

Social Learning and Regenerative Sustainability: Unlocking value
created in sustainability projects in higher education

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Abstract

This qualitative study considers two bodies of theory, regenerative sustainability and social learning theory, within a tertiary education context. Universities offer unique opportunities, across both the formal and informal curriculum, that engage with the two-fold socio-economic and environmental crises. The study explores both the promise of unlocking value in an ex-linear economy; and the healing and regenerative benefits in moving toward greener practices.

Through an embedded case study at Rhodes University, in the Eastern Cape of South Africa, this research explores the value that is being unlocked in campus-based sustainability projects, when considered through a social learning lens (Lave and Wenger, 1991).

Invitations to participate in this study were extended to project-leads of sustainability initiatives originating from Rhodes University campus. Six projects, which have been active on campus in recent years, were selected and, through semi-structured interviews, the insights of 12 participants were captured and analysed using the associated Value Creation Framework (VCF) developed by Wenger, Trayner and De Laat (Wenger, Trayner, de Laat, 2011) and later Wenger-Trayner and Wenger Trayner (2014, 2015, 2020). The VCF consists of value cycles that interconnect dynamically, including *Orientating, Strategic, Enabling, Immediate, Potential, Applied, Realised and Reframed or Transformative* value cycles.

The study identified instances of all these value cycles, within and across the six embedded case studies (project). Drawing on social learning theorists the analysis further focused on instances of collaboration, agency and boundary crossing. Additional themes that emerged across the majority of the embedded study projects, were a convergence of socio and eco; a whole-systems perspective shared by project leads; the importance of the social commons; language as an enabler; and problem solving for system change.

A recommendation is proposed to further unlock the unbounded value created through such projects by reframing the informal curriculum opportunities offered on university campuses as social learning spaces where students can practice agency. To do so, would require formalizing various forms of system support, thus facilitating expanded learning in regenerative sustainability activities, for the common social and planetary good.

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List of Abbreviations

CE	Circular Economy
CSD	Centre for Social Development
CSV	Creating Shared Value
CoP	Community of Practice
ECD	Early Childhood Development
ELRC	Environmental Learning Research Centre
ESD	Education for Sustainable Development
HE	Higher Education
IDP	Institutional Development Plan
IHL	Institutions of Higher Learning
IoDSA	Institute of Directors of Southern Africa
IT	Information Technology
MDG	Millennium Development Goals
MESA	Mainstreaming of Environment and Sustainability in African Universities Programme
NQF	National Qualifications Framework
PhD	Doctor of Philosophy
PPP/ 3Ps	People, Planet Profit
RS	Regenerative Sustainability
RSA	Republic of South Africa
RU	Rhodes University
SDGs	Sustainable Development Goals
SD	Sustainable Development
SK	Stanley Kidd Residence Hall
SRC	Students Representative Council
UK	United Kingdom
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAT	Unit-based Sustainability Assessment Tool
VCF	Value Creation Framework
WWF	World Wide Fund for Nature

Chapter one

Preamble

The lens from which I conducted this study is a combination of regenerative sustainability theory and concepts, social learning theory, the current times of the Anthropocene, together with the perceived need for education to be responsive and adaptive to meet the urgency of these times.

As this is a study towards a Masters in Education, I need to include an educational lens, and my choice was a social (systems) learning perspective (Wenger-Trayner & Wenger-Trayner, 2020). This perspective is focused to what social collectives need to learn, and how, in order to achieve the social change we desire. Finally, the study is situated in an Institution of Higher Learning, and offers argument on what kind of learning experiences universities should offer their students and staff.

At times this dissertation follows an unconventional academic style and presentation. The style of writing that is intuitive to me is to use language to convey my passion for the subject of my study, while also steadfastly seeking for the expression that best captures my findings and insights. The layout and flow of the study is also somewhat unconventional. The dissertation is separated into three parts. In part one, chapter one speaks of context, chapter two situates the theory and concepts of sustainability. This is necessary at this point, as it was the concept that guided the choice of projects that form part of the study. Chapter two is thus in part a secondary context. At the point where the full context is presented (at end of chapter two) the research question is introduced. Notably, chapter two is also the start of the literature review. Chapter three continues the literature review but focusses in on social learning theory. These three opening chapters together launch the study, with chapter four detailing the methodology.

In part two, chapter five presents the data and the first (of two) levels of analysis. This is presented in both narrative and tabled form. Chapter five details six projects as embedded case studies.

The third part to the study commences with chapter six, containing the second level of analysis, it opens the study's discussion. Chapter seven concludes the study.

A final practice that is somewhat unconventional is my use on two occasions of back-to-back quotes. I use this to paint a story from which I then launch my own narrative or present an argument for consideration. The first instance is in the introduction paragraph, and the second in chapter two (2.1.9).

1.1 Introduction

“Thanks to the scale of (human) impact, we have left behind the Holocene and entered uncharted territory, known as the Anthropocene: the first geological epoch to have been shaped by human activity” (Raworth, 2017, p. 48)

“Global economic development has fueled a dramatic increase in humanity’s use of Earth’s resources, at first driven by the resource-intensive lifestyles of today’s high income countries, and more recently redoubled by the rapid growth of the global middle class...Between 1950 and 2010 the global population has trebled in size, and real world GDP increased seven fold” (Raworth, 2017, p. 46).

“Do the best you can until you know better. Then when you know better, do better.”
(Maya Angelou, cited in Smith, 2021)

This dissertation opens with the question “what is real”? When the sun retires and the click of a switch brightens a room, is this real? A trip to the grocery store to buy a punnet of strawberries out of season, again is this real? One may argue that these daily routines are evidence of man’s ingenuity through technological evolution. But this ingenuity has come at an unseen cost of unsustainable environmental footprint, that include fossil fuel reliance and carbon dioxide emissions.

In orientating this study an argument may be made (drawing on the work of Raworth, 2017 and others) that recent generations have been born into a linear life-system. The invisible ‘everyday’ cycles and patterns in which we live are cemented in convenience, and the resulting unintended consequence is a planet that cannot sustain human activity in our current form of living.

Today's narrative is inescapable, daily media focusing on the crises of climate change; unemployment levels; and poverty, a convergence of crises. There is however opportunity in changing the narrative to focus toward concepts of a Circular Economy (CE) and Regenerative Sustainability (RS). This, however, requires a mind-shift, a curving of the existing linear systems to that of the cyclical; and herein lies the opportunity of an alternative response to the nexus of socio-ecological crises. Education is one of the mechanisms that can challenge conventional understandings and practices, towards such a paradigm shift. In the next section I outline a long history of international calls for education to address environment and sustainability challenges.

1.2 The Global Stage

The planet is under pressure (Rockström & Karlberg, 2010) and the current generation is faced with an extraordinary challenge, to find new ways of living that can heal, rejuvenate in a more socially just world. "Ours is the first generation to properly understand the damage we have been doing to our planet... [but we have] the chance to do something transformative about it ... should we collectively choose to make that happen" (Raworth, 2017, p. 286).

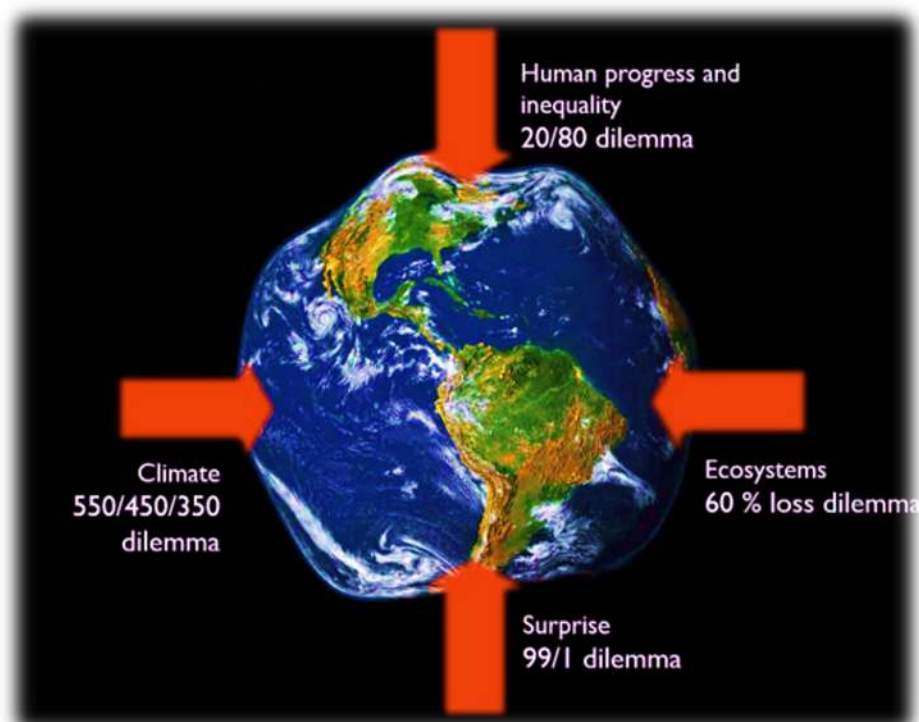


Figure 1.1: The Quadruple Squeeze (Rockström & Karlberg, 2010, p. 258)

1972 saw the first coming together of countries to address human impact on the environment and the need for sustainable development. Spearheaded by the United Nations, the Stockholm Conference on the Human Environment resulted in a declaration “to defend and improve the environment for present and future generations has become an imperative goal for mankind” (United Nations [UN], 1972, p. 1). Environmental Education featured as one of the recommendations from this Conference. (ibid.)

The Tbilisi Declaration followed in 1977 emphasising the role of environmental education in “the preservation and improvement of the world’s environment, as well as in the sound and balanced development of the world’s communities” (Tbilisi, 1977, p. 1)

1987 saw the Brundtland Report that was developed from the Report of the World Commission on Environment and Development, entitled *Our Common Future* wherein it defines sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”(p. 37).

1992 saw the United Nations Conference of Environment and Development, also known as the Rio Earth Summit (Brazil); the World Summit on Sustainable Development (Johannesburg, South Africa) followed in 2002; in 2005 the UN Decade of Education for Sustainable Development was announced; 2009 saw the United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Conference on ESD (Bonn, Germany); 2012 UN Conference on Sustainable Development with a focus on sustainable consumption and production (Rio, Brazil); 2014 UNESCO World Conference on ESD (Aichi-Nagoya, Japan) as a means to “accelerate progress toward sustainable development”; 2015 saw the announcement of the Sustainable Development Goals (SDGs) and the 2030 Agenda for Global Transformation; 2016 Sustainable Cities and Communities: New Urban Agenda; the Climate Conference of Parties in 2016 introduced “parties shall cooperate in taking measures... to enhance climate change education, training and public awareness, public participation and public access to information” in terms of the sustainable development conversation. (UNESCO, 2020, p. 66)

These events reflect the attention attracted globally to the importance of sustainable development and the role of education over decades. South Africa, the country in which this study is held, has participated in these conversations. In addition, in 1995 a White Paper on Education and Training (Parliament of the Republic of South Africa, 1995) announced that

environmental education should be an integral part of education and training in South Africa, across all levels. Both International and National level attention highlight the role education holds in addressing and moving toward sustainable development for the socio and environmental spheres.

A question that links the global stage perspective to the institutional perspective is now considered: how has this global and national imperative featured at Rhodes University, the context of this study? (note this is not the research question)

1.3 The Rhodes University Context

1.3.1 Institutional Lens

Sustainability in higher education has been defined by Glasser, Calder and Fadeeva (2005) as “advancing our ability to incorporate sustainability concepts and insights into higher education and its major areas of activity: policy, planning, and administration; curriculum/teaching; research and scholarship; service to communities; student life; and physical operations/ infrastructure. It also refers to research that treats higher education institutions as complex systems and focuses on the integration of sustainability across all of its activities, responsibilities, and mission” (as cited in Granados-Sánchez et al., 2011, p. 195).

Rhodes University is a public university situated in the Eastern Cape province of South Africa.

Statements by Rhodes University leadership provide evidence of institutional commitment to sustainability activities, as follows:

“2020 is the year that we start to move forward in earnest, and ensure our graduates have a heightened awareness of sustainability and a sustainable future... so that tomorrow will be better than today.” Professor Sizwe Mabizela, Vice-Chancellor of Rhodes University. (Rhodes University, 2020). These words focus on and speak to the graduate and the collective future for the commons. Here the question of *what* is raised by institutional leadership in the form of the Vice-Chancellor.

The question of *how* is next seen in the quotation from the institutional Chair of Council, “As a research-intensive institution of the post-school education and training sector, Council also encourages the mobilisation of the research resources and knowledge networks of the

students, staff and management of our University to contribute further to resolving the challenges of our times and work towards the achievement of a better life for all within the constraints of the geophysical planetary boundaries of sustainable development.” Judge Gerald Bloem, Rhodes University Council Chair (April 2021). Here institutional leadership speaks to the collective in addressing the current challenges, and the collective consists of the *whole* of the university and not select *parts* of the university.

A timeline of key events relating to institutional commitment to sustainability presents as follows:

- October 1996 Rhodes University signs the *Talloires Declaration*, an official commitment to environmental sustainability in all institutional activities, including teaching, research, operations and outreach at colleges and universities. In so doing the institution joined the Association of University Leaders for a Sustainable Future (ULSF). (Rhodes University, 2020)
- In response, the University develops an Environmental Sustainability policy incorporated into institutional governance structures in 1998, with a review cycle every five years so as to remain current. The stewardship of the policy document was entrusted to the Rhodes University Environmental Committee. The 2015 iteration of the policy document includes eight directives being: Sustainability Education and Research; and as relevant to Campus and its operations, Water Sustainability; Energy Sustainability; Sustainable Waste Management; Biodiversity; Sustainable Travel; Organisational Sustainability and Sustainable Procurement. (Rhodes University, 1998, 2015)
- In 2007 the Rhodes University Students Representative Council (SRC) creates an Environmental Portfolio within the SRC portfolios, and the Environmental Councilor is elected to serve in this newly founded role, which includes sitting on the Environmental Committee (Togo, 2009)
- Also in 2007, Rhodes University creates capacity and appoint a part-time staff member in the role of Environmental Officer, to oversee, manage and support the Environmental Policy implementation (Togo, 2009)

- Rhodes University develops their Institutional Development Plan (IDP) for period 2018 to 2022. Within this frame values include Social Justice; Stewardship in “caring for resources entrusted to us in a responsible and sustainable manner”; Development and Wellbeing “... demonstrated in critical reflection and a responsiveness to change”; Accountability and Courage “acknowledge(ing) that we are answerable to each other, our Council and ultimately, South African society for the decisions we make and the actions we take”. Within this IDP the institution measures its electricity, water and hard paper printing usage (Rhodes University, 2018). This IDP was under review in the second year of this study (2022).

In the period between the development of the Rhodes Environmental Policy and the IDP, the Environmental Learning Research Centre (ELRC), a centre within the Department of Education, was progressing a “social movement and momentum for higher education curriculum transformation and sustainability” (Lotz-Sisitka, 2021a) in leading a partnership programme entitled *Mainstreaming of Environment and Sustainability in African Universities Programme (MESA)*. The programme partners included the International Association of Universities (IAU), African Association of Universities (AAU) and the United Nations Education Programme (UNEP). This programme worked with universities across 50 countries in Africa and Asia, looking at “whole institution transformation within its community” (ibid).

ELRC PHD scholar, Togo (2009), developed the assessment tool for this MESA programme, calling it the Unit-based Sustainability Assessment Tool (USAT). Togo assessed the integration of sustainability within the functions of the various units of Rhodes University. Her recommendation included **progressing a shared understanding of sustainability; “adopt(ing) a holistic approach to mainstreaming and sustainability making it a campus-wide initiative, and supporting collaborative work in sustainable development issues.”** (ibid., p. 304). This 2009 recommendation is relevant to this study, and provides a launch pad to explore the value creation that such a recommendation inspires, if implemented.

Togo’s (2009) survey assessed a number of areas within Rhodes University and found as follows:

1. Department activities of research, teaching and outreach. Indicators included curriculum, teaching, research service and scholarship activities, sustainability topic

assessments, and staff participation willingness. Finding: Departments' ratings varied from 0% to 100%, influenced by discipline curriculums.

2. Student activities, with criteria adapted to activities and opportunities including societies, environmental centre, residence initiatives, orientation and awareness programmes, student collaboration with management in areas of sustainability. Finding: The average rating was 38%.
3. Estates Division (as it was then named) activities, included waste reduction practices, recycling, air pollution reduction, indoor air quality, construction and renovation, energy and water conservation, purchasing, transport, pest management, landscaping, bio-fuel use and integration of operations into educational activities. Finding: Whilst sustainable landscaping emphasising native plants, biodiversity and such, scored 100%, the overall average rating was 38%.

The percentages herein in help show the discrepancy between the activities and their ratings scored, against the overall average, in the Togo study (ibid.).

To note, the Togo (2009) doctoral study greatly highlighted teaching and curriculum. This Masters level study, in comparison, does not focus strongly on teaching and curriculum, but looks at projects with a strong practical focus that cover the operational, student and social activities, within the definition of (regenerative) sustainability, "aiming for thriving living systems in which whole-system health and wellbeing increase continually" (Gibbons, 2020, p. 1.)

The current study aims to continue the conversation started through Togo's study, by analysing projects associated with regenerative sustainability on Rhodes University campus through a social learning lens, focusing on the key social-learning features and the possible value that lies therein.

For this study, a differentiation is drawn between the business activities at Rhodes University as follows:

1. Primary activities being that of teaching and research,

2. Secondary activities being the operations and functions that support the academic project, these being academic administration, human resource support, business operations, IT support and residence operations.
3. A third realm of activity was identified as the students' experience.

1.3.2 Local context

The contextual profiling lens of the study widens to the macro situationality of the University's setting. Rhodes University resides within the Makana Municipality, in the Eastern Cape Province. The Eastern Cape Province's unemployment rate is the highest of the country's provinces at 43.8 percent (Stats SA, 2021, p. 15). The national unemployment rate in South Africa as a whole is 32.6 percent (Stats SA, 2021, p. 1), up from 30.1 percent as recorded last year (Stats SA, 2020).

Two arguments thus emerge:

In a socio-economic environment where one of four (national estimates), or one of three (local figures) face the prospect of joblessness, students turn to universities in the hope that a degree will best provide a guarantee for gainful employment. Amadi-Echendu et al (2016) argue that Institutions of Higher Learning also need to provide an entrepreneurial learning opportunity as "based on government initiatives and industry conversation, ... entrepreneurship and small business development will [best] alleviate the high unemployment rate in South Africa" (Amadi-Echendu et al., 2016, p. 21).

Secondly, as noted by the WWF UK, "we are the first generation to know we are destroying our planet and the last one that can do anything about it" (Steel, 2019, p. 1). In light of the UN imperatives outlined earlier, and the University's own environmental commitments, I argue that these are important features of the current socio-and enviro-economic setting in which the students at Rhodes University live and learn. This study spans from the University operations to the student's overall experience, as the two are inter-related and wholly dependent on each other.

It is within this setting that the study aims to identify the key features of social learning in activities associated with regenerative sustainability practice, undertaken within the broader

campus commons, at Rhodes University. However, before the research question can be introduced, a secondary context of sustainability should logically be presented.

Chapter two

Chapter one provided physical context to the study. Chapter two considers sustainability scholarly thought. Although I title it *a secondary context*, it is not secondary in importance, rather it complements chapter one in progressing the conversation, and adds relevance to the study. Chapter two closes off by introducing the research question.

2.1 A secondary context: Sustainability

Situating sustainability is necessary at this point, as the projects that form part of the embedded case study all feature (regenerative) sustainability, as a requirement for selection. This is explained more in chapter four. Much of this literature review is thus dedicated to Sustainability thought. The social learning lens will feature more strongly in chapter three.

Sustainability – key concepts and theory

Sustainability theory and concepts that will be brought in to focus in this section include:

- People, Planet Profit: The triple bottom line
- The Business Case for Sustainability
- Creating Shared Value
- The King Code
- Circular Economy
- Doughnut Economics
- The Sustainable Development Goals
- Education for Sustainable Development
- Sustainability in Higher Education

2.1.1 People, Planet Profit: The triple bottom line

In 1994, Elkington proposed sustainability as the nexus of profit, people and planet in his work on the triple bottom line for corporate business. The prominent dimension, due to the nature of capitalism, favoured profit over people, and over planet. His work later evolved to show a deeper relational dependence between the three dimensions, and in so doing, it shifted the perspective to show that profit was dependent on people, and profit and people

were wholly dependent on planet. In graphic depictions of the nexus (e.g. Figure 2.1), 'people' is referred to as the social dimension; 'planet' as the environmental; and 'profit' the economic dimension.

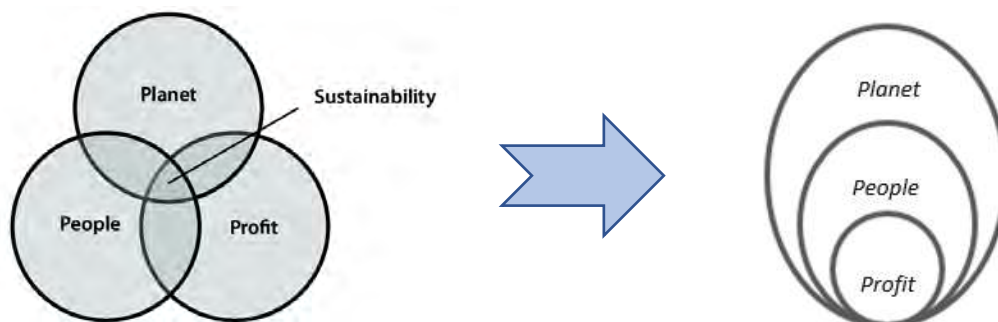


Figure 2.1: The triple bottom line nexus as described by Elkington (1994, 1997), and later expanded to show a different relational dependence between the dimensions, with people and profit entirely dependent on the planet

2.1.2 The Business Case for Sustainability

Willard (2002) continued the discussions around sustainability and showed in his Business Case both direct and indirect value to corporate organisations who incorporated sustainability practice. At the turn of the century, he proved this looking at operations and the cost savings that were on offer in the day to day running expenses of a business. Examples included energy, water, and raw materials. He further showed that sustainability practices increased productivity, reduced turnover, reduced risk, for an overall increase in profit to the organisation of between 51 to 81 percent (ibid). He proposed that competitive advantage could benefit the organisation even more if sustainability was infused to the value offering of the organisation, through innovation and better product creation.

2.1.3 Creating Shared Value

Others have since added their voices to that of Willard, such as business-strategy thought leaders, Porter and Kramer (2010). The duo introduced their concept of Creating Shared Value (CSV; see Figure 2.2), in which careful strategic planning produces mutually inclusive

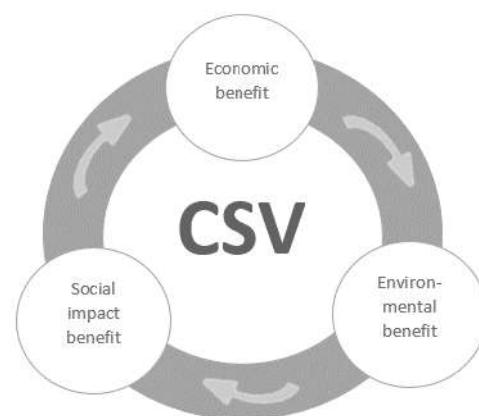


Figure 2.2: Creating Shared Value (based on Porter & Kramer, 2010)

value for all three spheres of activity (profit, people, planet), thus expanding on Elkington's (1994) work.

Based on the CSV concept, an organisation would brainstorm around an environmental concern, and the way it impacts society, and create solutions to one or both, whilst still driving economic benefit to the business. Alternatively, the organisation could look at a social concern and how it affects the environment, and again find a way to address this in a manner that benefits the business economically.

2.1.4 The King Code

Pioneered by South African Judge Mervyn King, the King Code has four iterations under the custodianship of the Institute of Directors of Southern Africa (IoDSA). King I was published in 1994, King II in 2002, King III in 2009 and King IV in 2016. The King elements expand on Elkington's principles of People, Planet, Profit by propagating strong and strategic focus around leadership, sustainability and corporate governance and citizenship. In essence, King argued that Elkington's 3Ps (profit, people and planet) be underpinned by governance (Figure 2.3).

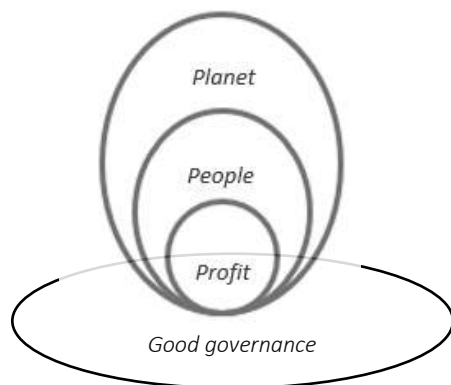


Figure 2.3: Elkington's Triple bottom line showing relational dependence, adapted by King to incorporate governance (King & Atkins, 2016)

In the work of King and Atkins (2016), a strong argument is made around value, including a prediction that organisations will start employing Chief Value Officers to their executive boards, to unlock the competitive advantage and other value that sustainability thinking and its practice potentially holds if it were to be integrated to the full business paradigm.

The afore all speaks to sustainability from a business perspective with a stronger weighting to the economics (or profit) element. The following bodies of sustainability theory emphasise a greater weighting to the people and planet perspectives.

