedial impetus (Tunks 2013).

Principles of public good, education to meet the custodial responsibilities of the community, involvement of people in decisions that affect them, a transcendent reference and the central reference to responsibility, are all recognizable in these accounts.

These values and practices can be seen in the Maori contributors to the Post School Pathways study. Maori students are animated by the authority of the spiritual dimension of working with land, and the deities attributed to the different forms of environmental energy systems – forests, oceans, land and rivers, referred to as atua, or atuatanga.   From interviews done for this project, one nineteen year old student spoke of

> My love for Atua Maori, my passion for wanting to leave a mark on this whenua [land] and not the kind of mark a drill makes, but the kind of mark that leaves that makes my future tamariki [children], proud to say 'that's my mother' (Interview December 2015).

One initiative, Whaingaroa, is characteristic of many Maori communities on ancestral land and a living example of custodial responsibility in action. Whaingaroa involves the local Māori community, and school leavers, and it runs holiday programmes. It is open to Māori and non-Māori, with a reach to business and includes delivering modules for providers of other courses, working with young people in the youth justice system and the Department of Corrections, and Ministry of Health, Mauriora (wellbeing) health competency training.[13] Whaingaroa is for sustainable living within the community with informal learning on the land as well as training programmes.

Traditional knowledge and custom is kept alive and passed on through working in the gardens and nursery and the adjoining coast. Gardening and food production is chemical free and the skills of growing are intended for transferring to home gardens for less reliance on the supermarket for food. This is an example of a hapū, an autonomously governed community on traditional land, kainga, linking with other organizations and wider communities through hospitality – a protocol of engagement involving an obligation to provide for the needs of guests, and working as kaitiaki (custodians) and to engage and influence the wider community.

Tribal initiatives are taking place in a context of Māori seeking compensation for land and cultural alienations and the destructive impacts of the colonisation process, and many tribes have developed educational and cultural programmes which seek to reaffirm relationships of young people with their tribal territories. Implicit in this is the learning of local narratives and practises in which the ethic of custodianship, or kaitiakitanga is inherent.

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[13] http://mauriora.co.nz/

In a globalised urban society many young Māori do not live in their tribal area so learning programmes or wānanga become an essential strategy for reconnecting relationships, affirming identity and building the capacity of youth. Part of these programmes is to ensure that the Māori language and culture is revitalized , and essential elements of the integrity of tribes us upheld, including through the continuation of cultural rituals. Kaitiakitanga or guardianship emphasises the role that Māori have to care for, protect and sustain the environment and these have some synergy with the sustainable development goals.

Māori initiatives may reach to the wider community. For example 'Pare Kore' (No Waste) began with Maori communities to support them to recycle their waste. It started locally, and is now a nation-wide movement.[14] As far as youth are concerned, Pare Kore gives hands on experience and the opportunity to take responsibility for managing waste. There are frustrations with the scheme to create sustainable spaces - with young people finding it too slow and even irrelevant. As the programme evolves the opportunity to teach Maori traditions of self governance and self sufficiency, bring in the wider dimensions for transformative change through recovery of language and land, and leadership towards rangatiratanga (self-governance).

These local initiatives are a counterpoint to globalization – localized, engaged, contextual and culturally meaningful practices of use of resources while safeguarding and enhancing land, water, forests and oceans and people. These are the basis of place-based pedagogies which emphasize the local social, ecological and economic resources of a community, with knowledge development and decision-making which is relevant to local economies and histories (Kleederman, 2009). The significance of this form of local initiative is the expression of public good and local 'democracy' in action. Place based pedagogy includes obligations on the local tribe to meet their custodial and care-taking responsibilities for the local and wider community.

Vocational and Training Initiatives in the Wider Community.

Social Enterprises

The post school training landscape has further examples of brilliant initiatives which seek to meet the needs of young people entering the world of opportunity, work and further development after school. These are marked by examples of transformative leadership and responsibility, powerful expressions of dedication, with energy of extra-ordinary dimensions for the benefit of others. Two examples are Te Rito Gardens and Orientation Aotearoa.

Te Rito operates as a co-operative, and in partnership with Maori in the area. It exemplifies many of the best attributes of vocational training programmes with care for land and food production, community partnerships, and the endeavor to integrate economic enterprise with skills of marketing and analysis of production costs and supply chains in the programmes. The members of the co-operative share the income from the sale of produce and from business products, on the basis of an equal hourly rate, calculated on contributions of time.