2.1.5 Circular Economy

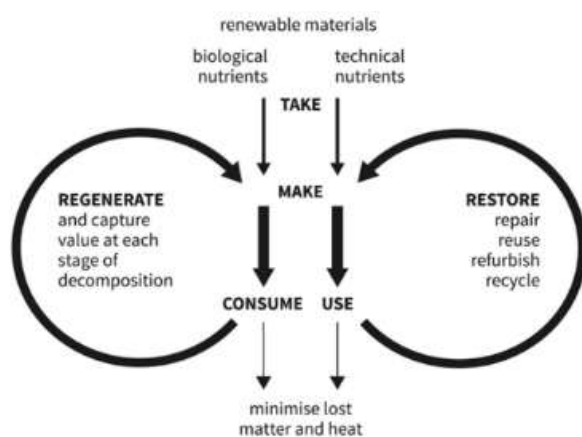


Figure 2.4 Circular Butterfly Economy (based on Raworth, 2017, p. 220 and Ellen Arthur, 2013, p. 24)

Circular Economy (CE) essentially decouples environmental pressure from economic growth (Ghisellini et al., 2016), through three principles: 1. “designing out waste and pollution, 2. keeping products and materials in use, and 3. regenerating natural systems.” (Radicle Balance, 2021). The concept of CE was first introduced by Kneese (1988). It was further developed by Pearce and Turner in 1990 showing the wastage in the various stages of production, from extraction of raw resources to the point of consumption.

Circular Economy (CE) challenges the linear paradigm, that can be described as the extraction of raw resources from the earth (take), a manufacturing processes follows with business distribution processes (make), consumer consumption (use), and once consumed the excess is discarded (lose). The process is captured as *Take, Make, Use, Lose*. A linear mindset focuses on the profit whilst failing to factor in environmental and social exploitative costs.

As shown in Figure 2.4, CE theory proposes the channeling of the biological nutrients (anything that is organic) curving the hard line back up and into the system for alternate use at each stage of decomposition. The technical nutrients which include plastics and metals, should be purposely designed for continuous uptake through, in order of priority: repair, reuse, refurbishing and lastly recycling.

2.1.6 Doughnut Economics

Raworth (2017) proposed that extreme social inequalities, planetary degradation and global financial crises are all interconnected through unintended consequences of neo-liberal linear mindset activities (in the form of unsustainable practices). This is evident over the last fifty to seventy years. Expanding on this, she includes Circular Economy in her body of work as one of the key principals for greater sustainability.

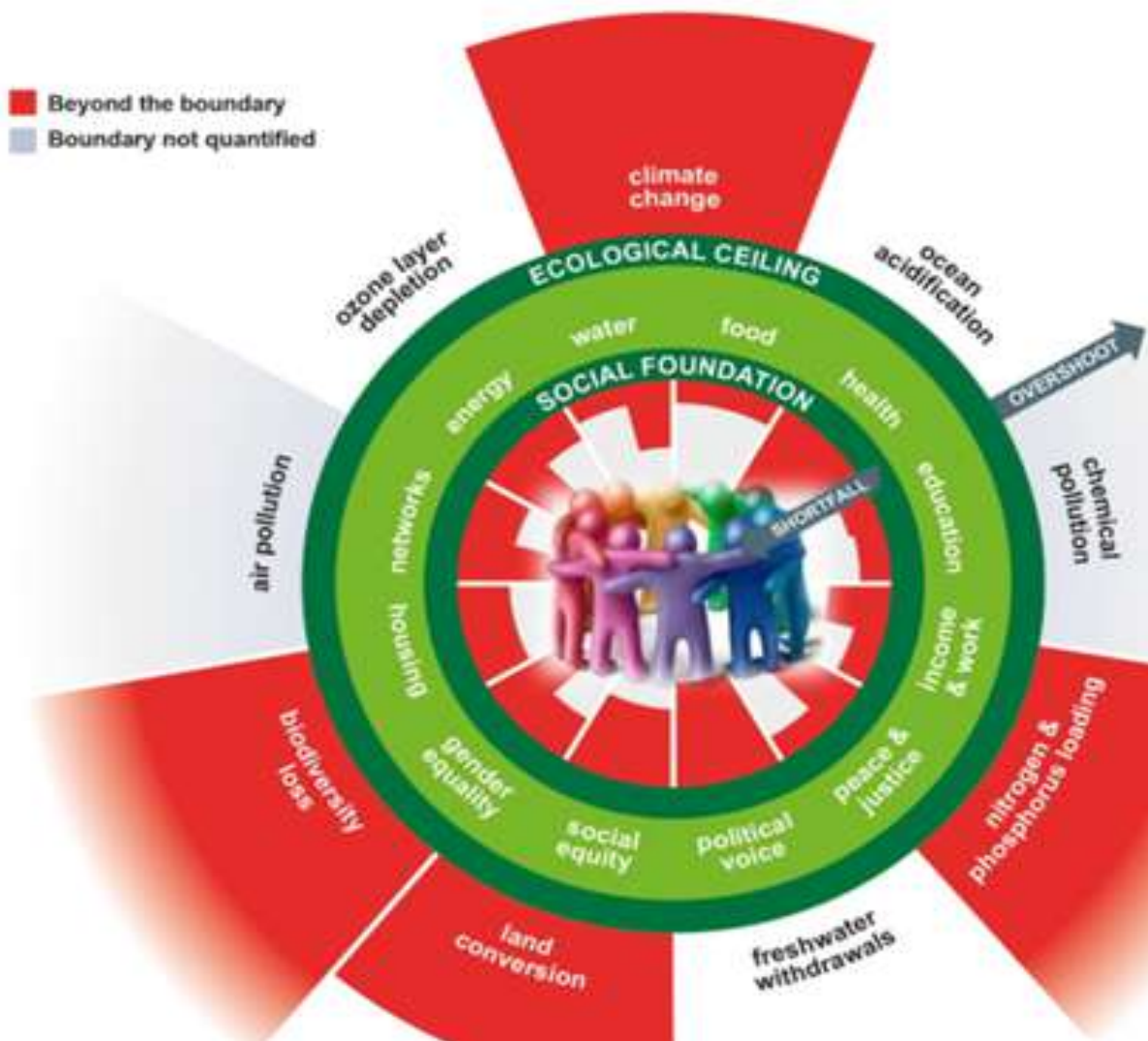


Figure 2.5 Doughnut Economics, the compass adapted to include 'social-commons' imagery at the centre (adapted from Raworth, 2017, p. 44)

Raworth called her work *Doughnut Economics* (ibid.). Herein she proposed a radical shift in economic thinking. She argues for a whole-systems perspective of human/nature interconnectedness where constrained planetary resources can hold benefit for all humanity, whilst remaining within the earth's carrying capacity. Her model looks at the social shortfall in

the centre and the overshoot over the earth's carrying capacity in the outer rim, for a balanced target in the 'safe' inner doughnut ring.

"The nine planetary boundaries ... define the Doughnut's ecological ceiling ... their interconnectedness [planetary & social boundaries] demand that they each be understood as part of a complex socio-ecological system and hence be addressed within a greater whole" (Raworth, 2017, pp. 49-50). The inner social foundation indicators are access to water, energy, food, health, education, income and work, peace and justice, political voice, social equity, gender equality, housing, and networks. The outer planetary boundaries based on the work of Rockström et al. (2009) are climate change, ocean acidification, chemical pollution, nitrogen and phosphorous loading, freshwater withdrawals, land conversion, biodiversity loss, air pollution, and ozone layer depletion. Raworth's work strongly advocates for 'regenerative' and 'distributive' design of an economic system, meaning it can regenerate and it is dynamically supported by a diverse complexity of interconnections, rather than simple single(ular) structure. "An economy that is regenerative by design is one in which people become full participants in regenerating Earth's life-giving cycles so that we thrive within planetary boundaries. This is our generational design challenge" (Raworth, 2017, p. 156)

2.1.7 Sustainable Development Goals

Another body of sustainability work is the United Nations' (2015) Sustainable Development Goals (SDGs). These SDGs evolved from the Millennium Development Goals (MDGs) published in 2000. Where the MDGs had a predominately social focus, the SDGs represent a more *whole-system* approach and provide for planetary considerations and environmental sustainability.



Figure 2.6 Sustainable Development Goals (Ndagijimana, 2020)

This 2015 body of work offers 17 inter-linked goals with a 2030 target, and include:

- | | |
|---|--|
| (1) No Poverty, | (10) Reduced Inequality |
| (2) Zero Hunger, | (11) Sustainable Cities and Communities |
| (3) Good Health and Well-being, | (12) Responsible Consumption and Production |
| (4) Quality Education | (13) Climate Action |
| (5) Gender Equality | (14) Life Below Water |
| (6) Clean Water and Sanitation | (15) Life On Land |
| (7) Affordable and Clean Energy | (16) Peace, Justice, and Strong Institutions |
| (8) Decent Work and Economic Growth | (17) Partnerships for the Goals. |
| (9) Industry, Innovation and Infrastructure | |

“The SDGs provide a context for discussing sustainable development but need to be treated critically and applied sensitively to local contexts” (TESF, 2020, p.3). The SDGs provides mechanism for creativity and engagement in the variety of the goals and the linkage of the goals to context. Within the SDG’s, Quality Education (SDG4), and specifically SDG4.7 Education for Sustainable Development and Global Citizenship, is recognised as a “key enabler of all of the SDGs” (UNESCO, 2020, p. 3).

2.1.8 Sustainable Development and the Role of Education

Using a Sustainable Development (SD) lens, a multi-country project focused on Transforming Education for Sustainable Futures (TESF, 2021) presents a categorization of sustainability bodies of knowledge. The categories are:

- i) environmentally orientated approach
- ii) human rights based,
- iii) capability approach, and
- iv) decolonial lensed approach

Briefly expanding on the approaches, the environmentally orientated approach focuses primarily on the concept of de-growth; the human rights based approach focuses on social justice; the capability approach looks to opportunity freedoms; and the decolonising approach focuses on the historically marginalised.

In terms of where this study would fit in this sustainable development categorization, it best aligns with the capability approach. The capability approach encourages empowering the social commons to have greater control over their own lives and futures. Social learning theorists, Engeström and Sannino, note that ‘learning leads development’ (2010), meaning that learning is a platform for personal and social development to take place. Education thus opens up new worlds, insights and opportunity, for individuals and collectives, including organisations. Another social learning theorist, Wenger-Trayner (2004), provides a complementary thought, offering that the value in the learning is driven through meaning-making and meaningfulness, rather than derived through “knowledge, skill, or curriculum” (Wenger-Trayner & Wenger-Trayner, 2020, p. 48). “It shifts the perspective from the inert to the living.” (ibid., p. 48.) These theorists appear to be approaching the capability approach through different but complementary processes.

Referring back to the section on Sustainable Development Goals, as is relevant and motivating the above narrative, the SDG4 Quality Education, and specifically SDG4.7 (being Education for Sustainable Development and Global Citizenship), is recognised as a “key enabler of **all** of the SDGs” (UNESCO, 2020). Pesanayi et al. (2019) note their supposition that “ESD (Education for Sustainable Development) has ... emerged as a model of transformative processes for enabling necessary learning-led change towards a sustainable future” (p. 5).

2.1.9 Sustainability in Higher Education



Figure 2.7 Representation of Sustainability in IHL (adapted from University of New Hampshire, 2016)

Education requires the collective of Head, Heart and Hands, and not only one nor a combination of just two of the three. Satish Kumar (2021) further argues that specialised and compartmentalized disciplines and systems (as are typically found in higher education) should evolve to a more holistic educational offering. Elaborating, he sees need for students to see the interconnectedness of everything, to learn ‘our’ place in ‘our’ eco system, and to strive to maintain the integrity of this eco

system. So the learning within educational institutions is holistic, it places the person within the social and planetary commons, and includes a relational perspective of the outcomes of being and existing within the life 'systems'.

Universities are uniquely positioned to drive change. I hereon offer quotation threads (creating a storyline) from various authors who offer that universities are positioned to drive change, so as to tell this story and to motivate this argument:

In looking at Sustainability theory and the arena this encompasses at Rhodes University, "we must start to reconceptualize our understanding of universities in a way that will bring about sustainable development in society." (Granados-Sánchez et al., 2011, p. 201).

Sterling et al. (2018) further offers: "At heart, sustainability education seeks to nurture transformative learning experiences that can heal, empower, energise, and liberate potential for the common good" (p. 324). And in the same reading,

A key question for radical change in higher education is the degree to which such changes can be incubated from within the current system. That is, in what measure are today's institutions of higher education capable of moving beyond enabling first-order learning about sustainability-related issues, to integrating the search for sustainable solutions into all levels of their organisational culture? (Sterling et al., 2018, p. 328)

In the 2021 webinar hosted by the International Association of Universities (IAU), thought leaders offered the following wisdoms, which continue the story and argument presented:

Change is difficult but possible, you need to work in the strategy but also the ground level of the institution to gradually invoke institutional and cultural change and there is no single blue-print, it is harder and more exciting than that... (and the importance of) introducing change without upsetting the system entirely. (Sterling, 2021)

Universities have freedoms and the power that many other [organisations] don't have... [and need to be] encouraged to be much bolder than currently are in addressing these future challenges... at the heart of it [there needs to be] a real commitment to and toward transgressive learning/ research and regenerative justice that reaches beyond [that which] can touch the planet. Universities can do this is they

can move out of the ‘stuckness’... I feel very strongly the enthusiasm for change in the young people on the African continent, so let's embrace this enthusiasm, and create the space for this to grow and for the creativity to emerge in our societies, and we will have a better future. (Lotz-Sisitka, 2021b)

Who if not we professional education communities, and when if not now, should take urgent action to shape sustainability mindsets, attitudes and behaviours to unite our communities' intellectual resources and to lead towards the solution of global societal challenges towards a more just peaceful and sustainable world. (Žalėnienė, 2021)

From the storyline above, the question – which is the interest of this particular study - thus moves to the ‘how’, and to identify and then amplify the key features of learning associated with regenerative sustainability, within the University, its community and its systems; and the need to learn HOW to shift towards sustainability in Higher Education, which is explored in this study.

The section focused to sustainability includes two final thoughts which round off this discussion:

2.1.10 An emerging relational perspective



Although not a body of theory, a perspective around relationality emerges.

This idea of relationality is in contrast to the *Rational Economic Man*, a representation of a key feature of modern day economics, described as “standing alone, with money in his hand, ego in his heart, a calculator in his head and nature at his feet” (Raworth, 2017, p. 96).

Linking to the above, the concept of self validating reduction is explained as a form of negative self-fulfilling prophecy, an act of “reducing potential”, where it creates a reducing cycle (Jickling et al., 2021, p. 52). “The reduction justifies itself to such an extent that it validates itself” (ibid., p. 53). Current economics is depicted as the *Rational Economic Man*, a process of (and result of) self validating reduction, - whereas early philosophers spoke of economics as a whole. The notion of economics

Figure 2.8 *Rational Economic Man: the human character at the heart of mainstream economic theory (Raworth 2017, p. 96)*

originates from the Greek word *oikonomikos* translated as “pertaining to management of household” (Online Etymology Dictionary, 2022). In 1767 however, Economics was proposed as a science rather a philosophical art, and from there a reductive cycle spiraled to the point that man stands above nature serving a neoliberalist agenda, where economies are now measured in GDP, a never ending spiral of growth at all costs, largely unchallenged (Raworth, 2017).

Relationships between human and planet is at focus in the anthropocene, and the lack of understanding of this two way relationship, may be argued to be at the heart of the current socio-economic and planetary crises. There is a disconnect in how humans interact in and with the planet, “this home that is ours but not ours alone” (Benyus, 1997 in Raworth, 2017, p. 116).

Raworth (2017) argues for a whole-systems perspective, for a more accurate view to emerge, that of human/nature interconnectedness. The paradigm thus shifts from *ego-driven man* to that of *man within-and-of a highly intricate and balanced system*. The argument centres around *relationships and relationships with ‘more-than-(just)-human’* (Jickling et al., 2021) as is illustrated in Figure 2.9.

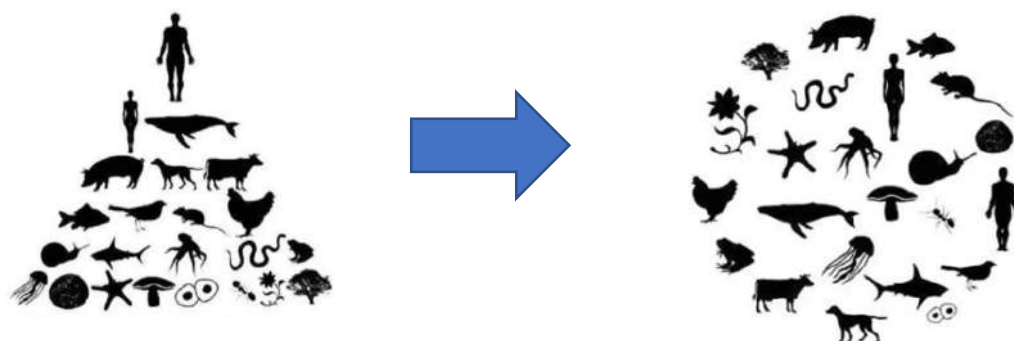


Figure 2.9: Top of the Food Pyramid? (adapted from TheDodo, 2014)

2.1.11 Regenerative Sustainability (as an expanded concept offering)

Raworth (2017) also argues in her sustainability work for the principle of *creating to regenerate*, so that the focus is on being “regenerative by design” (p. 206). *Sustainability* in and of itself implies a maintaining of the status quo. It can be argued that by changing the narrative to add the *regenerative* to the afore of *sustainability*, it affords purposeful action that better embodies the theory for practice and/or action.

Gibbons (2020) describes regenerative sustainability as “the next wave of sustainability ... aiming for thriving living systems in which whole-system health and wellbeing increase continually” (p. 1), so that it transcends ‘sustaining’. She further explains that it allows us to “address the root causes of (un)sustainability, and is inherently more inspiring and motivational”(ibid, p. 1).

Within this lies ‘disruptor’ capability; where new ideas challenge root causes rather than symptoms, and hold capacity to revolutionise linear thinking patterns, towards regenerative cyclical models and offerings. The conversation evolves from mitigating unsustainable practices to that of disrupting curated realities.

Throughout this study, therefore, this field of work is referred to as *Regenerative Sustainability*.

The aforementioned concepts and theories are linked to the context of this study situated at Rhodes University, through the following arguments:

1. that Institutions of Higher Learning (IHL) are situated within the greater economy as well as physical environment (a point that is obvious but still worth including);
2. that the curriculum (formal and informal) for university students should prepare them for economic participation. The South African National Skills Development Strategy III notes its mission “to increase access to high quality and relevant education... to enable effective participation in the economy....” (South African Department of Higher Education and Training, 2015, p. 3); and
3. that university research aims to inform society, and at the same time green economy opportunity provides hope for alternate (and by implication) a better future for the commons (both social and planetary).

The UNESCO Education Futures (2021) report speaks to the need to educate differently in light of social-ecological issues, calling for a shift towards sustainability (of which there have been calls over an extended period of time), and the calls are thus ever more urgent. This makes the study and its focus very timeous and pertinent.

There are other bodies of work that have not been included. Those included best align to this study.

2.2 Introducing the Research Question

Up to this point, a context has been presented, the regenerative sustainability introduced, and the platform prepared to introduce the study's research question. Before I introduce the question, important to note, this study draws on a social learning theory as a lens through which to view regenerative sustainability projects. The social learning theory that I use was developed through the early work of Lave and Wenger (1991) and later Wenger-Trayner and Wenger-Trayner (2014, 2015, 2020). My study employs the associated Value Creation Framework initially produced by Wenger, Trayner and De Laat (2011) and further developed by Wenger-Trayner and Wenger-Trayner (2020), for the analysis of the data generated. This theory will be discussed in chapter three. With this considered, the research question for this study is:

What (themes of) value creation emerge when considering regenerative sustainability projects, at Rhodes University, through a Social Learning lens, and what value does this hold for Institutions of Higher Learning?

- i) **How is the learning operationalized so that values are made visible, and possible absences evident?**
- ii) **What spurs the agency in undertaking and progressing regenerative sustainability projects?**
- iii) **Does the informal curriculum support the learning and learning opportunities on campus of such projects?**

In answering the overarching research question, the study allows for emerging features not yet identified, but also explores in particular a number of features of social learning already identified as associated with social learning and the analytical framework applied in this study (as outlined in chapter three).

It is here that I introduce what I view to be the *magic dust* of the study, being the social learning theory - this is that which holds and underpins the spirit of the study.

Chapter three

3.1 Education and Social Learning

The purpose of Education is evolving, and the foregoing concerns regarding planetary wellbeing calls into question the utilitarian and economic focus, arguing for a shift toward that of public and common good focus (Locatelli, 2018).

As explained by Rosenberg (2022), modernization that was driven by industrialization and extractivism promised a “good life for all. This promise has failed Africa, but might still be taught in our schools” (p. 9). So Rosenberg is saying that whilst the promises of modernization have not held true for Africa, these promises are still being taught in the educations systems.

Locatelli proposes a shift in focus for the common good, explaining that “Education as a common good, calls into question the current utilitarian model which sees education as a mere individual socio-economic investment. It favours a humanistic approach which places people and their connections with the community at the centre” (2018, p. 10).

Complementing Locatelli (2018) the United Nations Educational, Scientific and Cultural Organisation (UNESCO) also challenges for an expanded focus to education, calling for “a new social contract for education to repair injustices while transforming the future” (UNESCO, 2021, p.3). UNESCO further argues for curricula that “embrace(s) an ecological understanding of humanity that rebalances the way we relate to Earth as a living planet and out singular home” (ibid., p.17)

“We are increasingly asking if what people learn is truly relevant to their lives, if what they learn helps to ensure the survival of our planet. Education for Sustainable Development can provide the knowledge, awareness and action that empower people to transform themselves and transform societies.” (UNESCO, 2020, p. 8)

The above views all speak to the challenges faced by humanity today. This dissertation opened with three quotations, one speaking to the exponential impact human have on the planet leading to the Anthropocene (Raworth, 2017); the next to how modernization, economic development and a focus on growth has accelerated the depletion of Earth’s resources (ibid); and thirdly a quotation attributed to Maya Angelou “Do the best you can until you know better. Then when you know better, do better” (cited in Smith, 2021). I argue that modernization and economic development focused to growth was at that time our best,

we collectively did our best according to what we knew. Our education systems were set up for this goal. But we now know better. Our education systems need to thus adapt for this new knowledge. The new focus as proposed is Education for the commons – both social and planetary (Locatelli, 2018; UNESCO, 2020).

In an exercise of tracing the origins of educational metrics, two sources are recognised, the first is from the World Bank which argued a dimension of learning as *performance and mastery*, featuring efficacy and success; the second dimension originated from UNESCO and other developmental organisations arguing *learning as a democratic process*, featuring inclusion and participation (World Bank, 2011, 2018; Lotz-Sisitka, 2022). A third dimension was later proposed, with the discourse driven by UNESCO (2010), as that of *learning as connection*, featuring meaning-making and relevance (Lotz-Sisitka, 2012). This third dimension emerged through the realization of the need for *quality* education. It was argued that a focus on *access* to education was not sufficient, what was needed was *access to quality* education. The Sustainable Development Goals (SDGs), introduced in chapter two, contain within them Goal 4 Quality Education, showing the reframing from *access to-* only to that of *access to quality-* education.

As explored in chapter two in the section dedicated to Sustainability in Higher Education, it is recognised that education requires head, heart and hands. Education is not only a cognitive transfer of content, it is recognised to have a social and emotional domain, as well as an action-taking domain. As much as there needs to be a balance between these three domains, and as offered by Lotz-Sisitka, a fourth domain is required, being that of agency-for-change as transformative inclusion. Lotz-Sisitka speaks of a need for a “new genre of participatory research where social learning research is, in itself, a process of emancipatory social change, or capability development” (2009, p. 89).

Cundill, Lotz-Sisitka, Mukute, Belay, Shackleton and Kulundu (2013) complement this idea in saying “for learning to be referred to as social learning it must move beyond individuals and become situated in wider social units... since learning is considered to have a role to play in building human capacities to adapt to changing social-ecological conditions” (p. 39). Within these arguments by Lotz-Sisitka (2009) and Cundill (2013), a new focus for education for the social and planetary commons take shape, and these offer a way forward in starting to

address Rosenberg's (2022) concern to the false promises that are being taught in today's curricula.

O'Donoghue lends voice to the above narrative in saying Education for Sustainable Development (ESD) "presents as an open process of situated social learning where emergent competences steer social innovation towards a more sustainable future" (2014, p. 7). Social learning now comes under the lens.

3.2 Social Learning – Key concepts and theory

As briefly alluded to in the beginning of chapter two, this study draws on the concept of social learning theory that has evolved from the work of Lave and Wenger (1991), Wenger (2006) and Wenger-Trayner and Wenger-Trayner's (2014). Its earlier roots are in Vygotsky's socio-cultural learning theory (1930), which has been evolved to include concepts of Communities of Practice (Lave & Wenger, 1991) and System Convenors (Wenger-Trayner & Wenger-Trayner, 2014). Wenger (2004) emphasised meaningfulness as key to how we learn, he explains that this does not replace theories focused to what he calls the mechanics of learning (this being the cognitive processes and knowledge acquisition) but rather addresses a deeper level of learning. He explains that our higher level of learning is deeply imbedded within our social context; that we "negotiate" "new meanings" (p. 4) as opposed to simply learning new skills; and that our social-humanness "roots" us and is wholly dependent on our social context (ibid.). "So understood, learning transforms our engagement with the world as our being in the world. Learning is therefore a social becoming, an ongoing negotiation of an identity that we develop in the context of participation [and non-participation] in communities and their practices" (Wenger, 2004, p. 4).

Within Communities of Practice, as theorized by Wenger, collaboration is a key ingredient of learning. Lave and Wenger (1991) advocated for collaboration in a safe space so as to appreciate shared uncertainty, and to then embark on a cyclical process of generating ideas, scenario testing, feedback of outcomes, for further (and new) learnings, and then back into a new cycle. The continued process generates new insights and learnings with each cycle.

While Communities of Practice is more widely understood within social learning theory (Lave & Wenger, 1991), the work on *system convenors* is relatively new (Wenger-Trayner & Wenger-Trayner, 2014). System convenors are described as individuals "bringing [people]

together for social learning” with the goal to find “innovative solutions to their common problems” within complex landscapes. These individuals see opportunity beyond the immediate lens, looking for synergies and relationships to cross invisible boundaries.

Wenger-Trayner and Wenger-Trayner (2020) view learning as a process of value creation “placing the emphasis on the experience of learners *caring to make a difference* rather than on knowledge, skill, or curriculum as commodities. It shifts the perspective from the inert to the living”(p. 48). They also argue that “at the heart of *learning to make a difference* is an experience of agency. Engaged in a social learning space, this agency is not merely an end goal of making a difference; it drives the process of learning toward it” (p. 44). *Caring to make a difference* (which is synonymous to meaning and meaningfulness) spurs on agency, and this agency is not limited to levels of knowledge, skill or curriculum, if there is enough meaning driving the agency, then the skill and the knowledge will develop in the learning process.

The challenges of the Anthropocene are unknown. The bodies of knowledge and the skills required may or may not exist to draw upon. Being comfortable with the uncertainty is thus helpful in our learnings in times of the unknown (Wenger, 2020). Institutions of Higher Education, as discussed in chapter two, can provide the space for the coming together, and for testing new ways, new knowledge and new skills, for the benefit of social and planetary commons.

Granados-Sánchez et al. (2011) argue that

... the inevitable impreciseness of sustainability and SD (sustainable development) combined with the need to give it meaning in a specific context involving multiple stakeholders makes these concepts attractive from an educational perspective as they require joint meaning-making, co-creation of new knowledge, collaborative learning and, indeed, critiquing. (p. 193).

This explains the need for a special form of learning, distinguished from other forms of learning.

3.3 Theoretical Framework

The study aims to identify key social learning features that emerge in (regenerative) sustainability projects, undertaken at Rhodes University campus, and serving as embedded case studies in this research (as will be expanded on in chapter four).

The Value Creation Framework (VCF), developed first by Wenger, Trayner and De Laat (2011) and then by Wenger-Trayner and Wenger Trayner (2020)'s work, is employed as both the theoretical and analytical framework or 'lens' for this study. This framework is a tool for analysing (identifying, describing, evaluating) learning processes and the value created. In this study the VCF will be used to identify, describe and to some extent evaluate learning and the associated value created, in six different regenerative sustainability projects at Rhodes University.

As often happens the thinking around the VCF expanded over time. Initially the authors proposed five cycles, the first of these four as indicated by the authors are rooted in and adapted from the work of Kirkpatrick (1976, 1994) around training and evaluation and were named by the authors (2011, 2016) as *Immediate, Potential, Applied* and *Realized values*. They also added a fifth cycle which spoke to their work around communities and networks, and named it *Reframed value* (Wenger et al., 2011, p. 19). Later work saw additional cycles of *Orientating, Strategic* and *Enabling value* cycles (Wenger-Trayner & Wenger-Trayner, 2020). Within this 2020 body of work the *Reframed value* cycle is also referred to as *Transformative value* (p. 118).

The authors argue that all cycles involve feedback loops between them which in turn facilitate greater social learning (reference). Some cycles complement each other, whilst others underpin or overarch the framework. As described by Wenger-Trayner and Wenger-Trayner (2015), the VCF, illustrated in Figure 3.1, helps identify that which

is creating value for different stakeholders, and it is responsive to a changing and unpredictable environment ... this framework focusses on the value created by social learning, it distinguishes between the different types of value [cycles] and models learning as a dynamic flow among them... the feedback loops make the learning relevant and dynamic. (2.22)

The cycles help to see what is there and possibly that which is absent. The VCF can be applied to probe, study, evaluate, understand and identify learning throughout the life span of a project.

As already mentioned, the feedback loops between the cycles facilitate greater social learning.

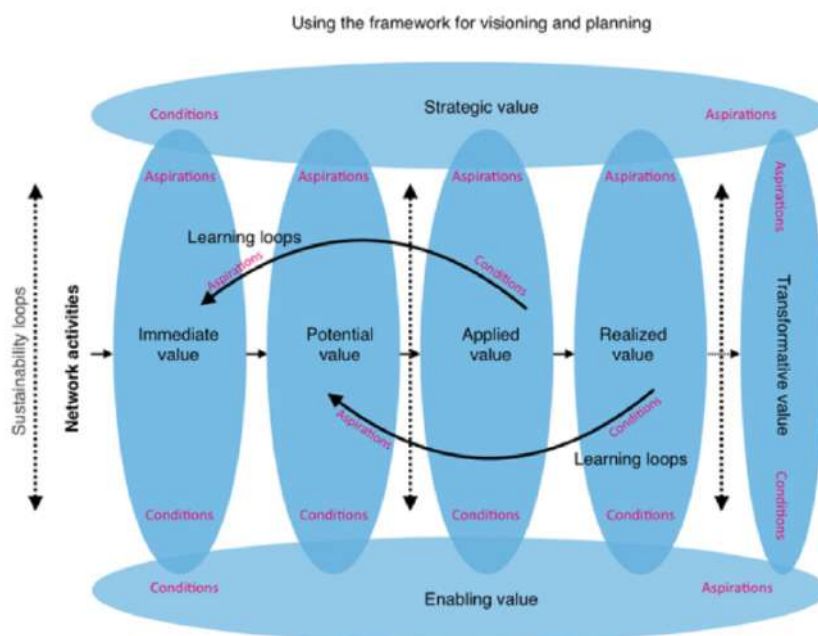


Figure 3.1 Value Creation Framework (Wenger-Trayner, 2014, p. 9)

3.3.1 The different types of value

The different value cycles have been introduced thus far by name only. This section expands on each. Important to highlight, the learning is a dynamic flow between the varying cycles, and although the cycles may have complementary partners, they are not dependent on each other. The operative word that best describes the relationship between the cycles within the framework is *dynamic*. Another point to mention is that the value may be positive, negative or absent (non-value). The value cycle explanations are as follows:

Orienting Value

Described as “Finding yourself in the broader landscape”(Wenger-Trayner & Wenger-Trayner, 2020, p. 113), orienting value allows participants to consider the broader social landscape, which is important because one cannot separate the individual and his/her/group identity from the social landscape and the influence thereof, with all of the complexity and

inter-connectedness that exists. This includes culture, activities, resources, inherited boundaries, power structures and networks.

As an example in the case study projects, and as will be expanded on later in the study, often the learning environment influenced this orientating value cycle, over the course of academic journey of the scholars. The importance of exposure to and engagement with trending concerns raised and discussed within the academic project and the tertiary experience of scholars thus becomes apparent.

Strategic Value

The key question posed in this cycle is “What is the quality of engagement with strategic stakeholders?” (Wenger-Trayner & Wenger-Trayner, 2020, p. 106), speaking to those individual who have a “stake in the effect of [the] learning” (p. 114), and also to be mindful of those stakeholders who have a stake but who may not directly participate in the activity. Including this stakeholder group into the conversations offers rich insight and strategic buy-in to the collective commons.

This value cycle has both an internal and external dimension to it. External examples include end users, management, control over context, oppressive forces, power, alliances, resistance and such. Internal dimensions would include constituencies, intentionality, learning agenda and strategic context (p. 107, 108).

An example to consider for this value cycle would be a project that engages senior management in developing a new system, policy or structure, that which goes beyond the project itself, and has wider and ongoing impact, so that it holds strategic value.

Enabling Value

Complementary to strategic value, the key question in this cycle is “What makes it all possible?” (Wenger-Trayner & Wenger-Trayner, 2020, p. 98). Enabling value is described as the “**key to the sustainability of value creation**” (Wenger-Trayner & Wenger-Trayner, 2020, p. 106)

This value cycle quietly serves in the background, and ironically, the more successful this value is, the higher the probability of invisibility. However as invisible as it could be, there will

still be individuals behind the scenes creating this enabling environment, and these individuals are stakeholders (in the broader framework discussion), and as such their work (as an example) should be acknowledged which is not an invisible act then, and so it requires balance. “Creating enabling value requires a balance between visibility and invisibility” (Wenger-Trayner & Wenger-Trayner, 2020, p. 105). An indicator is the sense of agency and ownership **the participants** feel in the learning space.

Here too there are two dimensions, external and internal. Activities such as coaching, funding, facilitation, logistics, technology speak to external enabling value, whereas internal examples of enabling value would include commitment, internal leadership, robust back-channel, transparency, efficiency, process, language, documenting.

The Wenger-Trayner theorist duo describe instances of thriving learning spaces in constrained resource settings, in which there is a shared sense of ownership and responsibility to the commons, whilst also having witnessed the reverse where the learning has been “suffocated when every minute is filled with pleasantries, food with a hundred choices, and innovative touches provided” (Wenger-Trayner & Wenger-Trayner, 2020, p. 105).

An example of enabling value may be explained as a *budget* a university provides for a sustainability project, or *behind the scenes administrative support* for project leaders running a workshop. In this example the support would be in the form of travel bookings for external participants so as to enable in person participation in the project.

There is a correlation that emerges in this value cycle – the more enabling the system is, the more invisible it appears to **the participant**, and the reverse is true too, the less enabling the system the higher visibility of the absent (or negative) value.

Immediate Value

One of the first values recognized in the development of the Value Creation Framework, the question asked in this value cycle is “what is the experience like?” (Wenger-Trayner & Wenger-Trayner, 2020, p. 79). This includes both basic first impressions to concrete experiences, it may be individual or shared consisting of short-term experiences - which are also not limited to only those that are described as positive, it can include negative responses which may also hold potential for the social learning process. Complementary to the

potential value cycle and generally positioned alongside, examples of this value cycle include shared experience, validation of shared concern, feelings and expressions of hope, and expansion of new horizons.

Potential Value

Closely linked to the immediate value cycle, the evaluator using the Value Creation Framework lens asks of participants “what can come out of this process?” Again this can be positive or negative, but it is “yet to prove useful in practice” (Wenger-Trayner & Wenger-Trayner, 2020, p. 88). Hearing another’s experience can inspire innovative potential responses to problem-solving. Thus, examples of personal insights and collective innovations emerge. Expansion of networks or access to resources, social capital, potential collaborators all fall within this value cycle. This is the value which can be created and discerned even prior to participants testing or putting an idea in action.

The associated theorists noted that facilitators generally take interest in the Immediate and Potential value cycles. (Wenger, Trayner, de Laat, 2011).

Applied Value

Applied value is the “learning in the doing” (Wenger-Trayner & Wenger-Trayner, 2020, p. 89). There is strong emphasis on the practical, in the action of applying oneself, or putting into practice. (ibid). The learning within the applied & realized value cycles is described as value creation in practice. This learning can happen in one of two ways; the learning acts as a landing pad (it moves from being abstract to concrete), or it can be a launch pad for another cycle of learning which could result in realized value. The distinction between applied and realised is that applied moves from abstract to concrete, whilst realised is seeing the result of the applied learning.

An example can be explained as an individual/collective applying learning to something tangible, such as developing a funding proposal (applied value) after learning about funding opportunities and/or how to develop proposals. This is applied value component. When the funding proposal is accepted and funding received, this is the realized value component (see realised value). All of which was created through the learning opportunity: where to look for finding opportunities, and how to apply for these.

Other examples that may be considered applied value include trying a new resource, a new collaboration, inventiveness, adoption/ adaption, increasing influence, leveraging of connections and harnessing synergies (Wenger-Trayner & Wenger-Trayner, 2020).

In applying an idea to a new context, may result in new challenges and learning opportunities arising, so this value cycle affords development and expansion in new ways thus adding to the learning collective. As explained, “putting things into practice is a learning event in its own right” (Wenger-Trayner & Wenger-Trayner, 2020, p. 90).

As in the case before, applied learning is complementary to realised value cycle, however, it may also link to other value cycles such as reframed or transformational cycles.

Realised Value

Wenger-Trayner and Wenger-Trayner propose that the learning loop progresses to its fullest form only when a difference is made, at which point new loops of social learning may take form, and so the key question in this value cycle is “What difference does it make?” (Wenger-Trayner & Wenger-Trayner, 2020, p. 94).

This value is described as seeing the result. But there is occasion when applied value does not translate into a result. Herein this value allows for analysis over the continuum of the framework, that would help identify or ‘see’ possible absences that (may) exist, better understand this, and by addressing this absence, may result in realised value. As an example, an unsuccessful funding proposal creates opportunity for a deeper look into reasons for rejection, thus furthering learnings, so that there is greater chance in succeeding in attracting funding in the future.

Examples of realised value may include improvement in performance, increased transactions (as an example for a retail business), or raised awareness (as an example for an educational campaign). It also may include reduced occurrences of accidents (risk management), unfavourable investments, lawsuits, and such (Wenger-Trayner & Wenger-Trayner, 2020).

The effects of learning, however, are not always easily observed, and may be complicated by time (short versus long term perspectives).

Reframed Value

Usually unplanned or unforeseen, this value cycle “recognis[es] broader and deeper transformations that social learning can give rise to” (Wenger-Trayner & Wenger-Trayner, 2020, p. 113).

The key question that this value cycle poses is “Does the difference you make have broader effects?” (Wenger-Trayner & Wenger-Trayner, 2020, p. 118). The transformational value is such that I consider this reframed/transformational value, supporting a general consensus of current scholars. In their work, Wenger-Trayner and Wenger-Trayner (2016) are careful to explain that not all learning results in reframed or transformative value. This value cycle is considered the most elusive of the value cycles. By its very nature it holds the power of unlocking root powers structures and thus challenging the status quo. This resonates with chapter two’s discussion focused to regenerative sustainability (see page 21).

Examples of reframed or transformative value are personal transformation, power shifts, new identity(ies), reconfiguration of boundaries, and instances of empowerment.

A warning is issued however that, “[m]ore than any aspect of learning, transformative value can challenge the status quo and is likely to run into system inertia, hierarchical tensions, or cultural resistance. It can be political, contentious or divisive. We have even seen it backfire with retributions to the instigators of change” (Wenger-Trayner & Wenger-Trayner, 2020, p. 122).

3.3.2 Other considerations

The framework speaks to flows between the value cycles, offering that it is here that the learning takes place. But the flows do not necessarily need to progress in order, the connections can skip cycles. The theorists further offer that in some cases the resultant flow may be more important than the cycle input. (Wenger-Trayner & Wenger-Trayner, 2020).

The theorists also include the idea of loops, explained as “a value flow that returns to its origin or an earlier point in the flow – enriched with additional learning gleaned along the way ... loops accelerate, deepen, and widen learning.” (Wenger-Trayner & Wenger-Trayner, 2020, p. 133). An example of this is the funding proposal that in its first attempt was not successful, the new learning is taken back so that the learning may be deepened for the next funding proposal application.

Lastly, Wenger-Trayner and Wenger-Trayner describe branches, this is where the flow is applied to a new and separate framework with its own separate thread of value. An example of a branch is in the instance of work produced that this is then applied to another context (ibid.).

In concluding this chapter, education and social learning have been considered, and the Value Creation Framework (VCF) discussed, with an elaboration around each of the value cycles that are depicted in the VCF. This VCF framework is used within this study as both a theoretical and analytical tool. How it is used is discussed 4.5.2 in the next chapter.

To this point, the context has been presented, and discussions around the bodies of theory and concepts for sustainability and social learning. The next discussion will focus to the study methodology and how it was designed and implemented.

Chapter four

This chapter looks at the research design and methodology of this study. It speaks to the type of study, and gives a brief overview of the projects and how they were selected. The data generation, validity and quality are then discussed before considering how the data was analysed. This chapter further examines ethical considerations for this study, and closes with a timeline showing the progression of the study project.

4.1 Methodology

This is an **embedded case study**. A case study offers the opportunity to deeply observe the relationship of a phenomenon and its setting, through the story telling of the case study (Grbich, 1999).

An embedded case study further allows for the sub-parts of the story to be explored and understood, and then speak back to the story, for a richness and deeper understanding, in a “cross-case synthesis” (Yin, 2003).

Cundill, Lotz Sisitka, Mukute, Belay, Shackleton and Kulundu (2013) state that “the case study appears to be the most widely used empirical methodology for social learning research across all bodies of literature reviewed” (p. 40).

Yin (2003) makes a case for case studies under the following circumstances:

1. the researcher has limited control over events

I engage with the participants and ask questions to gauge and understand their insights, perspectives and learnings. Although I have relationships with the participants that were formed prior to this study, I have no control over the projects themselves.

2. questions that focus on ‘how’ or ‘why’ and not just ‘the ‘what’

The semi-structured questions provided opportunity to *deep-dive* into the participants’ experiences. *What* type questions would not serve the purpose of deep diving, rather it would limit engagement (see Appendix 4).

3. contemporary phenomenon exists within a real-life setting

On the majority of occasions, I met with the participants in their real-life settings. In so doing, I was able to get a deeper appreciation of the participant in their project space in a setting where they felt comfortable, and this further allowed opportunity to get a deeper and more accurate understanding of the contemporary phenomenon in its true setting, as best possible.

The embedded case study method accommodated a qualitative data generation approach, looking to the participant's perspective and understanding in the way in which he/she interacts with, and engages, the knowledge about social learning and associated value in regenerative sustainability projects.

4.1.1 The Embedded Case Studies

The study involved Rhodes University as the main case study, looking at projects on the University campus that have a regenerative sustainability focus, as cases within the main case. The study sample was diverse in terms of project existence, they included longstanding projects that have been in existence for over a 10 year period , some that are relatively new with a two to three year track record, a struggling start-up and also that recently discontinued.

I identified ten sustainability projects for possible inclusion, with the intention of limiting the study to only four of these projects. I had planned for the final selection to be determined by participant willingness and availability. Invitations were then extended to seven of the ten identified projects (I excluded three projects in which I had actively participated, so as to mitigate inherent bias). Of the invites sent, I anticipated that not all would accept. The invitations were addressed to the project lead(s), specifically to individuals with an intimate knowledge of their project.

The criteria I based these invitations on were:

1. Must have originated from within Rhodes University, and had interaction with the University systems
2. Must involve staff and/or students

3. Must address one or more aspects of sustainability. Examples include circular or regenerative economies including upcycling, recycling, challenging unsustainable practices, reducing waste
4. Must be willing to participate
5. Must be willing to openly share both challenges and successes
6. Not focused on classroom based teaching or formal curriculum (because this was well covered by Togo, and because of the observed dissonance between the taught curriculum - which I had found in my past course - and the observed sustainability practices, or lack thereof)
7. Must reflect some diversity between them, in terms of the duration of the project's lifespan, how established the project was, the project backing (student driven versus staff driven), and in the project financial and resource support.

All of the 7 projects that were invited to participate in the study, accepted. One, however, was excluded later due to the sensitive timing of that project's implementation roll-out. As mentioned earlier, in terms of participant selection, all participants required in-depth knowledge of the project and its history.

The projects in this study are (the detail and elaboration of the projects is presented to the reader in chapter five of this study):

1. E(electronic)-waste repurposing initiative
2. Nambu Group (Alternative) Animal Protein Feed Project
3. Food for Us Project (creating economy for excess farm produce)
4. Eyethu Project (repurposing recyclables as teacher training aids)
5. Stanley Kidd Residence Recycling Project
6. SRC Enviro Councilor Legacy Team

4.2 Data Generation Techniques

The study used the following data generating techniques:

In discussing the interviews listed below, the participants were interviewed either via a remote Zoom™ meeting, in-person or a roundtable group setting, as per their preference

and geographic location at time of interview.

1. **Semi-structured one-on-one interviews:** Individual face to face meetings with the lead project participant was conducted. These participants had historical knowledge of the project. The questions were semi-structured, that was open-ended allowing for free flowing engagement between interviewer and interviewee (see Appendix 4). Care was taken so that the questions were not leading (so as not to prompt the participant to answer in a way that the interviewer prescribed). The theme of social learning featured in order to create a framework for the discussion. The interviews were recorded using a combination of a Zoom™ recording function, and Otter™ transcription application, where best suited. The recordings were then personally replayed and corrections (of the automated transcription) effected, and in areas necessitating the deletion of superfluous data, all within one week's time frame of the interview.
2. **Semi-structured round table interviews:** I conducted group in-person meetings with the lead project participants. All participants, baring one, had historical knowledge of the project. This technique offered the benefit of shared discussion, often prompting further engagement between the participants. Again, the questions were semi-structured. I facilitated the interviews mindful to hear the voices of all of the participants. Again, care was taken so that the questions were not leading. The theme of social learning featured in the design of the questionnaire. These interviews were recorded using the Otter transcription application. Again, the recordings were then replayed and corrections made, and superfluous data deleted, all within one week's time frame of the interview.

A total of 8 interviews were conducted with project leads (either individual or group round tables) across the projects with a total of 12 contributing participants (refer Table 2.2). The interview durations varied from 60 minute to 3 hours, with the average interview time being around 90 minutes.

Table 4.1. Interviews undertaken and their respective formats

Project Interviews	E-Waste	Nambu	Eyethu	Stanley Kidd Res Recycling	EnviroSRC Cllr Legacy team	Food for Us
Individual meeting with project lead	√ (Zoom) 1 participant	√ (in person) 1 participant		√ (in person) 1 participant		√ (Zoom) 1 participant
Group Roundtable			√ (in person) 2 participants		√ (in person) 3 participants	
Supporting stakeholder interview		√ (in person, group roundtable with RU Kitchens team) 2 participants		√ (in person, with RU Grounds and Garden's Manager) 1 participant		
Participants involved	1	3	2	2	3	1
Total sessions	8 interview sessions					
Total participants	12 Contributing participants					

* to be read in conjunction with the data generation technique section above

4.3 Validity and Quality

Yin (2016) emphasizes the importance of prioritizing data integrity processes over the duration of the case study, so that trustworthiness of the data is ensured. Creswell (2003) as cited by Wenger-Trayner and Wenger-Trayner (2020) echoes the need for validity processes to be continually upheld throughout the stages of the study. Shenton (2004) offers the measures that one can work with to test the data validity, included in these, are:

4.3.1 Credibility

Lincoln and Guba (1985) argue that “ensuring credibility is one of most important factors in establishing trustworthiness” (Shenton, 2004, p. 64). Credibility refers to processes in which researchers “seek to ensure that their study measures or tests what is actually intended” (Shenton, 2004, p. 64). He offered data triangulation as a way to, as best possible, ensure credibility of the data.

The following processes assisted in working towards credibility:

Data triangulation

The data generation techniques of interviews and group roundtables within the embedded case study projects provided opportunity to test the data against the other (as well as to enrich and compare). Case studies are not meant to be comparable, as each case study has its own nuances and uniqueness so as not to be comparable, although this thought is counter to what Rudin (2006) argues, where he says “that we must find avenues of using the cumulated wisdom of case studies available” (p. 807). I argue, that this master’s research is an embedded case study that is situated within a context that is the same for all of the projects, being Rhodes University, and as such, the ‘what’ question that this study poses does allow the drawing of comparison among these selected projects. The interactions with the units within the institution and the experiences that the participants speak to therefore do allow for data triangulation as a form of ensuring a level of credibility as is required to meet the integrity of the data generated.

Member checking

Member checking involves the data generated be *presented back* to the interviewee, providing opportunity to validate and test the rigour of the data. This was done through the presentation of the report that had been produced after the data analysis process, for confirmation and validity of the data generated. Member checking also provides opportunity for further clarity, corrections and deeper insights to emerge.

The data generated was presented to the participants in the form of an interim findings report, produced after the data had been analysed. Each participant received, via personal email, a report specific to their project. All participants (with no exception) confirmed the accuracy of the data presented therein. None added further insights or comments to the report.

Participants’ right to refuse

Shenton (2004) also offered ways for a higher likelihood of honesty in participants, which includes the right to refuse participation in the study. Participants received invitations to

partake. There was no duress in any form linked to this emailed communication. In one case where there was non-response to an invitation (a support services representative), and after a follow up reminder, I interpreted this non-response an indication of preference not to partake in this study. Participation was thus fully voluntary and those partaking did so out of an interest, or at least a curiosity in the study. No incentives were offered.

In addition, noted within the consent form, a clause was included providing a no-question opt-out at any point in the study (see Appendix 4). None of the participants have used this clause over the duration of the study.

4.3.2 Confirmability

Shenton (2004) explains confirmability as “the work’s findings are the result of the experiences and ideas of the informants, rather than the characteristics and preferences of the researcher. The role of triangulation in promoting such confirmability must again be emphasised, in this context to reduce the effect of investigator bias” (Shenton, 2004, p. 72). While recognizing subjective embodiment, I employed measures such as reflexivity exercises to help me recognise this. I also built into the study an opportunity to confer with the lead supervisor to ensure against the effect of bias. Meetings were scheduled over the course of the study, as an example after the first interview, where the transcribed interview was reviewed by the lead supervisor to check for any inherent interviewer bias and or possible leading of questions. Where there could be cases of this, I took the decision to exclude the data generated in the findings, specifically where I asked participants to rate the importance of some features of social learning, as this may have led to interviewer bias and leading questions.