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[14] http://parakore.maori.nz/.

They set up an organic vegetable market (previously certified organic though Organic Farms NZ) and a contracting horticulture and landscaping business to provide income generating activities for graduates of the course, and shareholders (students and graduates)

It is now exploring an accredited horticulture and vocational skills course with a practicum module for other vocational courses and several opportunities to achieve unit standards, or certification to facilitate practical employment. These are for horticulture including amenities management leading to employment by city councils, woodwork, carpentry, building and sculpture.

Acquiring such skills goes hand in hand with the benefits of a professional environment for students to familiarise with regular working hours, reliable attendance and professional conduct.

Being involved in growing produce involves expanded training and experience running regular markets and harvest festivals for selling produce and other income generating activities. Raising native and vegetable seedlings entails supplying local businesses, environmental regeneration and amenities maintenance programs for the local Council and for private consumers. Te Rito and other land based initiatives which market their produce and create income streams, incorporate production chain analysis to make links with global production systems, transport and energy and how these impact on costs and emissions.

A feature of Te Rito, as with many social enterprises, is their partnerships with local agencies, schools and the Ministry of Education Gateways Programme. They run training courses for Work and Income New Zealand beneficiaries and job seekers and alternative employment programs such as the now defunded Trash Palace waste reduction programs. The possibility of an *interdependently* accredited NZQA qualification (New Zealand Qualification Authority), is proposed, where a formally accredited tertiary institution and an enterprise such as Te Rito, enter into an agreement for recognition of the vocational and training contribution of the enterprise. This innovation faces obstacles:

> We see challenges of certification and susceptibility to funding restrictions, with partner tertiary institutions being tied to enrollment numbers to access funding streams (S. Wilson, Director Te Rito December 2015)

Te Rito Gardens previously ran a NZQA [15] accredited level 2 horticulture course through Whitireia Polytechnic primarily for students with special needs but open to all. This was disestablished in April 2015 due to cuts in funding and difficulty in linking graduates with industry related employment.

Many initiatives are hampered by uncertainty of funding and thus of continuity and rely on courage, leadership and enterprise in the face of precarious survival. Orientation Aotearoa began in 2015 as an eight month residential course that can be described as a living experience of permaculture as a transformative education programme for aspiring young change-makers aged eighteen to twenty-

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[15] New Zealand Qualifications Authority is the New Zealand Government's quality assurance body which ensures that NZ qualifications are credible and robust.

eight. The holistic curriculum was delivered by practitioners from around New Zealand exploring leadership, sustainability and social entrepreneurship[16]. The residential course is unique and learner driven.

Transformative attributes can be seen in the practical and collaborative features of these social enterprises. Engagement with partners in communities emerges as a feature which is central to the durability of the programme. Creating an inclusive structure involving youth and community partners allows for different skills, different knowledge (traditional and modern) is key to a sustainable project. Participants highlighted the need to ensure that the structure of their projects not only gets the message of sustainability across to their stakeholders but also that it remains relevant and interesting to them. This has meant that participants have sought people with different skills sets to carry out parts of the project created a succession plan through the buy-in of the community, this has been achieved through the transfer of knowledge from the young ones right through to the senior students (Key Informant, November 2015).

Participants in the study agreed that in order for their project to maintain traction and become a notable project within the community, the communities around them must have some form of buy-in into the project. This can be in the form of funding, plant and time donations, the offering of skills and knowledge. Such buy-in allows the community to become more invested into the project and has meant that the projects the participants undertake remain relevant within their communities. Participants said:

> (It is) Important to gain buy-in from all communities as they are important in the longevity of the process" (Teacher, Interview November 2015)

> Teach the marae, community and whanau how to recycle and then let them take over the initiative and retain responsibility (Community Leader, Interview December 2015)

 Because such education projects often do not generate sufficient income, buy-in from the community and demonstration of the benefits to the community are crucial in maintaining external funding and longevity of such projects. An exemplary local, place-based programme in a provincial city with the leadership of a business group 'Taranaki Futures[17] is supported by the Ministry of Business and Innovation, and works with schools and polytechnic providors and the Local Council to support vocational employment and training in the region. Participating businesses could have a specific register of sustainable businesses with liaison to students with these interests.

Council Programmes and Collaborative Ventures

Local Council programmes for supporting school leavers into training and work are effective at small and large scales. One example is a small rural town where a previous Mayor put in place a 'no youth unemployment policy', which has been continued and expanded by subsequent mayors.

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16 http://www.oa.org.nz/programme/

17 http://www.taranakifutures.org.nz/education-innovation.html

The Youth Employability Passport is a major urban initiative that has been developed alongside many organisations across Auckland. This initiative has been designed as a link between education, business and youth. An Employability Framework aligns skills developed by youth training providers in schools with the explicit skills that employers want. Achievement is recognized with an Employability Passport, to attest to young people's skill and character development, based on the skills identified in the framework.

The collaborative impetus is built into capacity building with the range of organisations that support young people, to help them to build employability skills and to use the Passport as a tool for building skills and engagement.[18] The passport gives young people the recognition of skills that they have gained through work placements which help to bridge the gap between what employers need and what young people are able to offer in spite of limited work history.

The council programmes do support equity, participation and inclusion, and public good interests, and other attributes could be identified in a closer study. Our critique would recognize the disjunct between student interests in sustainability and the economic market-place of jobs which may or may not have a sustainability agenda in Council policy.

A Sustainable Business

Before leaving this snapshot of enterprises, and council programmes we include a sustainability business which runs a shop and installs energy efficiency systems, such as insulation, and has internships and vocational education programmes.

The Sustainability Trust often hires school leavers without tertiary qualifications for its insulation installation work. Demand for insulation is much higher the winter which means the work can be seasonal and redundancies were recently made due to lack of demand for labour over the summer.

In addition to some experience being preferred, the Trust also looks for young people with good physical health and work ethics of reliability and autonomy, commitments to good quality workmanship and values in line with the Trust and a desire to contribute to society

The Trust has is open to taking on interns, especially for pro-active individuals to develop their vocational skills. Resources and therefore compensation are often limited and the Trust tends to only take on internships for 3 months or more so that the interns can be adequately trained. They would be open to a program where interns or employees work in the insulation program during the winter months then rotate to seasonal work at other organisations in the off-season.

Gateways National Vocational Training Programme: Economic and Educational Contradictions

The profile of youth disengagement from education and unemployment gives a backdrop to the importance of the Ministry of Education Youth Guarantee Vocational Pathways Program [19]. It has

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[18] http://www.cometauckland.org.nz/wawcs0160400/idDetails=172/Youth-Employability.html
[19] http://www.cometauckland.org.nz/wawcs0160400/idDetails=172/Youth-Employability.html

the explicit goal of preparation for employment and developed in collaboration with industry and education to ensure students 16-19 years have a better understanding of the workplace, and the qualifications and skills required by industry. Students can get NCEA Level 2 (the medium grade, minimal school qualification) with Vocational Pathways, which shows they have a broad knowledge and relevant skills that are relevant to primary and service industries, manufacturing and creative industries.

The pathways help students see how their learning and achievement is valued in the 'real world' by aligning the NCEA Level 2 Assessment Standards including specific 'sector-related' standards with six industries: primary and service industries, social and community services, manufacturing, construction and infrastructure, and creative industries.

During the interviews one opinion was that Youth Guarantee Vocational Pathways this is generally regarded as an option for low decile students, rather than an option with future beneficial horizons.

Mapping this observation onto the profile of pathways for school leavers adds some weight to this observation. Approximately 70% of school leavers do not enter degree level study. Service industries, including transport, tourism, communications, screen, trade, hospitality making up about 70% of GDP (Ministry of Education 201?).

Specific programmes to address Māori and Pacific disadvantage include 'Maori and Pacific Trade Training', [20] a consortium of eleven polytechnic providers, plus Ministries of Pacific Affairs, Maori Affairs and Business and Innovation. 'Count Me In' [21] is part of the Vocational Pathways for Māori and Pacific 16-18 year olds in New Zealand (Ministry of Education 2015) to support those who are disengaged from school or work, to gain educational qualifications and career pathways. A young person who participates identifies their study programme and is then linked to an education provider with appropriate networks where there is support, such as church, Maori community support, and relevant agencies such as police, social welfare, justice, and with employers.