4.3.3 Transferability

Transferability requires enough contextual information for a reader to have opportunity to justifiably draw parallels for their own setting (Shenton, 2004). Whilst all the projects have a regenerative sustainability focus, this study intentionally looks at projects that vary across continuums. Examples include: two studies look at technical nutrients (Raworth, 2017, p. 220) and one at biological nutrients; two are well established in terms of the project support structures whilst the others have limited access; one project shows a ten year

sustained longevity, one had a fixed period, one is in piloting, one is struggling and a final one project can be classified as emerging. The projects have vast differences between them, and for this reason transferability of the features that emerge across them, have transferring value, due to the unique placement of the data generated from and across them collectively. The question being that of 'what' in its nature allows for this unique opportunity to justifiably draw parallels for regenerative sustainability project settings.

4.3.4 Dependability

Shenton (2004) explains that qualitative studies in their nature have inherent difficulties in proving dependability, being the ability for a future researcher to produce the same findings.

Whilst qualitative studies are liberating, meaning that it allows people to say what they feel, and also that this is open to researcher interpretation, I would argue that dependability is still possible, as the research question and the semi-structured questionnaire mitigates this. The *timeline* of the project, however, would need to be factored in, should a duplicate study be run, as participant responses may evolve depending on the stage of growth of the regenerative sustainability project.

4.3.5 Other: Academia and Peer Presentations of Study Progress

Additional opportunity allowed for testing the validity and quality of the study, this includes:

- This study was overseen and supervised by two experts in the form of my study supervisors, who provided support, guidance and feedback over the duration of the study.
- The Masters study course included study blocks. The study blocks were one week contact sessions with the course coordinator, professors and senior lecturers in the Education Faculty, at Rhodes University. Within these contact sessions I was tasked to present my study as it progressed. These sessions provided expert feedback and guidance.
- In April 2022 I was invited to present at a Rhodes University hosted workshop, titled 'Curriculum Transformation and Sustainability... Rhodes University in focus!' (Appendix 13). I presented the interim findings of my study to this audience that

included Rhodes University academia and also, through hybrid video conferencing, to other South African and Southern African Institutions of Higher Learning.

4.4 Data Management

The data generated in throughout this study was stored on a work laptop that was password protected, as well as in a confidential Google drive that could only be accessed by myself as the researcher, the two study supervisors and the critical friend, in line with the approved ethics application. The data takes the form of the transcribed interviews, the recordings thereof, the consent forms and permissions for the images used where relevant. This data was then analysed, and all my notes saved to the same drives. I produced a storied version of the interim data and shared this with the artist, whom I engaged and commissioned for the illustrative posters. No raw data was available to the artist, and he had no access to the storage (Google) drive.

4.5 Data Analysis

The *reasoning* underpinning this study is a combination of induction and abduction logic, where; *reasoning* is explained as “advancing and clarifying arguments, reasons and evidence for reaching certain conclusions” (Mouton, 2001, p. 113); *induction* is understood to be rooted in logical reasoning, drawing observations from a phenomena to a broader context; and *abduction* can be explained as looking at a topic through a ‘new’ or alternate lens.

The data was gathered through semi-structured interviews, where I met with either the lead or two lead project members.

The data analysis process was an iterative process that was guided by the theory of Wenger-Trayner and Wenger-Trayner (2020) and their associated Value Creation Framework, as introduced in chapter three.

4.5.1 An overview of the process followed

In considering the data generated from the interviews with participants, this study took a methodical multi levelled approach, guided by the theory. The data was collected, reviewed

and refined, integrated through a cross-referencing system ('tagging'), and uncovering of themes.

This thus summarises the process I followed:

1. Collection

Initially I did a broad stroke ('soft') analysis of the eight interview transcripts, across the six projects, highlighting stand-out points informed by the literature review. These were annotated as researcher insights, in the respective transcription documents.

2. Review and refine

Thereafter I started populating a Microsoft Word™ table, the columns labelled with the Value Creation Framework's value cycles (running vertically). An example of this, is shown in Figure 4.1. Within these columns I placed extracts from the interview transcripts, in the form of quotations, and allocated them to the relevant value cycles. The quotations were arranged in sub-themes that emerged in the conversations, and I called these 'narrative threads'. The narrative threads run horizontally in the table. Where I noted a connection to another VCF cycle, I used arrows to connect these. I called this process 'weaving'. This process was repeated for each project case study and is shown in full in Appendix 6. (This process is expanded on in section 4.5.2).

I proceeded to write up a report for each case study, summarising the interview and my initial interpretations as part of the member checking process (member checking is discussed as a measure to increase validity in 4.3.1). Participants were requested to confirm or amend my interpretation of the interview, and to correct anything that I had misinterpreted. They were also encouraged to provide any further or deeper insights that may arise when reading through the report. There were no requests for changes and no additions.

3. Integrating the data through a cross-referencing system ('tagging')

Once this was completed across all of the case studies, I engaged in a process of what Wenger-Trayner and Wenger-Trayner (2020, p. 226) call "tagging": "But stories will often belong to more than one theme, so a tagging system is a good way to implement categorization". To create the tags, I summarised each quotation into one to three words. The tagging matrix can be found in Appendix 7. These were then all brought together to uncover commonalities between the case studies or in other words, themes.

4. Uncovering themes

At this stage, I then looked across the cases as analysed in the value-creation framework, searching for commonalities or emerging themes within the data. Wenger-Trayner and Wenger-Trayner offer this process for studies where there are larger sets of data, and where the “body of stories become large” (p. 226). Themes may fall along lines that include “thematic content”, “types of activities”, and dimensions of value cycles (ibid.). See Appendix 8 for examples of the themes that emerged.

There is thus a set of researcher insights; a set of narrative threads; a set of value cycles; and set of tags. In making sense of this data, I then engaged with an artist to create an illustration of the case studies, to create a visual representation of the study contained to a one page poster. This was a response to the theory’s reference to “the art of making value visible”, where researchers are encouraged to find “imaginative ways to present the results and making the dataset accessible to intended audiences” (Wenger-Trayner & Wenger-Trayner, 2020, p. 228). This is expanded on in chapter six. This art work was an expensive exercise so only four of the six case-studies were completed. These were presented to the case study participants for their confirmation and validation, and a secondary member checking exercise. The artwork posters resonated with the participants (as relevant to their case study), and the feedback received was encouragingly positive. See Appendices 9 to 12.

4.5.2 VCF analysis framework

This section gives more detail in how the data was woven into the Value Creation Framework (VCF), which is step 2 of the process outlined in the afore section. I created a table per case study, these are included in full in Appendix 6. As noted earlier, the eight VCF value cycles, described in chapter three, were entered as a heading, each to a column. I entered the data (selected quoted excerpts) from the interview transcripts, into the columns, along the narrative threads. I then used arrows between value cycle columns, to show the links that seemed to me to exist between values created, as also postulated by Wenger-Trayner and Wenger-Trayner (2014).

Figure 4.1 shows how the framework was used in this study. This is an excerpt of one of the case studies. The value cycles run vertically, and the narrative threads horizontally. Within

the figure the tags I created in step 3 by summarizing extracts, is also evident in the summarised pink inputs.

The narrative threads and the tagging process hold similarities, but while the narrative threads are specific to the specific case study, the tagging process pulls through across the case studies.



Culture of Care & Agency

The Commons

Oriental Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Transformational Value
<p>"Finding yourself in the broader-landscape" (Wenger-Trayner and Wenger-Trayner, 2020, p113)</p> <p>"... when I arrived at Stanley Kidd (Residence) in April 2017, there was a very basic recycling project that was on the go - people were collecting plastic and paper... So there was already that culture (and) a conscious awareness of the environment, taking care of their environment, and part of that was the recycling aspect" 02:09 <i>Culture</i></p> <p>"COVID definitely disrupted our way of doing things. And it disrupted that culture ... trying to re-establish that culture of recycling... when you lose a culture, it's difficult to bring it back" 32:24 <i>Culture</i></p>	<p>"What is the quality engagement with strategic shareholders?" (Wenger-Trayner and Wenger-Trayner, 2020, p106)</p> <p>"... for me personally, recycling and environment is majorly important. I've been recycling personally in my own capacity for the last 10 years" 03:23 <i>Resonance</i></p>	<p>"What makes it all possible?" (Wenger-Trayner and Wenger-Trayner, 2020, p98)</p> <p>A fit in culture amplifies the practice.</p> <p>"...when I arrived, and I started interacting with the different portfolios that exist, when I interacted with that portfolio, I [asked], What do you guys do? Or like how (do) you guys operate together? They told me and then I was like, cool, I love this. I want to support it. And that's when I said, Okay, how can we make this bigger, more effective? They (then) told me what they were wanting to achieve" 03:49 <i>Responsive ZPD</i></p>	<p>"What is the experience like?" (Wenger-Trayner and Wenger-Trayner, 2020, p79)</p> <p>Affirmation of project ideas</p> <p>support from the "hierarchical structure" in that they</p> <p>Not alone... use of "we" and not you (in this together)</p> <p>and then challenged to better them</p>	<p>"What comes out of it... yet to prove useful?" (Wenger-Trayner and Wenger-Trayner, 2020, p84)</p> <p>"And that's when I said, Okay, how can we make this bigger, more effective? They (then) told me what they were wanting to achieve" 03:39</p>	<p>"What are you learning in the doing?" (Wenger-Trayner and Wenger-Trayner, 2020, p89)</p> <p>"VE "We looked but there was nothing operational (formal recycling system at Rhodes University) at that time. There used to be though, at some point there had been drop off points/ collection points, but that was not functional anymore.</p> <p>(AGENCY) So the guys would fill two or three black bags, and I would take it to Leonard's site downtown (the recycler). I would ask, Can we drop this off? And he said yes. After about two or three months of doing that, it just exploded." 04:26</p>	<p>"What difference does it make? ... seeing the result?" (Wenger-Trayner and Wenger-Trayner, 2020, p94)</p> <p>"After about two or three months of doing that, it just exploded" 04:26 (extreme expansion of the project)</p> <p>"At month three or four the guys were taking (the recycling project) very seriously and I couldn't keep up with the demand. So (I arranged with) Leonard, his big bag (bags) that they use, I set up a space at Res and (arranged) for recycling committee fill the bags, and call (Leonard) to collect when full... We had four or five of those big bags; one for plastics, one for tin, one for glass and one for paper. It got to the point where the recycling committee had to empty out the recycling bins within the res at least, twice a week." 07:56</p> <p>Also, the project stemmed from the res-community, was supported and fostered - resulting the "it just exploded"</p> <p><i>Water recycling agency</i></p>	<p>"Does the difference... have broader effects?" (Wenger-Trayner and Wenger-Trayner, 2020, p118)</p> <p>Compared to G&G interview, where there was an absence of recycling culture and thus no fostering of new students' interest, here the reverse is happening. "It just exploded" implies buy-in from others - further implying that people do intrinsically care and will support if there is a system in place - AND if the culture is fostered.</p>
	<p>"We never involved (house cleaning) in the management (of the recycling project). Essentially, we (let them know) the bins over here are for recycling - this is not your responsibility. I said</p>	<p>VE Struggle in formalising structure (question of system responsiveness?)</p> <p>"Last year, after we had met, and I was reporting back to my committee that</p>		<p>"I think in terms of meeting you for 2020/21 and talking (referring to the recycling pilot conversations) (and) when you had those meetings with the dining and kitchen staff... that instance has reignited</p>			<p>"I did notice (an) occasion I think in 2019 that some of the cleaning staff from other res' started bringing (recyclables) from their res dustbins because none of the other res' were recycling - we were the only ones recycling.</p>

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	<p>(that) this is a students project (and which the students are running - the students) will empty these bins out. It's not your (house cleaning's) responsibility. (But we did invite them to use the system) if you come across plastics, put it over here... we let them know what we were doing, (invited them to support, in a way that) didn't add extra to their workload. We are not their bosses, so just wanted them to be aware of what we were doing and why there was a pile of rubbish" 17:56 <i>Respect Ubuntu</i></p>	<p>we ran the Hall with, people have great buy-in, the students are interested. And I know that with the right structure and with the right buy in from the different areas, housekeeping, catering and the students, I think there would be great benefit in our Hall in terms of the way we've spoken about things. Students are (continuing this) conversation, they still ask when are we getting (recycle) bins... And I keep on saying, I'm waiting to see what what's coming from Carlene and what's happening with the project on that side" 35:40 <i>Expectation</i></p>	<p>student's interest to do something, but in a different way, like think of it more holistically, (to the whole system) housekeeping, kitchen staff, Mandel... and not just Stanley Kidd" 34:08</p>			<p>Some of the cleaners, especially the Si water bottles, if they found a whole lot of damaged (bines - because sometimes they like to keep them, so those they did not keep) I would see them coming there to Stanley Kidd Res and drop them off in the (outside) recycling bags. So in some maybe in very informal way that had seen what we were doing and ... to walk from these res up to ours to come and drop it off there." 19:23 <i>Cleaning practice</i></p>
			<p>"Collaboration is definitely high up on the agenda. On our house comm (Committee) there is an Environmental Rep (Representative), when I arrived he was very, very active (in this role) and really set the culture, nothing) in a big way. He</p>			<p>"the people from that sub-structure ran for environmental rep for the following year, because now they had been part of that substructure, they saw this was interesting, was worth while, was of value" 15:38</p>

Figure 4.1 Excerpt of a VCF analysis as it was used for this study showing the dynamic connections between the value cycles, and also between the narrative threads (based on Wenger-Trayner & Wenger Trayner, 2020)

4.6 Ethics Considerations

Appendix 1 refers to the research ethics application considered and approved by the Chair of the Education Faculty Research Ethics Committee, for this study.

In terms of ethics considerations, I highlight three areas. Firstly, I accept that this study is situated within the nexus of eco-socio and economic crises. By framing it as such for research participants, it may, to individuals who do not have awareness of such, evoke a sense of helplessness as participants reflect on the seriousness of the situation in which humanity finds itself. “Researchers must be conscious and explicit of the risks involved in conducting their research. These risks include risks to the participants, risks to the researcher and risks to the university or other institution” (Rhodes University, 2022, p. 5). Low risk is defined as that lesser or equal to that which is experienced in a stable society (ibid.). Relevant to this study, in a university community of aware staff and students, this is not necessarily a risk beyond the ordinary.

All study participants are already working in sustainability projects, which provides a mechanism to counter these negative emotions, as they are actively working toward the betterment of the nexus crisis. It is also noteworthy that the narrative is intentionally focused on the positive, with terminology such as regenerative sustainability.

Secondly, that this interest has spanned a period of time and as such I have engaged in the past with these study participants. On the one hand it allowed for trusted conversations, but on the other I had to take care not to assume knowledge, or to use my prior relationship with the participants, to put pressure on them to participate against their will. All those who participated in the study, did so very willingly and unanimously waiving anonymity, - this is evident in the invitation process, the consent forms received, the insights shared in the data generation stages, and also in the member checking process where the data that was presented back to the participants – and which was validated by each of the participants, without exception.

Lastly, and as is discussed in the tensions of this study (see chapter seven), this is praxis that I strongly advocate for. This study is thus not without subjective embodiment. To counter this, much deliberation and reflection has been provisioned for, so as best possible, to recognise the inevitable and inherent subjective embodiment, to protect this work against this effect. I

have committed myself in maintaining the requisite rigour and trustworthiness throughout the process of this Master’s level study, and have endeavored to professionally care for and foster the relationships built with this study’s participants over the duration of this study, through honest communication, responsiveness, timely feedback and in the case of one participant, keeping confidential information from public record.

4.7 Study Timeline

An outline of the study time frame is presented in the below table.

Table 4.2 Study Timeline

Period	Activity	Phase of study and status
March - November 2021	Proposal developed and for November 2021 submission to the Rhodes University Education Department Higher Degrees Committee	Concept development Approved (subject to institution permissions) November 2021
November 2021	Institution permissions requested from the University Registrar for student participation, and Human Resources for staff participation in the study conducted on Rhodes University campus.	Permissions received November 2021
December 2021	Project participants invited to participate in this study	Connections established for the study
December 2021 - February 2022	The University annual shutdown and new academic start of year delayed the interview process	
February – April 2022	Interviews/ roundtables with participants across projects 1 to 6	Data generation
April 2022	Data analysis - Level 1: Broad-stroke/ soft analysis in the transcription exercise. - Level 2: Value Creation Framework analysis: weaving the data into the framework (in three sub level processes) Reflection exercises (continued throughout study)	Data analysis and reflection exercises
May 2022	Data analysis Level 3: Prepared summarised overview of data analysis, that would inform the interview reports	Data analysis and also preparing for the member checking process

	Reflection exercises (continued throughout study)	
June 2022	Data analysis level 4: interrogated of the analysis process to date, through the write-up of the value creation framework weaving process, into the beginnings of the dissertation chapters. Reflection exercises (continued throughout study)	Data triangulation Begin dissertation development
July 2022	Data analysis level 5: Presented interview reports of the summarised interviews to the participants to confirm and validate the data, as part of the member checking process. Deeper level insights did not emerge from this process. Engagements with artist to illustrate/create an interpretive visual representation of the projects. Of the six projects only four posters were finalized due to time and financial constraints.	Member checking process Continue dissertation development
July 2022 – study completion	Dissertation development. Reflection exercises (continued throughout study)	Dissertation development

Chapter five

5.1 Introduction to the chapter

This chapter presents the findings related to the six case studies. All of these studies have yielded very rich data but not all of this data can be presented in a dissertation of suitable length for a Master's study. Given that there are six projects analysed as embedded case studies in total, each case is of necessity quite short, allowing for tagging across cases. The data presented per case study focusses on the research questions outlined in chapter three. First, a project description is provided, based on the interview and internet sourced content (this being related news articles or the project website), both to serve as a basis for the reader to interpret the VCF analysis that follows, and to highlight the manner in which the project addressed regenerative sustainability. This description is followed by a summary of the key themes that emerged for the particular case, from its VCF analysis. This addresses the research question regarding social learning.

In explaining the format of the data referencing:

T references the Transcript with the case study interview number, followed by the time stamp of the interview, and (where relevant) the additional recording – in instances of more than one recording.

VM references the Value Creation Framework Analysis, with the case study number, and the number stamp of the horizontal entry, in Appendix 6.

ET references the emerging theme, with the theme number running vertically in Appendix 8.

CS references the case study, with the study number running horizontally in Appendix 8.

5.2 Case study one: E-waste Repurposing Initiative

5.2.1 Project Description

This project was initiated and run by a team of PhD students. The project involved the development of a concept that was entered into an international competition. The case study is thus about the development of a concept; unfortunately the concept itself has not been

implemented (yet) as a project, but as the description will show, much has been learned and gained along the way that is worth analysing. Dr Gauta Matlou is an early-career academic and social entrepreneur. While undertaking his doctoral studies at Rhodes University in 2018, Rhodes University invited scholar applications to the Hult Prize. The Hult Prize is an annual international competition that considers innovative *green* business ideas. Explained on their website, “the Hult Prize challenges young people around the world to solve the planet's most pressing issues through social entrepreneurship” (Hult, 2021, p. 1).

Matlou formed a team with three fellow PhD scholars within Rhodes University's Chemistry Department, and together they submitted their concept of Team E-Smart. The concept proposed to address youth unemployment as well as environmental sustainability by repurposing electronic device waste, creating a new life cycle for these recyclable materials. The project idea was for the PhD scholars to use their knowledge to train youth from the Makhanda community to dismantle devices for either repair, safe recycling, or repurposing for new use.

This entry by the four Chemistry students attained first place at the national stage of the competition and was invited to compete at the regional stage in Nairobi, Kenya in 2018. The students undertook fundraising activities to allow them to go in person to present their concept in Kenya, and here too they attained first place, and were invited to the final international stage of the competition, taking place in London, United Kingdom later that year. Again, fundraising activities ensued, during which the students appealed to Rhodes University and the local community for support.

The project's concept of repurposing electronic waste whilst creating employment and upskilling opportunities for local unemployed youth was well received, but was unsuccessful in this final leg of the competition. It did however lead to Matlou being invited to participate in the Hult-Accelerator programme the following year in 2019.

Nationally, the project also garnered interest by potential impact investors. Funding conversations were unfortunately scuppered by the Covid-19 pandemic in 2020-2021.

The team has since dissolved, but Matlou continues to pursue tech-waste opportunities, albeit in another province due to him taking up a position at the University of Johannesburg, following his graduation from Rhodes.



Figure 5.1 E-Waste team: Gauta Matlou, Nobuhle Ndebele, Reitumetse Nkhahle and Lindokuhle Nene. Photo credit: Rhodes University

The sustainability theory that this project most aligns to is that of circular economy theory (2.1.5), where the material ('technical nutrients') is channeled up into a new life cycle, so that these 'wasted' resources are diverted from the waste stream, and upcycled through the process of either repair, repurposing or recycling (Ellen Arthur Foundation, 2013; Kneese, 1988; Raworth, 2017). Another sustainability theory to which the E-Waste project aligns, is the 'Creating Shared Value' (CSV) model (refer to 2.1.3) developed by Porter and Kramer (2010). Within this concept, profit is made through addressing an environmental concern in a manner that holds positive social impact.

5.2.2 Social Learning and the Value Creation Framework

Within the context of this case study, one accepts that learning has taken place. Examples of this learning would be in the development of the concept where the students would have had to learn in-depth around electronic-waste and its possible solutions; how to develop and present a concept; about the national, continental and international competition spaces and how to successfully navigate them; navigating the Rhodes University space; and working together as a team.

However, I focus on two data points that emerge strongly in this study, these being: the leveraging that takes place and the role it plays in progressing learning and learning opportunity(ies); and the catalysing force that underpins this act of leveraging (and the

development-of-the-ability to leverage).

Leveraging as a mechanism that progresses learning

In the interview Matlou speaks to the academy's reputational equity, and how, through affiliation to Rhodes University, this created avenues and opportunities for the students, which they used to leverage progression of the E-Waste project. He says:

Are you applying as a civilian, or are you applying as an academic under Rhodes University? (T1.12:55)

and

So getting into Rhodes became a space where it allowed such things [pursuing of interests] (T1.31:40)

The data presented here shows the dynamic but also continuous nature of learning; first as leveraging that progresses learning, secondly as leveraging that progresses the project, and thirdly the further learning opportunity that results from the progression of the project.

Leveraging that progresses learning: Within the value cycles (see Figure 5.2, an excerpt from Appendix 6: VM1.4) the first quote is an example of *strategic* value but with links to *potential* value, and the later quote is an example of an *enabling* value. The learning identified here is the development of the ability to leverage this combination of *enabling* and *strategic* values, to create the opportunity). This ability (the learning) arose through the *potential* that was apparent to the participants -this is the value that they saw in the project concept.

Orientating Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Reframed/ Transformational Value	Code
	"Are you applying as a civilian, or are you applying as an academic under Rhodes University?" 12:55	"...So getting into Rhodes became a space where it allowed such things" 31:40		Opened up connections and networking opportunity with CSIR & DST. It also provided application to the Fujitsu Prize.				VM1.4

Figure 5.2: VCF analysis showing leveraging off of reputational equity in the E-Waste case study, and the opportunity(ies) reputational equity can create (excerpt from Appendix6: VM1.4)

Leveraging that progresses the project: Matlou leveraged off the Chemistry Departmental

reputational equity, as seen in the fund raising activities. He first received the departmental support. The Chemistry Department's act of endorsing (supporting) the project *legitimised* the project in the eyes of the participants themselves, but also the institution, and Matlou and team were thus able to leverage off this legitimization, and approach other divisions, allowing for a deeper access into the university and its systems. In so doing the participants progressed the project, through successfully raising the funds needed in order to attend and present at the competition stages (see Figure 5.3, an excerpt from Appendix 6: VM1.7). The *realised* value, being the opportunity in partaking and presenting at the regional stage of the competition, then provides *potential* value for either progression to the next stage of the competition, and/or deeper networking opportunity.

Orientating Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Reframed/Transformational Value	Code
	Chemistry Department's reputational equity	The Chemistry Department legitimized the group's project (endorsing the project) by raising the first R9k/(52k) for the travel costs to present at the regional level "...I think the first R9000 we got it from students, and members of the Chemistry department" 20:06	Legitimized the project for other departments and divisions		"we are able to know that I can get funding from this institution...if the project is aligned to them... but they will need a proposal" 14:46 Instinctively leaning towards leveraging systems	Presented at the regionals in Kenya, which resulted in further exposure and networking opportunity	Project led to awareness and influenced practices within RU community (academics and support divisions) : "we have brought this thing from the dark into the light"	VM1.7

Figure 5.3: VCF analysis showing leveraging off reputational equity legitimization to progress the project (excerpt from Appendix6: VM1)

Leveraging that results in opportunity for further learning: Each time the E-Waste concept and competition entry faced a hurdle (the continuous navigation of the administration landscape), Matlou leveraged reputational equity to enable progression, and thus facilitated his and the team's further learning opportunity.

This learning is seen in the following quote:

we are [now] able to know that I can get funding from this institution. [We understand that] if the project is aligned to them, I can get funding, but they will need a proposal. (T1.14:46)

But what lay beneath this leveraging (and the development of this ability)? What is driving the agency in this leveraging process (and thus the learning). In other words, what is the motivation that drives the agency?

Caring to make a difference and meaning making

Within the interview Matlou uses terminology that shows a strong *personal commitment* to environmental sustainability and the social commons, and shows that the motivation underpinning the project is the *meaning* it holds for him personally. Examples of this include:

We [as students and academics] are within this [electronic waste] problem. (T1.3:27)

Whatever I am researching, it must go to the community. (T1.32:33)

I have this dream of wanting to solve a problem that affects the community.
(T1.14:46)

The VCF value cycle in which each of these quotations are placed is the *orientating* value cycle. This is the cycle that, according to Wenger-Trayner and Wenger-Trayner (2020), looks at the broader landscape in which actors find themselves, and which inherently influences one's engagement with and within the world. The students, led by Motlou, brought with them into the project their own personal motivation, an *orientating* value, that propelled the development of the E-Waste concept, the competition entry, and provided the energy to push through their struggles to raise the funding to participate (all of which were opportunities for learning). This is seen in Figure 5.4, and excerpt from Appendix 6: VM1.2)

Orientating Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Reframed/ Transformational Value	Code
Ubuntu – all conversation is “we”, “we are within this problem” 3:27 Stewardship – pp & planet (toxicity to people & planet) Motivation: meaningful impact! “whatever I am researching, it must go to the community” 32:33 Self-worth derived through service to others “I have this dream of wanting to solve a problem that affects the community” 14:46							Environment is seemingly seen through the lens of the community – it is not a separated silo'ed thought process	VM1.2

Figure 5.4 :VCF analysis showing the orientating value that seemingly catalyses the agency (excerpt from Appendix 6: VM1.2)

The VCF analysis also offered insight to the potential that exists should the concept progress to implementation, and the continuous future learning that this would offer – as is seen in the looping of the arrow between the cycles moving back and forth on a continuum.

The *orientating* value in the above illustration thus provides insight to the motivation which catalysed the action (agency) when the opportunity presented itself (in the form of the Hult Prize), and by extension facilitated the leveraging – which serves as the starting point for opportunity for learning.

An instance of value absence

Matlou describes an instance of absence of value, and this occurs in his interactions with the university’s administrative systems, in which he had limited manoeuvrability. Within the VCF analysis, as illustrated in Figure 5.5, one sees his engagement with the administrative systems, in the first instance, is in his request for transport coordination support, but again at the point of project implementation, where he required office space to implement the project: “the system can actually hinder you from achieving your goals” (Matlou, E-Waste project, T1.1:01:56).

Orientating Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Reframed/ Transformational Value	Code
	-VE alludes to friction or misalignment in support structures, (but this may hold potential if it is changed to a positive value eg, Policy development in terms of these types of projects)	Shuttle transfer assistance was eventually provided, but was a struggle, & this showed possible conflict within supporting divisions, in the contradicting messages received -VE access to physical space hindered implementation	Experience of despair and frustration (lost opportunity)	-VE lost opportunity in bringing together the network of diverse skills due to no-space access	-VE “the system can actually hinder you from achieving your goal” 1:01:56		If reversed and becomes responsive, then the system can play an amplifying role in such projects	VM1.1

Figure 5.5: VCF analysis showing the absence of value, in engaging with the university administrative systems, an excerpt from Appendix 6: VM1.1)

The analysis shows that the *strategic* and *enabling* value combination holds influence over progressing an action, it shows the lost opportunity, but it also shows that if reconsidered, there would be an opportunity for continuous learning.

Keywords that will be further explored in chapter six:

meaning making; social commons¹

¹ Additional themes emerged in this case study which will be discussed in chapter six. See Appendix 8:CS1.

5.3 Case study two: Nambu Animal Protein Feed

5.3.1 Project Description

This project was initiated and run by a PhD student. It is ongoing.

The Nambu Animal Protein Feed Project involves a business using the nature-based processes of breeding and feeding Black Soldier Fly (*Hermetia Illucens*) larvae on kitchen waste, and then using the larvae as animal (e.g. chicken) feed. The small business, run by Lowell Scarr, has its origins in his PhD study at Rhodes University, where he has been supported by a grant from Allan Grey Orbis Foundation. His PhD study is still ongoing. Scarr's formal education is a combination of economics and philosophy which is married with an eco-conscious upbringing. His small emerging business holds large scale potential and challenges the status-quo of the agricultural system, by harnessing the value of readily available insects (Black Soldier Fly larvae) as an inexpensive, nature-based source of protein and thus pioneering an alternative for conventional agri-feed.

This Nambu Group business addresses the environmental sustainability issue of food-excess and wastage (from local restaurants and university dining halls) to produce a nature-friendly animal protein feed. He sells the live and dried larvae to farmers and "feed mills", and the current end-product being pet feed to Veterinary Clinics, and, in the near future, will include chicken farming for human consumption.

This project employs four staff (see figure 5.6) in addition to Scarr as owner. It has been designed to be 'labour-absorbing' and according to Scarr, this was the reason the project has attracted impact investment support. Since its small beginnings on Rhodes campus, the project has expanded into two additional cities within the Eastern Cape Province of South Africa, with a third city identified for the near future. The project has also been designed to be localised (as is best possible) so as to minimize the harmful footprint caused by large scale supply chains processes.



Figure 5.6: Nambu Group team (Photo credit: Nambu Group)

The sustainability theory that this project most aligns to is that of circular economy theory (Ellen Arthur Foundation, 2013; Kneese, 1988; Raworth, 2017 and see 2.1.5). Rather than discarding the food waste to landfill, the biological nutrient (food waste) is channeled up thus capturing value in each stage of decomposition, and creating new life cycle(s). Another sustainability theory that this project is aligned to, is the Creating Shared Value model (Porter & Kramer, 2010 and see 2.1.3). Within this concept profit is made through mitigating an environmental concern - being food composition and the global greenhouse gas (methane) emissions this contributes to - and creating positive social impact.

5.3.2 Social Learning and the Value Creation Framework

Voice, agency and the curriculum

As in Case Study One, the E-Waste project, the reputational equity of the university is more so evident. The Nambu project was born through the combination Rhodes University's reputational equity, the student's tertiary academic progression (journey of learning), with the underpinning of his informed *orientating* influence. This is explained as follows.

The *orientating* value is seen in the student's eco-conscious perspective (worldview), that according to him, was fostered in his upbringing, and which influenced his *voice*. The starting point in the learning progression for Scarr is thus *voice*.

My master study was within agricultural economics, but it had a strong focus on environmental economics as well, I come from an environmental background - my dad is in the environmental sector, and my mom in the agricultural sector. I wanted to go into business, to do something within the agricultural space in particular, because I find that [sector] to be one of the most problematic industries in many ways. It is the base of our entire economy. (T2.05:17)

This influencing voice was nurtured through his tertiary studies. Scarr was given opportunity to progress from *exercising voice* to *practicing agency*. This took place initially through the university's offering of post graduate studies, but culminated in the PhD study and launch of the Nambu project.

Scarr's voice and agency was legitimized through the University's recognition of the PhD study, as well as through the onboarding of an external sector stakeholder, namely

Agricultural Research Council (ARC), who took interest in Scarr’s proposed new way of farming, and which resulted in the co-supervision of this study, along with two departments, within Rhodes University, being Economics and Philosophy.

I fall across three different departments. I'm registered formally in the Economics department, Philosophy department, and I've got a supervisor in each and then through the Agricultural Research Council, I've got an agronomist, essentially, who is like an agricultural scientist, who then comes in from [the] agricultural side of it.
(Scarr, T2.00:02)

This method of farming is not curriculum based, it is exploratory. The university PhD offering holds an innovative element to it, in that it is praxis based and not curriculum based. Here praxis is explained as where theory and practice speak back into each other. Curriculum in this context flows back from the practice into the theory.

Drawing this into the value cycles:

As seen in Figure 5.7 (an excerpt from Appendix 6:VM2.5), the university provided the platform for Scarr’s current PhD studies (*enabling* value) which legitimized his voice (*orientating* value), and in doing so created opportunity for him to exercise and practice agency and ‘learning in the doing’ (*applied* value).

The partnership between Rhodes University and ARC created a space to test this new form of farming, through the PhD study. Although not curriculum based, it is creating possible future curricula. This study therefore holds potential for *transformative* value, in the sharing of the learnings within the larger field of agricultural practices and studies, on a continuum.

Orientating Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Reframed/ Transformational Value	Code
“...I come from an environmental background...” 05:17	<p>Reputational value of RU in connecting with Agricultural Research Council (external entity)</p> <p>Opportunity to partner between inter-departments: Economics & Philosophy institutional responsibility</p>	<p>“(The PhD study) is an auto ethnographic study, quite different for the economics discipline, but basically writing my own experience, and comparing that to the experience of other people/enterprise...looking particularly at the support environment for early stage rural entrepreneurs. I fall across three different departments... economics department... philosophy department... and through Agricultural Research Council” 00:22-></p>	Undertaking the study			<p>“We do quite a lot of training households or small holdings, small scale chicken farmers (at the Grahamstown site)” 41:59-></p> <p>Social commons</p>	<p>Value this holds in growing the ‘field’ Social commons</p> <p>(New knowledge holds transformative potential</p>	VM2.5

Figure 5.7: VCF analysis showing how the combination of strategic and enabling value holds potential in unlocking transformational value on continuum (excerpt from Appendix 6: VM2.5)

As mentioned before, this is an ongoing PhD study. Evidence of Scarr's learning now follow.

A *whole-systems* perspective

Within this interview, Scarr evidenced a 'whole-systems' perspective, which links macro- and micro-economics, business practices and environmental impacts. He does this for example when he explained that while the citrus industry in South Africa, is a huge earner of foreign revenue, it has a negative environmental sustainability impact because, as he puts it, "essentially we are exporting water from a water scarce country – if you look at the water consumption that is used to produce a bag of oranges" (T2.08:03).

This is evidence of the progression of his learning. The combination of economics, philosophy and agriculture holds key to his macro perspective, where he links questions around social justice, as well as an environmental concern of what he describes as (in)accurate costings in this unquestioned business activity (being the environmental cost of the water used in producing oranges, which is not factored into market pricing). In this same discussion thread he speaks of recycling the Rand in terms of the impact of local circulation of money and the resilience this creates in the local economy (T2.11:36). He also speaks to the cost of large supply chain footprints on global scales, and explains the socio and eco exploitation in ideas such as economy of scale (T2.06:37).

In speaking to the agricultural sector, Scarr says, "the majority of practices we use are unsustainable, exploitative, non-regenerative, and do not speak to the future that we need to be creating" (T205:17).

Throughout these excerpts of narrative, Scarr shows how his learning has progressed so that he holds a whole-systems perspective, but he further moves toward an abstract concept where he intrinsically symbiotically interlinks the eco and socio.

An instance of absent value

In the conversation with Lowell, there emerged an instance of *enabling* value that was in the negative or absent. According to Scarr, "in practice [I] experienced 'inertia' in the [administrative] systems" and "[Rhodes University] are not geared for these [types of enquiries or requests to collaborate]" (T2.19:50).

In the aforementioned VCF illustration (Figure 5.7), the VCF analysis process showed positive values across seven of the eight cycles in terms of fostering new knowledge. In contrast, the illustration now presented in Figure 5.8 shows absent value (-VE) across the cycles, this is specific to engaging in the university administrative systems.


Orientating Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Reframed/ Transformational Value	Code
<p>"There's this huge downward pressure on (Rhodes University and it's) financial resources, (this project has) a third income stream (potential for the university)" 19:50-></p> <p>Macro lens</p>	<p>=VE "Rhodes (Uni) from a business and a network perspective, did very little. "(with) an entrepreneur coming out of your (Rhodes) university (&) as one of your students" 19:50-></p>	<p>-VE difficult in access to:</p> <ul style="list-style-type: none"> * kitchen food waste (through the formal administrative systems) * research relationships & collaborations/ IP negotiations 19:50-> <p>System inertia Navigating landscapes Absence</p>	<p>Experience of frustration</p>	<p>"(this project has) a third income stream (potential for the university)" 19:50-></p>	<p>Experienced "inertia" in the (administrative) systems 19:50-></p> <p>"(Rhodes University) are not geared for these (types of enquiries or requests to collaborate)" 19:50-></p> 		<p>If addressed and reversed – a responsive system can play an amplifying role in such projects</p>	<p>VM2.6</p>

Figure 5.8: VCF analysis showing negative (or absent) value when engaging administrative systems (excerpt from Appendix 6: VM2.6)

In the conversation with Scarr, there emerged a secondary support system that took the place of the absent value, in the form of the Allan Grey Orbis Foundation, and this thus reversed the value flow to the positive. This parallel support system was fundamental in the realization of this Nambu project, but it was outside of the university systems and took the form of a third party. It allowed the project to grow in two metropolitan cities.

Keywords that will be further explored in chapter six:

*Whole systems; convergence of socio and eco*²

5.4 Case study three: Food for Us

5.4.1 Project Description

This project was initiated and run by students and staff in a University unit dedicated to environmental learning research.

With a strong focus on social learning in the context of excess farm produce, Food for Us was funded in 2017 through the United Nations Environmental Programme (UNEP) within the One

² Additional themes emerged in this case study which will be discussed in chapter six. See Appendix 8:CS2.

Planet Network. Led by Rhodes University's Environmental Learning Research Centre (ELRC), which raised and managed the funding, this project's focus was to minimise farm food wastage through a mobile application (App) connecting farmers to each other and community groups (such as the Nkombu Youth Cooperative) as well as to retail channels. Food security is a major challenge with an estimation of just under 50% of the population considered "nutritionally poor" (Rhodes University, 2017b), whilst farm output is sufficient to meet this need. In response, a multi-stakeholder conversation was facilitated with the aims of creating avenues connecting farm grown produce excess (that which would be wasted for reasons from seller grading considerations to excess single produce items and more), channeling this for nutritional consumption.



Figure 5.9 Dr Tichaona Pesanayi (late) participating in the project. Photo credit: ELRC, Rhodes University



Figure 5.10 Sarah Durr van Lingen who coordinated the Eastern Cape project, with project shareholders. Photo credit: ELRC, Rhodes University. Sarah was mentored by late Dr Tichaona Pesanayi (figure 5.9).

The project involved two geographical areas in South African geographical, being the Eastern Cape Province and the Western Cape Province. For my study I interviewed Sarah Durr van Lingen, a former Masters student at Rhodes University (ELRC), who coordinated the Eastern Cape Project. Now completed, there were interesting examples of learning that emerged in her study, such as inter-generational knowledge transfer, and community role players developing new identities in response to their learnings – such as providing training and mentoring support to the community. These findings are specific to Durr van Lingen's study (Durr, 2019).

The Nkombu Youth Cooperative really grew after being involved [in Food for Us] ... [they] developed a really important space... [in] being connected to older farmers and learning new farming techniques, and then they took it further to other youth groups who they then started to train, so they've now gone into a training space. (Durr van Lingen, T3.23:39, VM3.3)

Whilst aligned to Circular Economy (2.1.5) in terms of sustainability theory, this project also speaks to that which Raworth (2017) describes as 'Doughnut Economics' (see 2.1.6 in chapter two), where the project's primary focus is on the social development foundation undershoot (or shortfalls), whilst being mindful of the current planetary boundary overshoot crisis. The social foundation undershoot in this case is the nutritionally poor who need greater access to affordable food. The planetary overshoot speaks to the carrying capacity of the planet and how we are over extending what the planet can provide through agricultural production that produces food that is often wasted, and in the process often depleting soils and using water and habitats of other species. The project then looks to better usage of what we ask of the planet to produce (by putting producers directly in touch with consumers) and to better meet the unmet needs of the social commons (cutting the cost of healthy food). Another sustainability theory that is well aligned to the project is that of the Sustainable Development Goals (SDG), see 2.1.7, and within these SDGs, specifically to the goals of local economic development; poverty alleviation; and partnership development- the partnerships in this case being between the university, farmers, App developers, and consumers within the local communities.

5.4.2 Social Learning and the Value Creation Framework

In terms of learning, while the project's intended outcomes was to develop a new App through which to connect consumers and producers to each other, this did not work out, because it was difficult for project participants to use this specially designed App. They did however make use of an alternate app, Whatsapp™, and this alternative then became the preferred medium of communication between these stakeholders. This is an example of reframing value. To elaborate, while the participants did make use of a digital platform, it was not the one that was designed and envisioned in the planning stages among the collective.

Rather, they sourced an alternative- which for them held practical value. This was an expression of their communal voice.

As already mentioned, Durr van Lingen explained that her study found that value was created by the younger project participants through the sharing of their knowledge of mobile devices and the social media tools available thereon, with the older generation of farmers; and that a new identity was formed by the younger farmers who developed a training space as a service offering within the community.

Where these were findings in Durr van Lingen's study, my study focused more so to her experience of the project and any other unseen enabling and constraining factors that she felt impacted this social learning project's outcome. Included in this, is the deeper reach that Durr van Lingen's project had. This was a result of past engagements within the same community, and that which still existed because the value it held for the community, and from which a base of trust-building was created, between the centre (ELRC) and the community and the social collective. In addition, the interview with van Durr Lingen touched on *strategic* value that was available to this project, and that which created the impression of an amplifying mechanism for the project. This is discussed next.

Enabling systems

In analysing the transcript of the interview I noted an interplay between the VCF value cycles, as Durr van Lingen spoke to the project's support systems and their responsivity (as can be seen in Appendix 6: VM3.6).

I also noted *strategic* value where Durr van Lingen spoke to the fact that she was former Masters student, and contracted by the ELRC, had access to Rhodes staff and their technical know-how, as well as access to the university's administrative system, which assisted with logistics such as travel administration, data management support for the project participants, and financial and project management support for the coordinators. See Figure 5.11 which is an excerpt from Appendix 6: VM3.6, to illustrate this.

Orientating Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Reframed/ Transformational Value	Code
	<p>The ELRC managed the project from within Rhodes University system. The planning was designed to allow for flexibility and unplanned expenses.</p> <p>"which was more of a reactive component that we were dealing with - I think there had been budget set aside for those sorts of logistics which was then drawn upon from the Rhodes University admin staff who assisted with that" 22:50.</p> <p>Anticipatory system</p>	<p>"when one looked at the (distributing) the data and things like that - which was more of a reactive component that we were dealing with - I think there had been budget set aside for those sorts of logistics which was then drawn upon from the Rhodes University admin staff who assisted with that. So it was the (ELRC) team that bought the bundles and then we sent them out to the participants so that they could access the (required) data, and make more data available" 22:50.</p> <p>System responsibility</p>			<p>"We did have data issues, but we tried to address those through giving out data bundles to the participants" 21:48.</p> <p>Anticipatory and responsive system</p>			VM3.6

Figure 5.11: VCF analysis showing how a responsive project-support system holds potential as a mechanism to amplify or effect the project outcomes, excerpt from Appendix 6: VM3.6

This access to *strategic* value that the ELRC and the university more broadly provided was translated in to *enabling* value, as is evident Durr van Lingen’s comment: “... there had been budget set aside for those sorts of logistics which was then drawn upon [by] the Rhodes University admin staff who assisted with that” (T3.22:50).

This enabling value then supported the project, providing the platform from which the project participants could engage and participate in the project and the project research. Without access to this responsive system support, the project would have encountered challenges that would have inhibited the project’s aims and goals and the learning opportunity.

Keywords that will be further explored in chapter six: *Enabling systems*³

³ Additional themes emerged in this case study which will be discussed in chapter six. See Appendix 8:CS3.

5.5 Case study four: Eyethu Project

5.5.1 Project Description

This project was initiated and run by the Centre for Social Development (CSD), which is based at Rhodes University. CSD developed the project in discussion, Eyethu, which is focused on repurposing recyclables for teacher training aids. This project is ongoing, and will therefore hereafter be referred to as a programme. It was a response to the shortage of teaching resources available to teachers at Early Childhood Development Centres. The Eyethu programme trains educators in the repurposing of recyclables into teaching aids.

The interview was held with two CSD staff members, Vatiswa Joni and Nollie Shelle. I also read a CSD report for more background, and learned that: “The centre has trained over 700 ECD practitioners, reaching nearly 20,000 children and 40,000 parents. Foundation phase teachers are also trained in the waste resource training programme, in the Eastern and Northern Cape teaching programmes” (Rhodes University, 2017a). Eyethu’s success is in this document attributed to the strong focus on the community support structures that ‘hold’ the child, a whole-systems approach. The Eyethu programme includes ‘Play to Lean’ workshops that provide upskilling training to care givers, and included in this programme are wordless-picture-books created from discarded materials, which is a fun and empowering aid for illiterate caregivers to participate in children’s education.

Children and educators are encouraged to collect recyclable materials from their own homes, inspiring a new way of ‘seeing’ the potential for recyclables to have a new purpose and use.

The teaching programme included an initial classroom visit to a private school that had implemented a similar programme where everyday interactive class displays shaped from recycled and repurposed materials were exhibited in the classroom, examples include a weather chart and learner rotational duty list.

The teacher development programme developed to involve theme-specific topics which had strong focus to, in Shelle’s words, “counting, language, colours, (vocabulary development) and life-skills. So that they could be taken to the schools”.

The sustainability theory that this project best aligns to is that of Doughnut Economics (Raworth, 2017 and see 2.1.6), where the project's primary focus is to the social foundation undershoot, whilst considering the planetary boundary overshoot that exists. The social foundation undershoot addresses the need for teacher training resources in low income communities, thus also addressing SDG 4, Access to quality education, whilst seeing the harmful plastics pollution buildup in communities and water sources (see 2.1.7). The project also aligns well with Circular Economy theory (refer to 2.1.5), in upcycling and repurposing recyclables diverted from the landfill streams, for an alternate life cycle. These concepts are explained in chapter two.



Figure 5.12 Eyethu project in action, teachers encouraging children to create art using recycled materials from their homes

5.5.2 Social Learning and the Value Creation Framework

Challenging curated realities

When analysing the transcript of the roundtable interview with Joni and Shelle, I noted that there is a reframing-of-value perspective (see Appendix 6: VM4.3). The community that this project serves has limited financial resources, this means that community members, many of whom are illiterate, must constantly (re-)prioritize financial resources against the most basic of needs, of which often remain unmet. This constant state of necessity results in ingenuity and reframing of value, in that where one could view discarded recyclables as dirt and waste, the project members see potential value and opportunity. They divert recyclables from the waste stream within own homes, and use the materials, repurposing them as

teacher training aids, or creative outlets for children to make their own toys to play with, or parent-child educational bonding aids. As explained to me,

So we give magazines [so] they [care-givers] can collect some pictures relevant to what they are doing – [topics include] food they love, their families, their homes and other stuff. We are always encouraging the parents even if the parent is illiterate, but the parent can see the pictures ... then [parent and child] will talk more about it. (Shelle, T4.12.27)

There is harmony between the project members, as evidenced in the completing of each other's sentences, Joni leads and Shelle completes the statement:

If you share ideas, we can make it happen. (Joni, T4.19:31)

Which means poverty can run away if we are together doing this. (Shelle, T4.19:31)

This harmony is possibly inspired by many years of working together on a joint purpose within the centre and its structures (an example of *strategic* value) – that of a deep care for the community - the meaning and meaningfulness that drives this project. There is a deep respect for community and the social commons that influences and drives this project, and this is rooted within the *orientating* value cycle - the landscape in which one finds oneself, and is influenced by. It is however put into action, and thus connects to the *applied* value cycle, where one learns by doing: an example being the CSD staff teaching care-givers to make aids from recyclables. This extends to the *realised* value cycle, where a result is seen: when the care-givers make use of the learning by creating and using teaching aids from recyclables. The value extends even deeper into the cycles, moving into the *transformative* value sphere - in terms of the potential impact for the greater social commons. This is explained by Joni and Shelle as follows: the project creates an environment in which an illiterate care-giver is valued and empowered. He/she is drawn into the collective community partnership that oversees and progresses the child's educational journey. This example holds transformational impact potential, which is difficult to adequately measure, and that greatly exceeds traditional metrics. Figure 5.13 illustrates this, from the VCF analysis excerpt in Appendix 6: VM4.3.

Orientating Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Reframed/ Transformational Value	Code
<p>"Eyethu is an isiXhosa (word) and its (direct) interpretation is 'our' or 'ours'. We are saying (this is) for 'everyone'" 01:22</p> <p>Community/ Ubuntu</p>	<p>Culture and ethos of the centre "In this (Eyethu) project I (Nollie) work closely with Vatiswa. The Eyethu project is her baby, but I work closely with the parents when it comes to (supporting the) reading, writing, the toy library and all of that." 10:29-></p> <p>'togetherness' - although the projects connect they are separate but Sis-Nollie is present in a key figure, and takes the lead contributor role in this Eyethu interview</p> <p>System ubuntu: Responsiveness</p>	<p>Appreciating that meaningful relationships is key to the project's survival, and is thus a consciously focus goal of the project team, and which the centre collectively works together to achieve. "Working with the communities is not easy - you need build and build until they trust you" 51:45</p> <p>Meaningful relations: Trust</p>		<p>"Because now we are not talking only about Eyethu (project), we are talking about the parents - so that they know what is taking place at schools- so that if the child is from school and talking about something (then) the parent needs to know what is taking place at school. So that the parent is able to help her child." 09:39</p> <p>Strong emphasis on the 'whole' system. Not silo 'ed/ compartmentalised</p> <p>Holistic whole-system Community Empowerment</p>	<p>"And when the child is asking for waste for school, the parent (understands) why this child carrying waste. Because at the end of the day, the word waste to us it means something that you need to throw away..." Seeing</p>	<p>"We work together to help the parents and the practitioners to have a better understanding of what we are talking about... With the parents, we teach them how to use waste. They can make books out of waste material, especially those who cannot read and write" 10:29</p> <p>"...they (parents) make wordless books and stories to read for their children. Just pictures... (So the child sees a picture of an) apple - so you can talk about the apple - the shape, the colour, the texture and the taste... It is language development. And when we are talking about health" 12:27></p> <p>Holistic approach... Empowering parents</p>	<p>"So we give magazines (so) they can collect some pictures relevant to what they are doing - (topics include) food they love, their families, their homes and other stuff. We are always encouraging the parents even if the parent is illiterate, but the parent can see the pictures... then (parent and child) will talk more about it' 12:27</p> <p>Empowering social systems</p>	VM4.3

Figure 5.13: VCF analysis showing deep community investment in order to engage in problem solving activities and reframe value of recyclables (excerpt from Appendix 6: VM4.3)

This project challenges how value is framed among the social collective - in that 'waste' is reframed to that of 'discarded recyclables', so that this may be upcycled and reinvented into teacher training aides. But it also challenges a reframing in from whom value can be sought - illiterate care-givers contributing to a child's education. It effectively challenges what I term 'curated realities' - these being realities that we have been born into and accept as such, before necessity makes us question these realities or norm(s). Shelle says "we want to build everyone's way of thinking not to look down when we are talking about waste" (T4. 22:44).