The orientation in this paper of transformation and sustainable societies throws a different light on the goal of utilitarian employment, bringing into focus the prevailing drivers towards work which supports business-as-usual economic development goals. The quest to transition to sustainable societies means active policy reorientations across all sectors of society and the economy. It means a new kind of knowledge which is cultivated to take account of complex systems and interdependence, and which recognize values, spirituality and cultural practices and identity.

Transformative Responsibility

In order to support a transitional process in vocational education we propose a series of indicators, or responsible sustainable criteria for vocational education initiatives and policy.

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[20] http://www.mbie.govt.nz/info-services/business/business-growth-agenda/2012/skilled-and-safe-workplaces/maori-pasifika-trades-training-initiative

[21] http://www.education.govt.nz/ministry-of-education/specific-initiatives/count-me-in/

Locally Engaged and Inclusive

The theme of being locally engaged and relevant is a priority in the initiatives in the study, with the need to create and maintain relationships with partners with a shared commitment to providing pathways to learning and work to benefit young people.

Leaders must ensure projects are relevant to community and that the community buy-in to the project, this allows for the project to be maintained by the community themselves. This collaborative process, which is often referenced to eco-systems processes, with information loops and system responsiveness, is the substance of sustainable societies (Iser and Stein, 2009; Berkes, Colding and Folke 2003). The model of education for sustainable societies in the Regional Centres of Expertise is a direct implementation of local collaborative engagement with a counterpart in a global network. The communal impetus of responsibility brings public good to the fore, and the tremendous challenges of systems of governance for global common goods.

Pierre Calame refers to "inspiring cooperative commitment" to promote reflexivity on one's actions and how it affects the community, and fostering an interconnected relationship between humanity and the earth. He notes the importance of developing local initiatives and approaches as well partnerships with other organizational entities and says:

> The local is first and foremost what we encounter everyday, which is the best way to grasp the complexity and connections between people and things: complexity is best understood through the practical, rather than the abstract. It's also where commitment begins. From the environment that young children feels close to the globalized world of adulthood, commitment develops gradually, through wider and wider concentric realms, as they learn about responsibility through an ongoing process that takes place (Calame 2016)

Decision-making Involving Youth

A principle of participatory democracy is for those affected by decisions to be involved in decision-making. Involving youth in decisions about vocational programmes, along with local businesses, tertiary institutions, service organizations and Councils will be the best basis for decision-making and durability.

Diversity of Knowledge

The references to Māori and Pacific knowledge here, along with Western or liberal knowledge systems signifies a theme of valuing different knowledge systems and ways of knowing, including indigenous knowledge, sharing them, and applying them in the service of unifying solidarity and a pluralistic culture of peace. The full potential of knowledge and capability is greatly enhanced by encounters across diversity with the capacity for dialogue, critique, acceptance and understanding as the basis of respect.

Knowledge and Ethics

Learning and knowledge development are to support beneficial outcomes and wellbeing for all forms of life, people and the planet now and for time to come. Ethical criteria include enhancement of biodiversity, health of land and water ecosystems, respect for human dignity and non-human forms of life, and regard for the limitations of human knowledge (Royal 2003, Charter of Human Responsibility[22]).

Joining Together, Community Networking, Integrating All Sectors

There is no sector that can be excluded from environmental accountability – all have responsibility for transitions and reducing fossil fuels, for careful use of resources, and achieving systemic integration. Sustainability refers to resource use, to funds and to collaborative methodologies, as exemplified in some of the case study snapshots and in the design of UNU Regional Centres of Expertise, which are designed to respond to local sustainability challenges, while systematizing the core effective themes at regional and global scales (Petrie, Martin et al., 2014 and UN Decade 2014).

Whole-of-system approaches to integrate policy with education, ecosystem health, and economic goals, are central to embedding transformational outcomes. At local levels, interested parties joining together, such as local government agencies, schools, tertiary institutions, business and public and private parties has the benefit of community building and enhancing resilience. This in turn is the basis for building awareness of interdependence and long term consequences of today's actions and decisions.

Responsible Funding

The susceptibility of transformative initiatives to unsustainable funding has the double effect of loss of momentum and continuity for students seeking options to develop their capabilities for sustainability. The evidence of one provincial city initiative is that the involvement of the business and commercial sectors in vocational training and in contributions of funds, is a key to the durability of the programmes. Provisions of government funding, which may be complementary to locally supported programmes, is ideally a whole of government venture, to achieve integration and avoid susceptibility to political changes. A previous government funded 'Conservation Corp' opened up opportunities for youth to be paid to work and train on Conservation and Maori land. This was discontinued.

Flexibility of Vocational Provision

Flexibility, with a variety of options suits the varied needs of vocational education and training.

We have seen different forms of enterprise: residential, work based, periodic retreat style workshops, training workshops, courses during school and tertiary breaks, and longer one to two year opportunities. Some leaders considered a six week programme as a good option, but there is

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[22] www.response.org.nz

no convergence on one model. Maori led programmes need specific consideration for urban communities, as well as provision for resourcing programmes on ancestral land.

Individual and Citizen

Principles of content have been mentioned, such as complex thinking, personal interest embedded in public good thinking and action, and experiential cultivation of interdependence as themes for curriculum design. Responsibility involves taking into account the immediate or deferred effects of all acts, preventing or offsetting their damages, whether or not they were carried out voluntarily and whether or not they affect citizens. To cultivate an appreciation of effects on others, and all forms of life, in all fields of human activity both now and in the future is vital for all areas of education and learning, and is a significant change from an individual focus. It does not mean that ego and self-interest will be abandoned – rather that they will be part of recognizing that use and enjoyment of resources induces a shared responsibility to manage for the common good.

Accreditation

Accreditation is one of the more vexing challenges for vocational education, both for content and for programmes as a whole. Reference has been made to endeavours to run accredited programmes. One of the most creative suggestions is to create *interdependent* accreditation. Details need to be explored, but this refers to community enterprises being joined in some way to accredited training, and the contributions of both being recognized. It could include selected tertiary courses combined with a recognized enterprise programme. This would mean more flexible options for enrollment than existing Degree or Diploma courses, with suitable arrangements for finance, that ensures equitable access for all, with state support.

Policy Environment

Entrepreneurial initiatives would have more chance of being sustained in a supportive policy environment. Transformative policy would look to an integrative approach with cross-government accountabilities for engaging young people in education for sustainability. A government collaboration could start with Ministries of Education, Environment, Business and Innovation, Social Development and Corrections. Funding is an urgent priority to facilitate and sustain vocational and training initiatives.

These are indicators, references for identifying qualities of vocational education. They are not intended to be prescriptive. They foreground attributes of a transformative process and relationships, knowledge and action with communitarian principles at all scales, which serve as a guide for policy.

This work, as noted, is intended to be transformative and to achieve transitions to a social order of inclusiveness and economic systems that safeguard ecological integrity. The knowledge systems of Maori and Pacific Peoples have resonance with the themes identified by Levinas for a relational and accountable sociality, and include local level governance and decision-making (Hoskins 2010).

Conclusions

This paper identifies responsibility as a distinguishing framework for transformative education, to avoid the power and co-option to the neo-liberal, fossil-fueled economic growth model to which 'sustainable development' is susceptible. While rights are the more conventional framework for justice and transformation, as identified in the Sustainable Development Goals they do not reach far enough into the transformational mode without an account of solidarity and responsibility.

At the societal level, qualities of other-centredness and solidarity are expanded to include a primary regard for equity, inclusiveness and participation. This means proactive initiatives or policies of redistribution of wealth to prevent marginalization and disadvantage; it means decision-making that includes those affected by decisions, with plurality and difference at the ethical core. Nature is not separated from society, and the best ways of discovering the woven universe are in local activities which can be linked to global scale dynamics.

The study shows there are limited employment opportunities for youth in the sustainability field and few mechanisms for linking school leavers to 'green' vocational work and training. However, the projects that the participants offer allow youth to gain skills in a range of areas such as, gardening, beach erosion analysis, environmental analysis, and knowledge of economic systems which serve to gain employment in other areas.

All participants felt that employment for Sustainability needs to be developed further.

> There are limited jobs and avenues for this field, however students may find employment through district council, DOC, Forestry, nurseries." (Teacher, Interview December 2015)

A few requirements for effective vocational education, with transformative dimensions are identified here. The initiatives mentioned light the pathway ahead, and, in New Zealand many are linked in their genesis to the Toimata Foundation programmes which have been sustained since 1989, opening a pathway that catalyzes other initiatives. The question of sustainability and the best way to provide transformative learning programmes is repeatedly asked and not easily answered.