This project speaks to new ways of seeing, both the object and the human, and in doing so is an act of honouring the greater social commons.

Keywords that will be further explored in chapter six:

*Challenging curated realities; new ways of seeing; and honouring the social commons.*⁴

⁴ Additional themes emerged in this case study which will be discussed in chapter six. See Appendix 8:CS4.

5.6 Case study five: Stanley Kidd Residence Recycling Project

5.6.1 Project Description

This project was initiated and run by a student team with the assistance and support of a University residence hall warden. For my study I interviewed the Residence Warden, Jonathan Hellemann.

Situated within the Rhodes University Campus residence system, the Stanley Kidd Residence (SK Res) had run a recycling project from 2014 to 2020, a period of no fewer than 7 years, independently from the greater university campus. This residence of 50 students diverted recyclable waste from the waste stream within the residence and channeled this to a local recycling business. While they attained awards for other contributions to university life, they never managed to qualify for consideration to the University's Environmental Awards.

The Covid-19 pandemic disrupted the project. In the discussions to restart the recycling project, Hellemann explains that the students aimed for a campus wide recycling system, that was not limited to their residence. The Nelson Mandela Dining Hall was proposed as the pilot to the campus-wide recycling project. The Nelson Mandela Dininghall services 8 residences, comprising of Stanley Kidd Residence, Adelaide Thambo Residence, Helen Joseph Residence, and Guy Butler Residence, with a collective reach of 270 students.



Figure 5.14 Stanley Kidd 2016 residence (award winners)

Formalising a campus wide recycling project has its challenges and is a long standing matter for the university. The challenges such an activity faces include the student to ground-staff ratio, the physical layout of the campus, and the competing priorities of the University – from the local municipality having being placed under administration, the financial sustainability of the university, the dire socio economic circumstances and high youth unemployment rate in the province, the regional water crisis, and a recent memory of student protests and the damage caused to property.



Figure 5.15 Jonathan Hellemann, Residence Warden

Nonetheless, the stakeholders partaking in the renewed conversations around recycling include the environmental representation of the student body, the NM Dining Hall team, the ground-staff team, the University’s Environmental Committee and University Management. This is still a ‘work in progress’ project.

This project speaks to Sustainability in Higher Education (Sterling, 2018), see 2.1.9. Sterling asks “what measure are today’s institutions of higher education capable of moving beyond enabling first-order learning about sustainability-related issues, to integrating the search for sustainable solutions into all levels of their organisational culture?” (Sterling et al., 2018, p.328). The Stanley Kidd residence, within the university systems, and under the leadership of their residence warden, engage with socio and enviro questions amongst themselves. The residence conversations include, for example, repurposing recycled material into benches needed in the designated communal areas on University campus - in doing this an economic offering is created whilst partnering with local business - all with the intention of keeping the supply chains and market local, and thereby i) reducing the footprint in up-and downward supply chain processes, and ii) recycling the power of R1 (local currency) within the regional community. (The concept of recycling currency and the multiplier effect this holds within the local communities was also raised in case study 5.3, in the conversation with Lowell Scarr of the Nambu Project (Scarr, T2.11.36).

Among the other sustainability concepts that this case study aligns to, as discussed in chapter two, another more obvious alignment, is that of Circular Economy (CE), where materials are diverted from landfill streams, for a new alternate life cycle (see 2.1.5.), the SDGs specifically

to the goals of education for sustainable development (quality education); local economic development; poverty alleviation; and partnership development (see 2.1.7)

5.6.2 Social Learning and the Value Creation Framework

Voice, Agency and the (hidden) Curriculum

According to Hall Warden, Hellemann,

... when I arrived at Stanley Kidd [Residence] ... there was already that culture [and] a conscious awareness of the environment... (T7.02:09)

And that's when I said, 'Okay, how can we make this bigger or how can we make it better, more effective?' They [then] told me what they were wanting to achieve [in terms of their recycling goals for their residence]. (T7.03:39)

After about two or three months of doing [formalising the recycling system within the residence], [the project] just exploded. (T7.04:26)

The above extracts show the power of the act of legitimization - where a person who is formally recognised within a system affirms the communal agency (in this case the students' informal recycling project) and assists them in creating the space (or formalising the space) to exercise greater agency (in that more residents supported the recycling project to the point that it was difficult to keep up with the volumes collected, and moving these recyclables off campus). Drawing this into the VCF, there is a harmonious coming together of *orientating* + *enabling* + *strategic* value cycles.

Helleman acknowledged and affirmed an *orientating* value (the broader landscape in which one finds themselves, and are influenced by) - being the existing culture and an awareness of the ecological environment - and legitimized the agency that stemmed from this *orientating* value, in the form of the informal recycling system that the residents were running within a university sub-structure. Affirming and legitimizing the agency is a form of *strategic* value. Brainstorming how to make the recycling system work more effectively and efficiently is a form of *enabling* value. The *orientating* + *strategic* + *enabling* value catalysed the flow of value transfer from the *potential* through *applied* to *realised*, in a powerful manner that was described as 'explosion' (or extreme support of the project) by the residence's social commons.

See Figure 5.16, an excerpt from Appendix 6: VM7.1, which illustrates this catalysed flow of value.

Orientalising Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Reframed/ Transformational Value	Code
<p>"... when I arrived at Stanley Kidd (Residence) in April 2017, there was a very basic recycling project that was on the go - people were collecting plastic and paper... So there was already that culture (and) a conscious awareness of the environment, taking care of their environment, and part of that was the recycling aspect" 02:09 Culture</p>	<p>"... for me personally, recycling and environment is majorly important. I've been recycling personally in my own capacity for the last 10 years" 03:23 Resonance</p>	<p>A fit in culture amplifies the practice.</p> <p>"...when I arrived, and I started interacting with the different portfolios that exist, when I interacted with that portfolio, I (asked), What do you guys do? Or like how (do) you guys operate together? They told me and then I was like, cool, I love this. I want to support it. And that's when I said, Okay, how can we make this bigger or how can we make a better, more effective? They (then) told me what they were wanting to achieve" 03:39 Responsive ZPD</p>	<p>Affirmation of project ideas</p> <p>Support from the "hierarchical structure" in that they</p> <p>Not alone... use of "we" and not you (in this together)</p> <p>and then challenged to better them</p>	<p>"And that's when I said, Okay, how can we make this bigger or how can we make a better, more effective? They (then) told me what they were wanting to achieve" 03:39</p>	<p>-VE "We looked but there was nothing operational (formal recycling system at Rhodes University) at that time. There used to be though, at some point there had been drop off points/ collection points, but that was not functional anymore.</p> <p>(AGENCY) So the guys would fill two or three black bags, and I would take it to Leonard's site downtown (the recycler). I would ask, Can we drop this off? And he said yes. After about two or three months of doing that, it just exploded." 04:26</p>	<p>"After about two or three months of doing that, it just exploded" 04:26 (extreme expansion of the project)</p> <p>"At month three or four the guys were taking (the recycling project) very seriously and I couldn't keep up with the demand. So (I arranged with) Leonard his really big (bags) that they use, I set up a space at Res and (arranged) for recycling committee fill the bags, and call (Leonard) to collect when full... We had four or five of those big bags, one for plastics, one for tin, one for glass and one for paper. It got to the point where the recycling committee had to empty out the recycling bins within the res at least twice a week." 07:56</p>	<p>"it just exploded" implies buy in from others - further implying that people do intrinsically care and will support if there is a system in place - AND if the culture is fostered. Also, the project stemmed from the res-community, was supported and fostered - resulting the "it just exploded" -> Culture amplifies agency</p>	VM7.1

Figure 5.16: VCF analysis showing how synergy between the value cycles can result in a powerful and positive response from the participants (excerpt from Appendix 6: VM7.1)

Hellemann explains the motivation behind the agency,

I think the primary concern [for himself and the students] is the environment, knowing that the community will be negatively affected ... we talk about the dumpsite here not been able to function properly... And we know directly it has an impact on the community because environment and community are not separate. They're not separate. (T7.48:03)

... the students of today are very aware of societal issues, of injustices [and] this kind of stuff... [We] need to highlight 'spaces' where they can ... practice that agency... (T8.43:19)

The conversation uncovers a tension; firstly he explains that there is interest among the students for a campus wide (formalised) recycling system, but that in order for the students to practice this agency in a greater scale (this being their interest in recycling across campus) there requires a "mechanism" (here Hellemann means a 'system' is needed) that enables this

practice of citizenship, which is absent, outside of their residence: “we need to recycle, but [where] there's a mechanism in place for recycling to happen” (T7.25:24).

And secondly he speaks to an informal curriculum offering that is broader than the formal curriculum,

... I want [a focus] around the environment, because it will have an inherent benefit to the [local community], it can lead to new skills transfer [for a] future economy, a green economy, future jobs. That's what we have to think about now in education - in how this must be able to lead to something more, not just have a piece of paper [degree]. I think [this is] the challenge that we have. (T7.02:42 3rd recording)

This conversation holds clues to a culture of recycling (*orientating* value) that is coming into the university with the first year and new student intake, and that students bring with them an appreciation and awareness of environmental and social concerns (an *orientating* voice). They however need the space to practice their agency (recycling), thereby putting their voice into motion (agency) – this being an example of *applied* value – and in engaging with the concerns of the times, so that they can contribute to and learn in-, with-, and from- these social debates (which then has potential for a *transformative* value connection).

Keywords that will be further explored in chapter six:

*Voice, agency and (hidden) curriculum; convergence of socio and eco; and honouring the social commons*⁵.

⁵ Themes that emerged in this case study which will be discussed in chapter six, and are tabled in Appendix 8:CS5.

5.7 Case study six: SRC Enviro Councilor Legacy team

5.7.1 Project Description

This project is initiated and run by elected representation of the student body. I met with and interviewed three Student Representative Council (SRC) Environmental Representatives who had each held office for their respective calendar-year term, over the last three years (2020 – 2022). The SRC year of service runs concurrently alongside the academic year, from February to December. These student body representatives have engaged with environmental concerns and challenges, whilst having experienced the informal curriculum (learning opportunities created outside of the formal curriculum) during their tertiary experience at Rhodes University. All three councilors study within the Environmental Sciences Department, they are:

- Putuma Balintulo who served for the 2020 year.
- Milca (Taku) Matariro served for 2021.
- Anda Mtshintsho held office for 2022



Figure 5.17 EnviroSRC Legacy team (L-R), Putuma Balintulo, Milca Matariro and Anda Mtshintsho

The group conversation flows easily between the three individuals, who echo similar experiences, and relive the highlights and successes during their term in office. They speak of navigating the Environmental Portfolio in terms of how they understand the role, and of past initiatives, examples of which include (but are not limited to) plastics recycling, and a ‘No-Meat-Monday’ campaign in the residence dining halls.

As is described in the SRC’s Constitution of Student Governance (Rhodes University, 2019), the Environmental Councilor represents the SRC on the Rhodes’ Environmental Committee. The governance document (ibid) holds that he/she is expected to engage with the University

around the Environmental Policy and its implementation; engage and coordinate the student body's environmental initiatives; raise awareness in the residence system and greater campus; along with the Academic Councilor to engage the university wide curriculum inclusion of environmental issues; among other responsibilities.

The sustainability theory that best speaks to this legacy project is that of Sustainability in Higher Education (as discussed in chapter two, see 2.1.9). There is however also an alignment to the theory which speaks to governance and sustainability, the King Code, as discussed in 2.1.4; and Sustainable Development and the Role of Education (refer to 2.1.8) due to the context of this project within the university setting, and within the governance structures of the University.

5.7.2 Social Learning and the Value Creation Framework

New and relatable language as an enabler to new paradigms

An interesting theme emerged in the conversation with SRC Enviro Legacy team, around language. Mtshintsho asked the question that he faced during his term: "When you say environmental – what are you referring to? Is it conservation? Or is it social environment? Or is it economic environment? What do you mean?" (Mtshintsho, T8.17:25).

Balintulo similarly explained later in the conversation:

...people use all these terms that [ordinary] people do not understand – [we need] everyday language that speaks to the ordinary person, you know, for them to understand. (Balintulo, T8.25:52:2nd recording)

In applying the VCF analysis to the transcript (Appendix 6: VM8.8), I placed these insights within the *realized* value cycle column where one describes the result of the action, and directly connected this to the *applied* value cycle, where one is learning in the doing. This example show the dynamism and fluidity of the learning, because from here the flow travels backwards from the *realised* cycle (being the insights that emerge from the conversations) to the *immediate* value cycle, where one describes what the experience is like. But the flow does not end here, this is only the first part. See Figure 5.18 to illustrate this dynamic flow.

Orientating Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Reframed/ Transformational Value	Code
<p>"When you say environmental - what are you referring to? Is it conservation? Or is it social environment? Or is it economic environment? Or is it social economy or socio ecological? What do you mean?" 17:25</p>						<p>Anda Mtshintsho (2022 SRC Enviro Councilor) "to be eco-conscious, you (don't have to just be) be vegan, or must do environmental science. Your everyday practices should be informed ...our ways of consumption- what does that speak on?... transportation, buying local, -all those thing. My biggest concern is eco-conscious people use all these terms that (ordinary) people do not understand - (we need) everyday language that speaks to the ordinary person, you know, for them to understand." 25:52 (2nd recording) (LANGUAGE)</p> <p>Putuma Ballintulo (2020 SRC Enviro Cllr) "Yes ... relatable and inclusive (education). Because most of the time this environmentalism thing (it is perceived to be) number one It's for whites, it's for the rich, it's for the vegan people because it's so expensive... it automatically excludes the ordinary person from the environmental stuff. People will tell me you are doing white things ..." 29:08</p> <p>Anda Mtshintsho (2022 SRC Enviro Councilor) Exactly</p>		VM8.8

Figure 5.18: VCF analysis showing the dynamism in the flow between value cycles (excerpt from Appendix 6: VM8.8)

The second part of the flow involves the new opportunity to travel towards and into the *potential* value (in seeing what now could be). Explained, the reach is greater if there is shared language because shared language enables debate. The flow is thus arrives at *potential* value. Debate then facilitates and inspires new ways of seeing and understanding, which therefore leads to learning. This thus shows opportunity for a further deeper linkage into the *transformational* value cycle. VCF flow has thus reversed direction looping from *immediate* to *potential* to *transformational*.

Balintulo offers,

Because most of the time this environmentalism thing [it is perceived to be] number one it's for whites, it's for the rich, it's for the vegan people because it's so expensive... it automatically excludes the ordinary person from the environmental stuff. People will tell me you are doing white things ... (Balintulo, T8.29:08 2nd recording)

The value of potential transformation is also evident in Balintulo's learnings that:

[Current thinking] separates ordinary people from nature, because [it's thought] there is mother-nature and then there is us – no, we are nature ourselves... (Balintulo, T8.29:38 2nd recording)

Keywords that will be further explored in chapter six:

This conversation speaks to themes of *convergence of socio and eco; new and relatable language as an enabler; challenging perceptions* (or curated realities); as well as the hidden curriculum debate.⁶

5.8 Chapter closing

This chapter introduced the reader to each of the six case studies that form the basis of my dissertation. It presents the stakeholder role held by the project initiator, within the university. This is either as a student team aligned to a department, or an institutionally recognised student body, or a project run by staff, or staff and students, within a university centre, unit or residence. It presents an overview of the project, and then analyses the project in relation to the regenerative sustainability theory that was presented in chapter two. Finally, I analyse the participant's insights and examples of social learning through the lens of the value creation framework. I did not present the full VCF analysis of each case, as it would make the dissertation too lengthy, but I do provide these in Appendix 6 to give the reader a sense of the analysis that preceded the values and related themes presented in this chapter. The themes that emerged across the case studies is explored in chapter six.

⁶ Additional themes emerged in this case study which will be discussed in chapter six. See Appendix 8:CS6.

Chapter six

6.1 Introduction to the chapter

Chapter five introduced the case studies, comprising of the project descriptions, the alignment to sustainability concepts and theories, and the social learning that emerged through the Value Creation Framework analysis. In this chapter I present the themes that emerged across the six cases studies. This chapter is also the beginning of the discussion that extends into chapter seven.

In the discussions, I draw on my review of relevant literature in chapters two and three, this being the body of theory and the analytic framework used, as well as the data presented in chapter five. I will also on occasion present data (examples from the case studies) that have not yet been introduced until this point, to further illustrate a theme, where relevant.

6.2 Meaning as a precursor to agency

Wenger (2004) explained that meaningfulness informs a deeper level of learning: “Viewing learning as value creation is well aligned with this focus on meaning as an experience of life...” (Wenger-Trayner & Wenger-Trayner, 2020, p. 48).

Within this study, meaning is strongly linked to the desire to make a difference within the community (or being of service to the greater commons), and that which spurs agency. “Agency is not merely the ability to act... Agency implies both a role in action and a role in negotiating meaning” (Wenger-Trayner & Wenger-Trayner, 2020, p. 61).

The relationship between action and meaning is a dynamic flow. I accept that meaning may not always precede action, and also that meaning may result from action. Here, however, in this section, I explore the catalyst to the action and agency, and, within this study that is focused to regenerative sustainability projects on Rhodes University campus, *meaning* is identified as a strong motivational force that drives the action or agency. Refer to 3.2 where the relationship between learning, meaning and agency is discussed.

Reaffirming the aforementioned theorists' argument and linking meaning to the origins of the project (the agency) but also to a cause greater than oneself, evidence is presented from within the study.

In the SRC Environmental Councilors conversation it was described as, "it's like a calling" (Matariro, T8.50.49).

Whereas Scarr (Nambu Project) explains it this way:

At the core I have always been purpose driven... establishing something that in our context is labour absorbing... I want my kids to have a future in South Africa ... I want a future that is good for South Africans. One way that I can do that is by creating jobs, particularly for young unemployed, unskilled people, that can be my contribution from a societal perspective. (Scarr, T2.50:58)

This is also echoed by Matlou (E-Waste case study), and, as did Scarr (Nambu case study), he links purpose to the social commons: "I have this dream of wanting to solve a problem that affects the community" (Matlou, T1.14:46), and "whatever I am researching must go to the community" (Matlou, T1.32:33).

The Stanley Kidd Recycling project here too speaks to the link between meaning-making and the social commons: "It needs to be for the inherent good of the immediate participants, but also the wider community, their environment" (Hellemann, T7.38:13).

Finally, the Eyethu project echo this narrative of purpose, meaning and social commons with their conversational thread: "If you share ideas, we can make it happen" (Joni, T4.19:31), "which means poverty can run away if we are together doing this" (Shelle, T4.19:31).

The above can be seen Appendix 8: EM1.

A sense of meaning and purpose to serve the greater commons, as is seen in these case studies, spurs on the act of agency. And it is in the agency (or the *doing*) that there lies opportunity for- (or leads-) the learning.

6.3 Convergence of socio and eco

Particularly in a business context, sustainability is often described as comprising of three compartmentalised pillars (Elkington 1994, 1997; Porter & Kramer, 2010). There is a clear separation and divide between the pillars (or elements), being that of People (socio), Planet (eco) and Profit (financial). From the position of the compartmentalised pillars there is then the attempt to align and create mutual beneficiation, an example is seen in the CSV concept discussed in 2.1.3 (Porter & Kramer, 2010).

This paradigm is challenged in the Doughnut Economics theory (Raworth, 2017) discussed in 2.1.6, that offers an integrated perspective, focused to the social under-, and planetary over-shoot simultaneously. The Sustainable Development Goals (SDGs) explored in 2.1.7 also suggest an integrated approach (and perspective), in that they offer multiple goals that complement and link to the others. Examples include *no poverty* which relates to – and is linked to- *reduced inequality*, which also relates to – and is linked to- *decent work and economic growth*, and more; another example is *sustainable cities and communities* which relates to – and is linked to- *industry, innovation and infrastructure* relates to – and is linked to- *responsible consumption and production* relates to – and is linked to- *climate action*, and more; a final example is the SDG *life on land* which has linkages to *life below water* which is also linked to *good health and well being*, and more.

I offer however that the social learning scholars, Granados-Sánchez et al. (2011), best challenge the compartmentalised perspective by offering a telescope as an analogy to explain an alternate view for this three-pillar paradigm. The telescope has three lenses, one for each of the (compartmentalised) pillars, and in this way they show the profit lens (placed first and closest to the eye of the viewer), thereafter a social lens overlay, and after this an eco or planetary lens overlay. This perspective argues that profit, people and planet do not stand as separate elements but are an inter-connected relationally. This convergence or interconnectedness is evident in the case studies.

Within the Nambu project, Scarr talks to the current agricultural paradigm, saying it “do(es) not speak to the future we need to be creating”, explaining that current agricultural practices are “exploitative” and “non-regenerative” against *both* the socio and eco. Terminology such as ‘exploitive’ in general conversation speaks to socio concerns, whilst ‘non-regenerative’ to eco concerns, but here they are used inter-changeably by the participant to speak to both eco

and socio. Again this is seen in his whole-systems perspective, where he explains the citrus industry dilemma (see 5.3.2), Scarr raises controversial questions around social justice and eco-concerns in arguing for a more accurate costings in this citrus farming practice. A final quote from Scarr, showing the convergence of socio and eco, where he speaks of social stability (current and future) in the same breath as environmental sustainability:

So I see all these challenges in the agricultural system... on the way we produce food... it is completely counter to being able to produce food in 50 years time... We need to have new models of agricultural production, resource usage and recycling that can support 50-100 years in time, for our kids, our grandkids, stretching across South Africa, [for] a country that is socially stable, and a country that is environmentally sustainable, and a world that is environmentally sustainable. (Scarr, T2.51:57)

The Eyethu project, too, echoes this convergence of thought in the following argument:

Eyethu is an isiXhosa [word] and its [direct] interpretation is 'our' or 'ours'. We are saying this [making teaching aids out of discarded items is] for 'everyone'. (Shelle, T4.01:22)

The project name has a socio focus, however the project's focus is also an eco focus (diverting recyclables from the waste stream).

The E-waste project has a similar argument. Whilst the project aims to divert e-waste from the waste stream and into a new upcycled life, the narrative of the participant is focussed to the social commons. This is seen in quotes such as "whatever I am researching must go to the community". Notably the environment is seemingly seen by the project participants through the lens of community or social commons, rather than as a separated, silo'ed concern.

Another quote that affirms this argument is:

So the most challenging thing is that [the e-waste]... consist of hazardous materials... we then said, 'Okay, we are within this problem, and how can we then take up our knowledge as chemists, and then meet it up together with the demand for work, especially in South Africa and realizing that... youth unemployment is growing. (Matlou, T1.3:27)

The Hall Warden of Stanley Kidd also speaks of this convergence in their recycling project:

“we talk about the dumpsite here not been able to function properly... And we know directly it has an impact on the community because environment and community are not separate. They're not separate” (Hellemann, T7.48:03).

And speaking to outreach projects, the residence students automatically link the two:

So I think there's just a natural extension, ... when they [students] do community projects with our school partner [in which] we have a [sanitary] pad drive or a stationary drive [as an example] the one time when they went [along] they did a clean-up [of litter] around the immediate school- so I think the two are interchangeable, they're in a symbiotic relationship. (Hellemann, T7.40:44)

The EnviroSRC Legacy project shows a similar value of holding sight of the socio while addressing the eco, with members explaining, “[within] the residences the two portfolios are [also] linked ... community-engagement and environmental reps.” (Mtshintsho, T8.14:57 2nd recording) and “[current thinking] separates ordinary people from nature, because [it’s thought] there is mother-nature and then there is us – no, we are nature ourselves...” (Balintulo, EnviroSRC Legacy case study, T8.29:38 2nd recording).

The above narrative of evidence is seen in Appendix 8: ET2.

And thus echoes a recurring theme across the projects where socio and eco converge, they are wholly interlinked in the projects’ design and in the understanding of the project participants, and the compartmentalized pillar paradigm, is challenged.

6.4 Holding sight of the Social Commons

Recognizing and honouring the social commons, is another recurring theme across the cases. It refers to the understanding and approach among the project leads that collective action is needed to address sustainability challenges

“We are increasingly asking ... if what [people] learn helps to ensure the survival of our planet. Education for Sustainable Development can provide the knowledge, awareness and action that empower people to transform themselves and transform societies.” (UNESCO, 2020, p. 8). Within the two sentences of this quote, the first sentence speaks of planetary survival and the second social transformation. While this may motivate the previous theme, I

present it as a distinct theme, reflecting what the project leads have learnt about the importance of the social commons and the role of the social commons in addressing the challenges of the Anthropocene.

Across the case study collective (as can be seen in Appendix 8:ET3), the participants engage with the social commons in an authentic two-way partnership that is profoundly respectful and meaningful, and in doing so, they create opportunity for *deeper* reach within the community networks, through a *deeper* level of access within communities; *deeper* impact for a broader offering in the projects; and two-way beneficial social learning opportunity. This is seen in the examples of the Food for Us and the Eyethu Teacher Training Aids case studies,

The idea was not to come up with a ready-made app for the communities that we would be working with, but rather to develop something together. (Durr van Lingen, Food for Us Project, T3.02:59)

... it's no more now something which is going to be my advice, it will be our advice to each other, so that then we can achieve the goal which want. (Shelle, Eyethu Project, T4.1:05:40)

The Eyethu Project emphasises meaningful partnerships, and manages the projects so that they serve the social commons. They do this through a two-way flow, so that what the social commons deems is valuable, is recognised by the project. These partnerships are built over years, and this provides a launch pad for deeper engagements and social reach within the community.

Working with the communities is not easy – you need build and build until they trust you. (Joni, Eyethu project, T4.51:45)

So we were working with a network that we were really quite familiar with and there was a lot of trust. (Durr van Lingen, Food for Us project, T3.9.55)

The EnvSRC Legacy project echoes the value in co-engagement,

... the solution [should] come from those affected... you cannot think for that community. They know their lives better than you do. Until you have been one of them you can't speak for them... it's the value co-creation - I love how you put the 'co-' before creation... (Mtshintsho, EnvSRC Legacy, T8.49:14, speaking to the proposed play on words of value and co-creation)

Aligned to Mtshintsho's above insight, but in the Food for Us Project's Durr van Lingen explains how a trusting social commons provides deeper connections for an amplified impact, as seen in the following quote: "the success of the Eastern Cape [case study], [was due to access to the existing] network,... [this] was a huge enabling factor ..." (Durr van Lingen, T3.23:59).

And expanding on this;

The Nkombu Youth Cooperative really grew after being involved in the Food for Us project ... [they] developed a really important space... [in] being connected to older farmers and learning new farming techniques, and then they took it further to other youth groups who they then started to train, so they've now gone into a training space. (Durr van Lingen, T3.23:39)

This engaged relationship building (between the ELRC and the local community) led to expanded (and new) accessible networks (being the Nkombo Youth Cooperative), which held impact in the creation of a new identity and new voice (for the Nkombu Youth Cooperative, who became trainers themselves, and advocates reaching out to other groups), all of which is evidence of social learning in action.

6.5 In service to whole-systems

A perspective that looks to the whole-system was evident in the value created across the project collective. This is confirmed by theory in the work of Doughnut Economics (Raworth, 2017), discussed in chapter two's regenerative sustainability body of theory.

Raworth, in her description of 'Economics for the 21st Century' argues that a whole system perspective is essential if humanity is to successfully address the social development shortfall and the planetary boundary overshoot caused by the separations (e.g. failure to adequately value natural resources, or economic justice) in current economic models (ibid.).

Examples of this theme within the case studies include the following instances (as is seen in Appendix 8: ET4):

Within the Nambu Project, Scarr speaks to a whole-systems perspective in his citrus quotation (Scarr, T2.08:03) alluded to earlier, as well as his point of how localizing spend and

recycling the local currency aids in building the resilience of local communities and economies – both examples are evidence of whole systems perspective.

Durr van Lingen, in the Food for Us project, says that from the outset it had a whole systems approach, as is evident from her comments;

So we were developing the idea for a while, specifically looking at a much more holistic approach to market transformation and not using an app by itself, but using the app connected with a whole-systems approach. (Durr van Lingen, T3.27:37)

They [younger] were able to introduce the technology / technological space to the older farmers – [and they were] working together. (Durr van Lingen, T3.14:17)

The first quote speaks to inclusion of all role players and stakeholders, and the second to an inter-generational perspective. This may be considered whole-systems.

The Eyethu project also provides evidence of this *whole-systems* approach. Their project engages across the all of the systems that ‘hold’ the child - from teacher, to parent, to the community as a whole. In addition, the focus crosses the varying needs of the child, from a full belly of food, to healthy nutrition, to social engagement skills (language development) to self empowerment (of their parent/caretaker) and further into sustainability skills training (for the family), resulting in a multi-dimensional convergence in service offering to the *whole-system* from the perspective of the child. Examples are seen in the following quoted excerpts:

We work together to help the parents and the practitioners to have a better understanding of what we are talking about... (Shelle, T4.10.29)

... the parent needs to know what is taking place at school. So that the parent is able to help her child. (Shelle, T4.09:39)

... a preschool in extension 6 have divided their land into three parts ... for their children's garden, for the community which is the parents, and the other part is for the practitioners. (Shelle, T4.12:27)

There is wisdom in caring for the whole-systems that ‘hold’ the child, just as there is in considering social justice implications in profiteering off water-rich produce exports in water scarce regions, just as there is in bringing together the whole systems of shareholders in addressing the redistribution of farm produce excess in a nutritionally poor country.

6.6 New ways of 'seeing'/ reframing value

As explained in chapter three, one of the value cycles within the VCF is the *Reframing* cycle, which is also described as *transformative* value (Wenger-Trayner & Wenger-Trayner, 2020, 2016). It is described as mostly unplanned, unforeseen and elusive compared to the other value cycles in the VCF. Within the cases in this study, however, Reframing or Transformative value appears repeatedly. *Reframed* value is described as “recognis(ing) broader and deeper transformations that social learning can give rise to” (Wenger-Trayner & Wenger-Trayner, 2020, p. 113). The ability to successfully *reframe value* holds power to unlock root power structures and thus challenge the status quo. It holds ‘disruptor’ potential, alluded to in chapter two (see regenerative sustainability as a concept). This narrative is continued in a later theme, *Problem solving for system change*.

The projects in and of themselves all challenge for a reframing of value (see Appendix 8: ET5).

It is however suggested that more than one manner of reframing of value is evident in this study. In the Food for Us case study, Durr van Lingen and the project team engage in reframing a challenge for a solution. This being a reframing of the issue, which has value in itself, as is seen in the following quote: “In a country that produces more than enough food to feed everybody how is it that just under 50% are nutritionally poor” (Rhodes University, 2017b).

Another view of reframing is seen in the Nambu, Eyethu and E-waste case studies, where the participants engage with others and encourage them to reframe how they would view a discarded material, and show the value of the said material in the way that they (the participants) see it, or assigned to it. To explain this, consider that the E-Waste Project that is focused to repurposing ‘technical nutrients’ for a new use; the Eyethu project does the same; Nambu transforms food waste (biological nutrients) into a new cycle of value for animal protein feed. Traditionally these nutrients are discarded, yet in these cases studies they are reframed as valuable, in the act of ‘seeing’ in a new way.

Examples from the case studies that are evidence of this theme are presented as follows:

Nambu project’s Scarr shares an insight that speaks to a paradigm-shift, being that of a new way of seeing and understanding:

I essentially view myself like a dairy farmer... [there are] slight differences in the operations but essentially doing the same thing... so there's no reason why we shouldn't be sharing information. (Scarr, T2.1:01:53)

and

The market doesn't know the value of what I'm doing yet. (Scarr, T2.1:07:50)

In a similar example of reframing value, Hellemann shares his insights in speaking to the Stanley Kidd Residence project, where he links a value framing to the informal curriculum. He says, "Its about what opportunities you are creating for (a) future economy..." (Hellemann, T7.00:02 3rd recording).

Another example of an exercise of reframing value, is reframing the metrics of success. The Food for Us and Eyethu case studies build on trust, and in doing so amplify access and reach for deeper collaborations. This is evident in the following quotes,

Having [access to] those existing partnerships – with Busi and other really important farmers, was, [in other words] without those initial network relationships, I don't think we would have gotten as far. (Durr van Lingen, Food for Us project, T323:59)

So we were working with a network that we were really quite familiar with and there was a lot of trust. (Durr van Lingen, Food for Us project, T3.9.55)

[Success is defined within this project by a] good working relationship with the practitioners, the parents and their children ... long term relationships [compared to measuring it by profit margins, as an example]. (Joni, Eyethu project, T4.22:20)

A final example of reframing of value from the SRC Enviro Legacy case study, is that where Putuma Balintulo in her eco activities is challenged for engaging in these activities that are viewed by her social commons as exclusive and burdened in historical socio-political injustices. Balintulo speaks back into the social commons, reframing this perspective, and motivating that eco activities should not be seen as exclusive or owned by any one demographic of the general population, rather it must be owned collectively because "we are nature ourselves" (Balintulo, T8.29:38 2nd recording).

6.7 New language as an enabler

New language as an enabler of learning and change is an interesting theme emerging from the analysis of the case studies. (New) language enables the progression of ideas, that may seem abstract at first. Naming a concept or new idea provides traction among the social collective to progress the idea or concept, or as in this case, a new field within the Anthropocene setting. It takes the concept from the abstract to the concrete.

Examples of project participants having learnt of the need for new or adaptive language is evidenced from the case studies (as is shown in Appendix 8: ET6) as follows:

The EnvSRC Councilor Legacy team speaks of the need for developing language in two instances. Balintulo speaks to her experience that the language often used by environmentalists actually needs to change;

...people use all these terms that [the greater community does] not understand – [we need] everyday language that speaks to the ordinary person, you know, for them to understand. (Balintulo, T8.25:52:2nd recording)

Mtshintsho further adds,

When you say environmental – what are you referring to? Is it conservation? Or is it social environment? Or is it economic environment? What do you mean?

(Mtshintsho, T8.17:25)

The E-Waste project shows evidence of an evolution of language having taken place. The project was founded as E-Waste, meaning *electronic* waste, but when speaking with Matlou, he evolves the language to *Tech*-waste within the interview setting, to broaden the language to include all technical waste. He said,

It would have been a space where this generation can come and learn that there are ways to handle e-waste, let me just say tech-waste, because it is relevant to all technology in our homes. (Matlou, T1.26:41)

And then the Eyethu project provides an example of adapting language to a specific context, and in doing so, offers a launch pad to an alternate paradigm. To explain, the *Eyethu* project name directly translates to 'our' or 'we are one' which is a socio-focus, and yet the project has an eco-focus, of repurposing recyclables for teacher training aids. In so doing they marry

two ideas, communal ownership to a reframed value (in the form of repurposed resources). This thus opens a space for new language (and metaphors) to develop.

In the same way, when Nambu's Scarr speaks of seeing similarities of what he does to that of dairy-farming, understandably this is alien to the dairy farmers, and where one (as in Scarr) sees new possibilities that don't yet exist in the minds of the collective, it then pre-supposes a need for new understanding – and, new understandings being abstract concepts, and these are concretized through new shared or evolved language that emerges from the social collective, and leads learning opportunity.

In addition, the study saw a sense of *oneness* in purpose between the Eyethu project's support systems and the project itself, and within this theme, in my attempt to define this sense of oneness, I tagged this phenomenon as *system-ubuntu*.

6.8 Problem solving for system change and challenging a curated reality

The themes *Holding sight of the social commons*, *In service to whole-systems*, and *New ways of 'seeing'/reframing value* all speak to the current challenges faced by society and the social commons. This final theme to emerge from the analysis of the cases speaks to a 'disruptor' factor that challenges the realities in which the project beneficiaries live. Disruption implies more than mitigating or adapting. Within the projects, the participants inherently see a social problem, and their project focus either attempts to address the 'cause', or to untangle or disrupt the 'symptoms'.

Evidence of this is seen within the case studies (see Appendix 8: ET7) as follows:

The Nambu project aims at disruption in the agricultural sector with Scarr saying, "... the majority of practices we use are unsustainable, exploitative, non-regenerative, and do not speak to the future that we need to be creating" (T205:17).

So I see all these challenges in the agricultural system... on the way we produce food... it is completely counter to being able to produce food in 50 years time... We need to have new models of agricultural production, resource usage and recycling that can support 50-100 years in time, for **our** kids, **our** grandkids, stretching across South

Africa, (for) a country that is socially stable, and a country that is environmentally sustainable, and a world that is environmentally sustainable. (Scarr, T2.51:57)

The Food for Us project explains that food security is a major challenge with an estimation of just under 50% of the population considered “nutritionally poor” (Rhodes University, 2017b), all whilst farm output is sufficient to meet this need. In response, avenues were explored to channel excess farm produce, in the process disrupting the practices that encourage food waste while opening channels to disrupt hunger in surrounding communities.

The Eyethu project was similarly created to address another social concern, the lack of teacher training resources within Early Childhood Development (ECD) Centres, in communities with limited finances resources. They may not be explicitly speaking about disrupting the status quo, but they are seriously challenging the curated reality where it is generally accepted that good resources cost money, that the items we daily discard hold no value at all, or that re-using materials is a sign of poverty. The E-waste project was motivated to disrupt pollution from electronic waste and to disrupt high levels of unemployment in the youth.

The EnvSRC Legacy team also challenge conventions, here these conversations speak to challenging perspectives, evidenced in the following statement by Balintulo,

Because most of the time this environmentalism thing [it is perceived to be] number one it's for whites, it's for the rich, it's for the vegan people because it's so expensive... it automatically excludes the ordinary person from the environmental stuff. People will tell me you are doing white things ... (Balintulo, T8.29:08 2nd recording)

Expanding on the above insight from Balintulo, and as touched on in an earlier theme, the activities that Balintulo engages in- and promotes- is challenged by her social peer and support system. The language that is used for these activities is perceived to be exclusive. This is evidence of the need for inclusive and endogenous language. By endogenous, I mean language that is born from within the social commons, so that it is owned by the collective, rather than stifled in language that is burdened with connotations of historical socio-political injustice.

As is seen throughout the study thus far, these projects all are in and of themselves an exercise of problem solving for system change. They challenge the status quo. They challenge

the 'curated reality' that we live in, and into which we were born. It involves a new way of seeing that does not accept what is prescribed (by convention, or sometimes intentionally orchestrated by vested interests) as 'reality'. Rather these projects act as a positive 'disruptive' force that presents an alternate offering to the current way(s) of being and living, and engaging with the environment.

6.9 Chapter closing

This chapter introduces the themes that emerged across the case studies. It draws on the theory and data presented in earlier chapters, and starts some discussion from the perspective across the projects.

It is at this point that I refer to Annexures 9 to 12, which are the posters as mentioned in 4.5.1. The posters comprise a significant part of the analytic work, as I had to interpret the projects and what makes them valuable, to the artist. They are a response to the theory reference to "the art of making value visible", where researchers are encouraged to find "imaginative ways to present the results and making the dataset accessible to intended audiences" (Wenger-Trayner & Wenger-Trayner, 2020, p.228). The posters offer a one page overview of the projects, and, in considering and addressing the limitations of the VCF (which are discussed in 7.5), may assist the reader in better following the analysis and discussions.

Chapter seven offers further discussion of the findings of the study, considers its limitations, and provides recommendations and conclusions.

Chapter seven: Discussion and Conclusions

7.1 Introduction to the Final Discussions

Where chapter five focused on the individual case studies, chapter six focused on the cross-case themes. Chapter seven aims to offer discussion that allows the data presented in chapters five and six to speak back into the bodies of theory presented in chapters two and three.

Wenger-Trayner and Wenger-Trayner argue: “A social learning space is embedded in a broader social structure, but it opens the condition for agency because of the kind of engagement it invites” (2020, p. 57).

This study is situated within Rhodes University. It must be acknowledged that the Academy’s enabling hand is evident across the case studies. The Academy provided space for the fostering of curiosity and the development of new knowledges. It created opportunity in the form of institutional reputation from which projects could leverage their progression, resources and associated learnings. It opened access to systems and platforms to projects that were recognized within the university structures. On the other hand the projects themselves, too, brought something vitally important to the Academy, and this will be discussed in this chapter.

There are three discussion points in chapter seven that close off this study. The first is the need, in studies on learning, for a way to operationalizing the learning, which in this study is offered through the Value Creation Framework (Wenger-Trayner and Wenger-Trayner, 2020). The VCF categorises the values associated with social learning, and then makes visible the flow of the learning in the form of the dynamic movement between the value cycles. I argue the features of social learning that are evident in the case studies, as relevant to the operationalizing of the learning, is underpinned by the agency of the project leads, and that the acts of leveraging in the projects led the opportunities for learning. This will form the first discussion, and the data presented in chapter five is drawn on.

The second discussion looks to what is driving the agency, and this I argue, is the meaning, meaning-making and meaningfulness that spurs on the agency. Here I draw on the content from chapter six, being the emerging themes.

The third discussion that closes off this study considers the role of the informal curriculum in higher education institutions.

7.2 Social learning operationalised as value

In their 2020 work, Wenger-Trayner and Wenger-Trayner state their aim in “developing a more detailed, operationalized view of the nature of mutual engagement in social learning” (p.5). The Value Creation Framework and the eight value creation cycles it entails is a research tool for operationalizing learning, to better understand or ‘see’ the learning. It allows one to identify the ‘parts’ and to track how the flow between the parts translate into learning and value. It further provides clues to that which possibly enables or constrains the learning, and learning outcomes. This thus offers opportunity to adjust the inputs to progress toward the meaningful difference being sought. As I conducted the analysis of value created, as seen in Appendix 6 and summarized in chapter five, I was undertaking an exercise of operationalizing learning and tracking its flow as value creation cycles.

A value associated with social learning that emerged strongly in the study is leveraging, a form of enabling value.

Leveraging off opportunities provided by the university is seen here as a mechanism that created or enabled learning opportunities. Examples of this are the use (leveraging) of reputational equity, where the association to Rhodes University and the reputation within its departments, was used by project leads to create and progress opportunity and networks for their projects.

Matlou demonstrated his ability in using the strategic and enabling value available to him, in his fundraising activities, to progress access to the international stage of the competition to which the project had reached, and in so doing he led the opportunity for learning (how to develop an E-Waste project) to happen. Similarly, Scarr, in the Nambu case study, demonstrated leveraging ability, when he relied on the reputational equity of the institution to access an industry sector third party, who undertook a co-supervision role in his PhD study. Again, in operationalizing this learning, Scarr took the strategic and enabling values, and combined it with the realized value of his past qualifications, to leverage progress into a PhD study. This provided the platform to the current PhD VCF story, and in so doing laid

foundation for the transformational value possibility in terms of the impact potential that the Nambu project holds for the agricultural industry, for job creation and for the environment. Both the E-Waste and Nambu projects were, however, also frustrated by an absence of value at times. This is explored in section 7.4.

In the case study of the Stanley Kidd Residence, in 5.6.2, the VCF analysis shows that legitimizing existing agency can amplify transformative value possibility. Hellemann explained that when he started as the residence warden, there was an awareness of the ecological environment and that there was already a culture of recycling, albeit limited to this residence. He encouraged this act of agency, and this resulted in a powerful uptake and support of the recycling activity across the residence, within a short period of time.

The *orientating + strategic + enabling* value catalysed the flow of value transfer from the *potential to realised*, in a powerful manner that was described as ‘explosion’ (or extreme support of the project) by the residence’s social commons.

A final example of operationalising the learning - to better see the flow in terms of the values-, is in the learning experienced by the SRC Enviro Legacy team.

In the discussion focused on language, Mtshintsho asked the question that he faced during his term as student ‘environmental’ representative, “When you say environmental – what are you referring to? Is it conservation? Or is it social environment? Or is it economic environment? What do you mean?” (Mtshintsho, T8.17:25)

Balintulo similarly explained later in the conversation, “...people use all these terms that [ordinary] people do not understand – [we need] everyday language that speaks to the ordinary person, you know, for them to understand” (Balintulo, T8.25:52:2nd recording).

The above two quotes are inputs placed within the *applied* value cycle, as these are examples of conversations the SRC Councilors have engaged in where they tested their ideas (an example of an action) with members of the student body. The responses this generated challenged the ideas posed, and shows a backward flow to the *immediate* value cycle (where these ideas were challenged, and thus called for a renegotiation of their initial ideas) taking them to the value cycle that holds what the experience is like. Experiences do not need to be positive to have a positive outcomes, as explained by Wenger-Trayner and Wenger-Trayer (2020). This shared experience between the councilors, sparked debate between them in the

interview, to a point where a shared consensus was reached, reversing the flow again to that of the *potential* value positioning (in seeing what could be). In operationalising this exchange of a shared experience through a VCF analysis – there emerged a dynamism and fluidity of the learning process, and the recurring looping between the different values, regardless of the positioning of the value.

7.3 Agency enabled by the orienting value of meaning and shared meaning-making

As noted earlier, Wenger-Trayner and Wenger-Trayner (2020) links meaning to agency: “Agency implies meaningfulness, experiencing that who you are matters and that this makes you exist in your engagement with the world” (p. 61) and “agency is not merely the ability to act... Agency implies both a role in action and a role in negotiating meaning” (ibid.) .

Section 7.2 explores leverage as an enabling value, and the ability to leverage values which provides opportunity for learning to happen. But what spurs the agency that sits behind the act of leveraging - the choice to engage the university beyond simply studying there, and choosing to enter a competition, raise funding, start a new business or get others together to collectively address a problem such as food waste or a lack of toys and learning aids? In analysing each VCF story it became evident that agency is often spurred on by the orientating value (that being the broader landscape in which one finds oneself, and which inherently influences one’s engagement with and within the world. For Scar his upbringing contributed significantly to this orientation, which includes a desire to disrupt unsustainable agricultural practices and create a better world for future generations. For one of the SRC members, she experienced it as answering a call. The Nkombu Youth Cooperative were so inspired by their experiences in the Food for Us project that they started training other youth groups, seemingly deriving meaning (orientation) from the project experience itself. The orientating value inputs in the E-Waste case study provide insight to Matlou’s motivation, the *meaning-making* which drives agency, that facilitates the leveraging, and leads the learning.

Wenger-Trayner and Wenger-Trayner (2020) open their book with the chapter titled ‘The Difference We Care to Make’. I argue based on my engagement with the project leads that the notion of ‘care’ is that which connects the orientating value to the meaning-making that

sets the agency in motion. In each case study there is a display of *care* for something more than self, and often the eco and socio converge (see also Section 6.3).

Matlou uses terminology that shows a strong community and social commons perspective: “we are within this problem”(T1.3:27) and “whatever I am researching, it must go to the community” (T1.32:33).

Here again I reference chapter six, and argue that all of the themes that emerge and that are discussed in chapter six, start at the point of *care*. *Care* transcends singular concepts of eco or socio, with the case studies showing evidence of a convergence of the two. It is *caring* that inspires a whole-systems perspective, and *caring* that kindles deep respect for the social commons, and openness to two-way learning opportunity. *Care* drives the agency behind problem solving for system change; *care* acts as a catalyst in reframing value, and finally *caring* enough to find new ways of communicating to challenge for conversation and debate, also emerges in these projects.

Scarr refers to both socio and eco justice in his description of the citrus industry, noting non-regenerative and exploitative practices that need to be debated and challenged. Shelle and Joni, in the Eyethu case study, challenge the curated reality on where one finds value, from reframing waste to empowering illiterate care-givers as valuable contributors to the educational journey of their charges, but also in using levels of trust within the community as a metric or measurement of the case study’s success.

Hellemann with reference to the Stanley Kidd Residence students states that “... the students of today are very aware of societal issues, of injustices [and] this kind of stuff... [We] need to highlight ‘spaces’ where they can ... practice that agency...” (T8.43:19).

The study thus motivates to legitimize the act of *caring*, as a mechanism to respond to the Anthropocene. In the final discussion, I move to where the dissertation started, which was to situate it within higher education. We have seen that Rhodes university to some extent enabled learning and agency in the six projects included in the case study. What do we learn from the nature of this enablement (and instances where it was not evident) that can inform it, and possibly other universities, to even better enable transformative social learning, caring and agency in the Anthropocene?

7.4 Curriculum in Higher Education

7.4.1 Formal Curriculum: The academic project

In considering the role of the formal curriculum in Institutions of Higher Learning, I refer to chapter two where I quoted Granados-Sánchez et al (2011) who argue that “the inevitable impreciseness of sustainability and SD (sustainable development) combined with the need to give it meaning in a specific context involving multiple stakeholders makes these concepts attractive from an educational perspective as they require joint meaning-making, co-creation of new knowledge, collaborative learning and, indeed, critiquing” (p.193). This explains the need for a special form of learning, distinguished from other forms of learning that are already present in the academy, for example, the kind of learning that Sfard (1998) described as ‘acquisition’.

Explored in 1.3.1 the University has three activities being the academic project, the operational support functions and the student’s tertiary experience. If one was to ask the purpose of universities, I would argue that it is to offer paths toward alternative futures and to challenge problematic societal paradigms for a better (collective) commons, and, that this should be embraced within the activities of the university.

The embedded case studies give evidence that the academic project in the university (comprised of teaching, learning and research) creates fundamental value, examples are the Nambu and E-Waste projects, where students explored sustainability issues through their studies, with the input of academics and in Scarr’s case with the further input from an industry expert appointed by the university as a co-supervisor. The primary activity of university fostered and developed the scholars’ curiosity, thus vitally contributing to these sustainability projects that served as case studies in this dissertation.