Effective engagement of young people, business, service organizations and training institutions is a key to achieving multiple organizational engagement and a dedicated person in a liaison role is extremely beneficial for this level of co-ordination.

In a situation of multiple providers, diverse programmes and a range of business, training and local government interests there is a need for coordinated information system. This could be a register of vocational enterprises and businesses with sustainability priorities, including those which identify willingness and capacity to engage with vocational support for young people.

Overall, an enabling environment for locally based initiatives supported by an overarching system to provide cohesion, information sharing and resource development would be a significant for the

transition to a fully fledged system for education for responsible societies. Educational governance with attributes of responsibility integrated into school and post school learning communities is a primary policy goal.

References

Berkes, F. Colding, J. and Folke, C. (eds) (2003). *Navigating Social-Ecological Systems*. Cambridge, UK. Cambridge University Press.

Berkes, F. and Folke, C. (eds) (1998). *Linking Social and Ecological Systems. Management Practices and Social mechanisms for Building Resilience.* Cambridge University Press. Cambridge, UK.

Brown, M., Sack, F., C.P. (2013) 'Student voice in 'skills fir sustainability': a missing component from the demand side of Australian Vocational Education and Training. *International Journal of Training Research*. Pp. 2013-224. Content Management Pty Ltd.

Calame, Pierre (November 30, 2015). Education: a blind spot that represents a major lever in shifting towards sustainable societies. blog@pierre-calame.fr.

Coll, R., Taylor, Nathan, S. (2003) 'Using Work-based Learning to develop Education for Sustainability: a proposal'. *Journal of Vocational Education and Training*. Volume 55, Number 2. Pp. 169-181.

Cupino, F.de L. (2016) ' Education for Global Citizenship' Unpublished paper

Davidson, A. (2009) The Language of Longing: Ttionality, Morality, and Experience in Education for Sustainability. In Willis, P. et al (eds) *Rethinking Work and Learning. Technical and Vocational Education and Training: Issues, Concerns and Prospects*. Pp.63-79. DOI 10. Springer Science+Business Media

Garrat, D. and Piper, H. (2012) 'Citizenship, education and philosophical enquiry: Putting thinking back into practice' in *Education, Citizenship and Social Justice*. http://esj.sagepub.com?

Giles, L. (2015) 'Education for Global Citizenship.' Unpublished concept paper.

Hall, S. (1986) Variants of Liberalism. In Donald, L. and Hall, S. (eds) *Politics and Idealogy*. (Pp. 34 - 85). Milton Keynes Philadelphia: Open University Press.

Harris, R. (2009) 'The Historical Contribution of AVE to Social Sustainability in Australia.' In Willis, P. et al (eds) *Rethinking Work and Learning. Technical and Vocational Education and Training: Issues, Concerns and Prospects*. Pp.45-61. DOI 10. Springer Science+Business Media

Hipkins, R., Bolstad, R., Body, S. and McDowall, S. (2014) *Key Competencies for the Future.* NZCER Press.

Hoskins, Te K. Martin, B. Humphries, M. (2011) ' The Power of Relational Responsibility'. *Electronic Journal of Business Ethics and Organization Studies* (EJBO).

Hoskins, T. K. (2010). Māori and Levinas. Kanohi ki te Kanohi for an Ethical Politics. PhD Thesis. University of Auckland. New Zealand.

Iser, A. and Stein, R. (2009). *Rule. Reforming Water Governance.* Gland, Switzerland. IUCN.

Kleederman, J. R. (2009) Power of Place-Based Pedagogy: Theory and Practice of Place-Based Education. Masters Thesis. Wesleyan University. http://wesscholar.wesleyan.edu/etd_hon_theses/233/

Kothari, A., Demaria, F. and Acosta, A. (2014) 'Buen Vivir, Degrowth and Ecological Swaraj: Alternatives to sustainable development and the Green Economy'.
In Development 57 (3–4). Pp. 362–375. doi:10.1057/dev.2015.24 www.palgrave-journals.com/development/journal/v57/n3-4/full/dev201524a.html

Levinas (1996) 'Is Ontology Fundamental?'. In Peperzak, A.T., Critchey, S. and Bernasconi, R. (Eds.) Emanuel Levinas. *Basic Philosophical Writings*. (Pp. 1-10). Bloomington and Indianapolis, IA: Indiana University Press.

Marriott, L. and Sim, D. (2014) Indicators of Inequality for Māori and Pacific People. Working Paper in Public Finance 09/2014. www.victoria.ac.nz/sacl/centres-and-institutes/cpf/publications/pdfs/2015/WP09_2014_Indicators-of-Inequality.pdf Retrieved 10 March 2016.

Martin, B. (2016) 'Levinasian Ethics and Responsibility in All Matter'. Special Issue, Educational Philosophy and Theory. Volume 48. Number 4. Pp.418-435. Routledge. Taylor and Francis Group.

Martin, B (2014) Review of Education for Sustainable Development in Aotearoa new Zealand, including Professional Development. New Zealand National Commission for UNESCO.

Ministry of Education (2015) Count Me In. New Zealand. Accessed 1st February 2016. http://www.education.govt.nz/ministry-of-education/specific-initiatives/count-me-in/

Ministry of Education (2015) Youth Guarantee Vocational Pathways Program: http://youthguarantee.net.nz/start-your-journey/

Ministry of Education. http://youthguarantee.net.nz/assets/assets/Sector-flyer-VP-Services-A4-Brochure.pdf

Morrison, S. L., & Vaioleti, T. (2011). Ako - a traditional learning concept for Maori and Pacific youth, and its relationship to lifelong learning. Bildung und Erziehung, 64, 395-408.

Vaioleti, T. M., & Morrison, S. L. (2015). Traditional concepts for Māori and Pacific adult education and lifelong learning. International Perspectives in Adult Education, (71), 220-228

Morrison, S. (2014). Kāinga. Unpublished paper.

Petry, R.A., Martin, B., Galkute, L. et.al. (2014) The First Ten Years: Reflections and Prospects for RCEs Post 2014. *The UNESCO End of the Decade on Education for Sustainable Development Commemorative Book*. United Nations University, Japan

Pope Francis (May 24, 2015). *Laudato Si*. A Papal Encyclical from the Roman Catholic Church.

Royal, C. Te Ahukaramu and Martin, B. (2010) Indigenous Ethics of Responsibility in Aotearoa New Zealand. Harmony with the earth and relational ethics. In Sizoo, E. *Responsibility and Cultures of the World.* (Pp. 47-64). Berlin: P.I.E. Peter Lang.

Royal, Te Ahukaramu C. (Ed.) (2003) *The Woven Universe*. *Edited Writings of Revd. Māori Marsden*. New Zealand: Marsden Estate.

Skilbeck, M. (2002). The vocational quest: New directions in education and training (1st ed.). Routledge. New York; London. doi:10.4324/9780203075791

Steffen, W. Rockström, J., Richardson, K. (2015). *Planetary Boundaries*: Guiding human development on a changing planet. Science Vol. 347 no. 6223

Tiatia, J. (1998). Caught between cultures: A New Zealand-born Pacific Island perspective. Auckland. New Zealand: Christian Research Association.

Thaman, K. H. (1988). Ako and faiako: Educational concepts, cultural values and teachers' role perception in Tonga. Unpublished PhD Thesis, The University of the South Pacific, Fiji.

Tunks, A. (2013) 'One indigenous Vision for Sustainable Law? Tensions and Prospects. In Klaus Bosslemann and David Grinlinton *(eds) Environmental Law for a Sustainable Society*. Pp. 97-121. NZ Centre for Environmental Law, University of Auckland.

UN Decade of Education for Sustainable Development (2014) *Shaping the Future We Want. UN Decade of Education for Sustainable Development (2005-2014). Final Report*. Published by UN Education, Scientific and Cultural Organization, Paris, France.

Willis, P., McKenzie, S., Harris, R. (2009) 'Introduction: Challenges in Adult and Vocational Education for Social Sustainability'. In Willis, P. et al (eds) *Rethinking Work and Learning. Technical and Vocational Education and Training: Issues, Concerns and Prospects*. DOI 10. Springer Science+Business Media

Vaioleti, T, M. (2011). Talanoa, Manulua and Founga Ako: frameworks for using enduring Tongan educational ideas for education in Aotearoa/New Zealand. Unpublished doctoral thesis. University of Waikato, Hamilton.

Zhao, G. (2016) 'Singularity and Community.' In *Special Issue, Educational Philosophy and Theory.* Volume 48. Number 4. Pp. 346-359. Routledge Taylor and Francis Group.