7.4.2 Informal Curriculum: The student experience

Rosenberg (2022) argues that, in terms of learning, a key teacher competence, is being able to engage with the concerns of the time. This applies to the formal curriculum, however, this is also seen in the case study of the Stanley Kidd Residence project (see 5.6.2), which falls outside of the formal taught curriculum. The informal curriculum, in addition to the formal

curriculum, lies across the university activities. Why is it important to look at the broader range of university activities?

Sterling et al (2018) offer “At heart, sustainability education seeks to nurture transformative learning experiences that can heal, empower, energise, and liberate potential for the common good” (p.324). And in the same reading

A key question for radical change in higher education is the degree to which such changes can be incubated from within the current system. That is, in what measure are today’s institutions of higher education capable of moving beyond enabling first-order learning about sustainability-related issues, to integrating the search for sustainable solutions into all levels of their organisational culture? (ibid, p.328).

Informal curriculum, which is shaped by organisational cultures, plays a role, and instances of this are evident from the case-studies. Examples include:

The conversation with the EnvSRC Legacy team gave insight into the importance of voice and agency, which is nurtured and developed over time. This is seen in the subtle progression that culminates to ‘answering a call’ to service to SRC Environmental Portfolio role.

Opportunity to learn and exercise agency was created outside of the formal curriculum, in the form of the Student Representative Council, a platform that is strongly supported by the senior leadership at Rhodes University, and which encourages leadership and agency; and within the SRC, an environmental portfolio. The existence of this portfolio sends a strong message and within it, the incumbents experienced a progression from voice to agency culminated through this informal curriculum offering and platform.

Another example of the informal curriculum that shapes the students’ holistic experience is the expectation that one would contribute to recycling within the residence system, and the opportunity to help run such a project. Hellemann, of the Stanley Kidd Residence Recycling case study, highlights the current student body’s appetite for informal curriculum opportunities, when he says that:

... the students of today are very aware of societal issues, of injustices [and] this kind of stuff. The biggest challenge is getting them to actually do [something about] it... You need to highlight ‘spaces’ where they can do/ [put into] practice... to practice that agency...” (Hellemann, T8.43:19, VM7.5).

And he motivates the importance of this offering, thus resonating with Sterling et al. quoted earlier, by saying,

...I want [a focus] around the environment, because it will have an inherent benefit to the [local community], it can lead to new skills transfer [for a] future economy, a green economy, future jobs. That's what we have to think about now in education - in how this must be able to lead to something more, not just have a piece of paper [degree]. I think [this is] the challenge that we have (Hellemann, T7.02:42 3rd recording, VM7.6).

7.4.3 The third sphere of university activity: Support structures

Each case study is positioned within the nexus of these three spheres of activity at Rhodes University: Academia; Operations; and Student experience.

The role held by the project leads, interviewed in this study, within the university's landscape, directly affected their access to and navigation of the support systems. Nambu and E-waste case studies spoke of hurdles, that the other projects do not mention. Nambu and E-waste differ from the other case studies in that they were initiated by scholars, and as such, who did not have the necessary access to maneuver within the administrative operational space that of which is outside of the primary activity of the university. In contrast, Food for Us, Eyethu, Stanley Kidd and the EnviroSRC Legacy projects are all housed (or formalised) within the university administrative and operational systems, and therefore have automatic legitimization within, and access to, the university administrative systems (the university's secondary activities).

In the conversation with Scarr, there emerged a secondary support system (the Allan Gray Orbis Foundation) that took the place of the absent value, thus reversing the value flow to the positive. This parallel support system was fundamental in the realization of this Nambu project, but it was outside of the university systems and took the form of a third party.

As discussed in 3.3.1, the *enabling* value cycle serves quietly in the background, the more enabling the system is, the more invisible it appears **to the participant**, and the reverse is true too, the less enabling the system the higher visibility of the absent (or negative) value. In the

interviews with Nambu and E-Waste there was an immediate and intensity of emotion when discussing their experience of the support structures (and the limited access thereto). In contrast the other projects required a process of deeper probing to bring to light their experiences of the support systems available to the project.

Enabling value is described as the “**key to the sustainability of value creation**” (Wenger-Trayner & Wenger-Trayner, 2020, p. 106), and a further example of this appears in the narrative thread in the Food for Us project conversation, which spoke of the amplifying effect that having access to an enabling support system, as well as the degree of responsivity thereof, creates. This access resulted in an amplification of the desired impact, as well as a deeper reach, and this was key to meeting the project goals.

7.4.4 The importance of the interplay between the university activities: Universities as a social learning space

7.4.2 presents an argument that the informal curriculum lies across the university activities, while 7.4.3 argues that university support systems plays a role in terms of the impact, reach and probability of success of the project’s outcomes, and furthermore, how the varying degree of access within the support systems is directly determined by the role held by the project lead(s) within the university landscape.

If we recognise that i) the informal curriculum lies across the university activities, and ii) that a key teacher competence, is being able to engage with the concerns of the time (Rosenberg, 2022), also alluded to in 7.4.2, then I would argue that **IHLs across all activities must seek** “to nurture transformative learning experiences that can heal, empower, energise, and liberate potential for the common good” (Sterling et al, 2018, p.324). This then introduces the idea that universities should be viewed as social learning spaces, and where regenerative sustainability is fully embedded in culture.

An additional argument is that universities need to provide students with opportunities to practice agency aimed at meaningful change in response to the concerns of our times. A formal curriculum that is enhanced through opportunity for scholars to practice agency creates an authentic learning experience. Further motivating this argument, the relevance of the formal (explicit) curriculum becomes more evident when linked with action based

learning projects, and that which is learned from succeeding (and/or failing) can complement, add or subtract from formal curriculum content. In contrast, if we only teach about sustainability challenges in theory, but which does not reflect the campus experience, this becomes problematic from a values perspective.

Rosenberg et al progress the argument further still:

the interlinked complex of knowledge, skills and values is not simply gained by new topics being taught;... this complex of knowledge, skills and values can be developed through boundary crossing interactions between formal and informal learning processes where the theory ... can be engaged as theory-and-practice-in-practice. (cited in Rosenberg et al, 2018)

This thus shifts perspective of the conversation from considering formal and informal curriculum as separate activities, and further motivates toward *social learning spaces*, supported across university activities.

In this discussion, there is no fault or criticism assigned, the intention is to rather create opportunity to explore the appetite and resource availability within support systems, to engage in informal curriculum activity, that which could inform new knowledge and learnings. In other words, the support systems of the university have opportunity and a role to play in effecting the praxis (practice and theory) of an academic project activity.

Notably, the needs of the projects are nuanced, and I acknowledge that there is a 'cost' associated with supporting new initiatives and projects. The cost takes varying forms (resources, capacity, expertise, legitimization, energy, change management support and social learning support); and the bearer of these costs needs consideration. It is a limitation of this study that these costs, and the varying forms that they take, could not be probed further. Other limitations are discussed next.

7.5 Study Limitations & Future Work

In addition to the limitation noted at the close of the afore section, another limitation of this study is that the case studies have not been given an opportunity through this study to share

their learnings between each other, as was originally intended, and thus the learning that takes place is limited to the individual project. A community of practice (CoP) would offer a platform for these learnings to be shared so that the progression is greater than having the same learnings repeatedly without the benefit of expanding into the 'commons'.

Other limitations of this study are mentioned below, along with measures that I have taken, or hope to take in future, to address them. These limitations are linked to the scope of a small-scale Masters study in relation to the size of the topic of interest, and some are linked to the VCF itself.

One issue is that the theory of social learning underpinning the VCF does not closely specify the relationship between learning and value, nor the relationship between learning, agency and change, and the study has not presented an opportunity to explore these key relationships further at a more conceptual level, given its design and space limitations. The relationship between these concepts is something to probe in further iterations of this work, within a wider body of literature that addresses them. What was evident, however, is the flow from one value creation cycle to another, which is illustrated through the arrows in the table in Appendix 6. Again, the dissertation did not allow space to expand on these connections between the value creation cycles which are clearly important, as Wenger-Trayner and Wenger-Trayner (2020, p. 127) noted: "It is in the flow that learning makes a difference". An example from the Nambu project: Scar's upbringing provides him with orientating value: he grows up learning and caring about the environment, developing potential value in the form of his curiosity and interest to make a difference. The university, supervisors, co-supervisors and funders enable the realisation of his vision for a sustainable stock feed project. He develops an extensive understanding of agricultural and economic systems and their interrelated socio and ecological aspects, providing him with further orienting value. His emerging agency enables him to persevere even when the university's secondary systems (the administrative support systems that provide access to the kitchens' food waste) initially do not see the value of supporting his project. His academic project creates potential value which he eventually turns into realized value when he has a fully-fledged, growing business employing several people - creating further potential value, including the value of re-framing how we think about and work with waste, create wealth, and design food systems.

Still, it is not always easy to tell from the VCF narratives told by the research participants, what came first, and what led to what. As Wenger-Trayner and Wenger-Trayner (2020, p. 240) explain:

Social learning spaces are as complex as any human system: assessing the value they create is correspondingly problematic. The most we can hope for is a plausible account of their contribution to changes in the world. Plausibility ... depends on the audience: what is plausible for someone may seem far-fetched for someone else. ... Our claim is simply that it is possible to take a rigorous approach to creating such plausible accounts.

In this study I attempted a rigorous analysis of the six cases of regenerative sustainability projects I encountered at Rhodes, identifying value based on the interviews with project leads and my interpretation of their accounts of value present and absent, identifying the flows between value cycles, and extracting themes across cases to discuss key concepts already identified in the published theory of social learning and value creation.

A key challenge in this study has been how to present the wealth of data generated. The design was to use six embedded case studies, so as to look for insights across cases, but each case generated data that could have been explored in more depth and shared more extensively. What to include in the analysis? What to present to the reader? How to justify conclusions drawn? Wenger-Trayner and Wenger-Trayner (2020) also acknowledge as a potential weakness of the VCF:

... plausibility also depends on the form of presentation. ... [I]t is a challenge to present evaluation results in a way that does justice to the social learning space while also giving audiences a digestible synopsis. The presentation of contribution data requires a careful selection of representative stories from the larger dataset. Even when integrated with robust effect data and driven by a systematic thematic analysis, such a selection is always subjective and open to challenge. ... But ... the intuitive nature of the [VCF] framework makes presentation to external stakeholders easier because they can understand the perspective and method behind results. (p. 240)

In this study, I had to leave much detail about the sustainability projects in my sample out of the dissertation. However, I tried to capture the richness, energy and drive that I experienced when interacting with the project leads, in the form of commissioned art works. I hope that the posters (referred to in chapter six) convey some of what I experienced, as I retold the value creation stories of the projects to the artist. I will also use these posters in further processes of unpacking the projects, hopefully with some of the project leads, as well as others who may be able to learn from and contribute to these projects.

7.6 Recommendations

In chapter three (see 3.1) within the section of Education and Social Learning, and the exercise of tracing the origins of educational metrics, there in it speaks of learning in terms of performance and mastery. If the university is considered as a social learning space, then the formal curriculum is by and large dedicated to the domain of performance and mastery. This is the acquisition of knowledge, which provides a solid base from which to progress. The second dimension considers learning as a democratic process, which features inclusion and participation. Thirdly, learning as connection which features meaning-making and relevance. A fourth domain is then presented, that of a “new genre of participatory research where social learning research is, in itself, a process of emancipatory social change, or capability development” (Lotz-Sisitka, 2009, p. 89) that is focused to agency-for-change as transformative inclusion (ibid.). Cundill et al. (2013) complement this idea in saying “learning is considered to have a role to play in building human capacities to adapt to changing social-ecological conditions” (p. 39). Herein a new focus for education for the social and planetary commons is offered, and that which responds to Rosenberg’s (2022) concern to the false promises that are being taught in today’s curricula.

It may be argued that the formal curriculum does not provide the space to practice this agency, and thus the importance of the informal curricula should be recognised in creating a space where one can encounter and experiment with regenerative sustainability.

So when I say ‘space’ is needed, am I talking about physical space? No, I am referring to space as in a social commons where students can test their ideas, where they can be challenged but they can also be supported.

This study does not prescribe what the social learning space should look like, but does recommend the inclusion of policy guidelines, so as to legitimize these spaces and resource mobilization, and thereby creating an enabling environment when such instances arise.

As an example, if universities recognize the role of mentors or systems convenors, and the role they play as a service and contribution to the university, in the same way a board member is recognised for the role served, this would facilitate academics’ and other mentors’ contributions to the social learning spaces.

Another example is that of recognising a green/green skills category in entrepreneurial hub activities.

Universities are intrinsically social learning spaces. There is a need to recognize that many young people come into the institution, already imbued with passion and looking for something meaningful to partake in. And at Rhodes University opportunities do present, due to the institution's reputational equity, which this offers legitimization, that students can leverage from. But the university needs to recognise informal curriculum as a space that holds opportunity for students and the university community to practice agency, a place where meaning, passion and agency can be tested and further developed. This recognition cannot only be contained to the academic project, it needs to be campus-wide.

Togo's (2009) PhD study recommendation was to progress sustainability, making it a campus-wide initiative, this masters level study gives a deeper understanding of what campus-wide means. Campus-wide includes all activities of the university, ranging from kitchens to residences, student leadership platforms, engaged research projects and local community-based projects.

This is not to say that the university as a whole must participate in the sustainability activities in a regulated way, but rather create enabling spaces for those students and university community members who have a passion for regenerative sustainability initiatives, to test and progress their learning for the common social and planetary good.

This recommendation is supported the White Paper on Education and Training (Parliament of the Republic of South Africa, 1995) that recommended environmental education be an integral part of education and training at all levels, highlighting the role education holds in addressing and moving toward sustainable development for the socio and environmental spheres.

7.7 Conclusion

The study opens questioning the click of a light switch or the availability of out-of-season strawberries. It touches on the Anthropocene, and the collective demands that humans place on the planet. A direction that this study could have taken, would have been to educate towards mitigating everyday behaviours that don't (in an obvious way) display the hidden energy being drawn from, and polluting, our planet.

The study rather looked to instances within the community that I work, being Rhodes University, to find possible disruptors. Disruption as a word holds negative connotations, but in this narrative it looks for instances where the status quo (or *curated* reality) is challenged -

in the way that adding internet access to the mobile phone has transformed how people interact with each other and the world, before which was unimaginable. I found these instances of disruption within this community, and these are the projects that I included in this study.

What I know now that I didn't know then, is how instrumental (if not obvious) meaning, meaningfulness and meaning-making are in driving the agency in these projects. This sense of meaning seems to be born in the Orientating value discussed in chapter three (see 3.3.1) and chapter six (see 6.2). It already exists within the students embarking on their tertiary educational experience and entering the university community, but these young meaning-makers need a *space* to practice agency, where they can encounter and experiment with this difference-that-they-want-to-make. And the *space* in which to practice this agency is the informal curriculum.

In the discussion thus far (7.2, 7.3 and 7.4), the focus has been around operationalising learning; the meaning, meaning-making and meaningfulness that spurs on agency; and the role of the informal curriculum.

In saying this however, and speaking back into this study's context of regenerative sustainability, highlighting what I believe is the study's contribution to the field, are the threads of value that emerged, as was discussed in chapter six. Rudin (introduced in 4.3.1) argued to "find avenues of using the cumulated wisdom of case studies available". Initially these threads of wisdom (or "nuggets of gold" as described by Jonathan Hellemann) that emerged were abstract and difficult to categorise, but across this context of regenerative sustainability, they emerge as inherent values.

Where Elkington's 'pillars' of sustainability are named as Profit, People and Planet, and conceding that the theory evolves to a relational dependence between the pillars, within this study however, the value is an overlaid-lens perspective of people and planet, so that these are seen within and through the other.

Where the pillar of people is presented in the sustainability theory, this study argues for the recognition of, and reverence, of *the* Social Commons, and engaging therein in a deeply respectful manner - so that the relationship is not one way (top-down) but rather a mutually beneficial flow where inputs, and that which the social commons deems as valuable, is recognised and honoured.

The value of a whole-systems perspective connects these two values. To elaborate this, I reference the citrus industry example, where a water scarce country exports for profits (the

majority of which benefit a select few), that which used the very water that is so scarce and that which belongs to the commons. Leading to the next thread of value, requiring a new way of seeing, and a reframing of what is accepted as reality, and of that which holds value. This thus challenges for an alternate paradigm, where the curated realities are named for their curated-ness, where they are debated and reframed, collectively, so that learning may be progressed through this naming and debating process.

Institutions of Higher Education can provide the space for the coming together, and for testing new ways, new knowledge and new skills, as well as new language which would support the progress of and lead learning, for the benefit of social and planetary commons.

I close by repeating the story line as presented in 2.1.9, from the 2021 webinar hosted by the International Association of Universities (IAU):

Universities have freedoms and the power that many other [organisations] don't have... [and need to be] encouraged to be much bolder than they currently are in addressing these future challenges... at the heart of it [there needs to be] a real commitment to and toward transgressive learning/ research and regenerative justice that reaches beyond, [that which] can touch the planet... I feel very strongly the enthusiasm for change in the young people on the African continent, so lets embrace this enthusiasm, and create the space for this to grow and for the creativity to emerge in our societies, and we will have a better future. (Lotz-Sisitka, 2021b)

Who if not we professional education communities, and when if not now, should take urgent action to shape sustainability mindsets, attitudes and behaviours to unite our communities' intellectual resources and to lead towards the solution of global societal challenges towards a more just peaceful and sustainable world. (Žalėnienė, 2021)

Yes, we live in a time of uncertainty... but they are exciting times.

8. References

- Amadi-Echendu, A., Phillips, M., Chodokufa, K., & Visser, T. (2016). Entrepreneurial education in a tertiary context: A perspective of the University of South Africa. *International Review of Research in Open and Distributed Learning*, 17(4), 1-15. <https://files.eric.ed.gov/fulltext/EJ1108439.pdf>
- Brundtland, G. H. (1987). Our common future: A report of the World Commission on Environment and Development, also known as the Brundtland Report. *World Commission on Environment and Development*. Oxford University Press. <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>
- Cundill, G., Lotz Sisitka, H.B., Mukute, M., Belay, M., Shackleton, S., & Kulundu, I. (2013). A reflection on the use of case studies as a methodology for social learning research in sub Saharan Africa. *NJAS: Wageningen Journal of Life Sciences*, 69(1), 39-47. 10.1016/j.njas.2013.04.001
- Durr, S. J. (2019). Enabling social learning to stimulate value creation towards a circular economy: The case of the Food for Us redistribution mobile application development process [Unpublished Master's dissertation. Rhodes University]. Rhodes University Environmental Learning Research Centre Dissertation Archive. <https://www.ru.ac.za/elrc/ourpeople/alumni/mastersandthesisarchive/#d.en.303495>
- Elkington, J. (1994). Towards the sustainable corporation: Win-win-win business strategies for sustainable development. *California Management Review*, 36(2), 90–100. <https://journals.sagepub.com/doi/10.2307/41165746>
- Elkington, J. (1997). *Cannibals with forks: The triple bottom line of 21st century business*. Capstone Publishing.
- Ellen Arthur Foundation. (2013). *Towards the circular economy*. <https://ellenmacarthurfoundation.org/towards-the-circular-economy-vol-1-an-economic-and-business-rationale-for-an>

- Engeström, Y., & Sannino, A. (2010). Studies of expansive learning: Foundations, findings and future challenges. *Educational Research Review*, 5(1), 1-24.
10.1016/j.edurev.2009.12.002
file:///C:/Users/s1500117/Downloads/Studies_of_expansive_learning_Foundations_findings.pdf
- Food For Us. (2019). Project report. Rhodes University.
https://www.ru.ac.za/media/rhodesuniversity/content/elrc/documents/2018/Food_for_Us_Report.pdf
- Ghisellini, P., Cialani, C., & Ulgiati, S. (2016). A review on circular economy: The expected transition to a balanced interplay of environmental and economic systems. *Journal of Cleaner Production. Towards Post Fossil Carbon Societies: Regenerative and Preventative Eco-Industrial Development*. 114, 11–32. 10.1016/j.jclepro.
<https://www.sciencedirect.com/science/article/abs/pii/S0959652615012287>
- Gibbons, L.V. (2020). Regenerative—The new sustainable? *Sustainability*. 12,1-19.
file:///C:/Users/s1500117/Downloads/sustainability-12-05483-v2.pdf
- Glasser, H., Calder, W. & Fadeeva, Z. (2005). *Definition: Research in Higher Education for Sustainability*. Halifax.
- Granados-Sánchez, J., Wals, A.J., Ferrer-Balas, D., Waas, T., Imaz, M., Nortier, S., Svanström, M., Van't Land, H., & Arriaga, G. (2011). Sustainability in higher education moving from understanding to action breaking barriers for transformation. *The Global University Network for Innovation*.
http://www.guninetwork.org/files/sustainability_in_higher_education_moving_from_understanding_to_action_breaking_barriers_for_transformation.pdf
- Grbich, C. (1999). *Qualitative research in health*. Allen and Unwin.
- Hult Prize. (2021). *The Hult Prize Challenge*. <https://www.hultprize.org/>
- Jickling, B., Lotz-Sisitka, H.B., Olvitt, L.L., O'Donoghue, R., Schudel, I., McGarry, D.K., & Niblett, B. (2021) *Environmental ethics: A source book for educators*. African Sun Media.

- King, M. (2016). King IV. *Institute of Directors of Southern Africa*.
https://www.iodsa.co.za/page/king_iv_report
- King, M., & Atkins, J. (2016). *Chief value officer: Accountants can save the planet*. Greenleaf Publishing.
- Kirkpatrick, D.L. (1976). Evaluation of training. In R. L. Craig (Ed.), *Training and development handbook: A guide to human resource management* (2nd ed., pp. 301-319). McGraw-Hill.
- Kirkpatrick, D.L. (1994). *Evaluating training programs: The four levels*. Berrett-Koehler Publishers.
- Kneese, A.V. (1988). The economics of natural resources. *Population and Development Review*, 14, 281-309. 10.2307/2808100. <https://www.jstor.org/stable/2808100>
- Kumar, S. (2021). Online presentation. *GEN2021 EcoVillage Summit: Living Solutions for a Regenerative World*. <https://www.facebook.com/watch/?v=2857841481100699>
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.
- Lincoln, Y.S., & Guba, E.G. (1985). *Naturalistic inquiry*. Sage.
- Locatelli, R. (2018). Education as a public and common good: Reframing the governance of education in a changing context. *UNESCO Education Research and Foresight Working Papers. Education2030*. <https://unesdoc.unesco.org/ark:/48223/pf0000261614>
- Lotz-Sisitka, H.B. (2009). Piecing together conceptual framings for climate change education research in southern African contexts. *Southern African Journal of Environmental Education*, 29, 82-92 . ISSN 2411-5959
<https://www.ajol.info/index.php/sajee/article/view/122808>
- Lotz-Sisitka, H.B. (2012). Conceptions of quality and 'learning as connection'- teaching for relevance. *Southern African Journal of Environmental Education*, 29, 25-38. ISSN 2411-5959 <https://www.ajol.info/index.php/sajee/article/view/122256>

Lotz-Sisitka, H.B. (2020). 'Ways of being free': Finding 'pulses of freedom' in the border zone between higher and public education for sustainable development. Chapter 5 in: Armon, J., Scoffham, S., Armon, C. (Ed). *Prioritizing Sustainability Education: A Comprehensive Approach*. Routledge, London. ISBN: 9780429021800.
<https://doi.org/10.4324/9780429021800>.

Lotz-Sisitka, H.B. (2021a). Researching learning in Africa. A course for postgraduate researchers in education, Rhodes University. 26-29 July, 2021.

Lotz-Sisitka, H.B. (2021b). Panelist in the IAU 2021 webinar series: Acting and educating for sustainable development at universities. International Association of Universities.
<https://www.youtube.com/watch?v=g0Bnh8yUEZk>

Mouton, J. (2001). *How to succeed in your masters and doctoral studies*. Van Schaik.

Nambu Group. (2020). *Insect protein for a sustainable future*.
<https://www.nambugroup.co.za/about>

Ndagijimana, N. (2020). Strategies for delivering on the Sustainable Development Goals: Some lessons from Rwanda. *Africa in Focus Series*.
<https://www.brookings.edu/blog/africa-in-focus/2020/01/20/strategies-for-delivering-on-the-sustainable-development-goals-some-lessons-from-rwanda/>

O'Donoghue, R. (2014). Re-thinking education for sustainable development as transgressive processes of educational engagement with human conduct, emerging matters of concern and the common good. *Southern African Journal of Environmental Education*, 30, 7-26. ISSN 2411-5959 <https://www.ajol.info/index.php/sajee/issue/view/12722>

Online Etymology Dictionary. (2022). Oikonomikos translated. [etymonline.com](https://www.etymonline.com)

Oxford Languages. (2019).
https://www.google.com/search?q=endogenous+meaning&rlz=1C1GCEB_enZA921ZA921&oq=endogenous&aqs=chrome.1.69i57j0i131i433j0l8.2275j0j15&sourceid=chrome&ie=UTF-8

Parliament of the Republic of South Africa. (1995). Notice no 196 of 1995, White Paper on Education and Training. *Department of Education General Notice*.

https://www.gov.za/sites/default/files/gcis_document/201409/16312gen1960.pdf

Pesanayi, V. T., O'Donoghue, R., & Shava, S. (2019). Situating education for sustainable development in southern African philosophy and contexts of social-ecological change to enhance curriculum relevance and the common good. *Southern African Journal of Environmental Education*, 35, 1-9. 10.4314/sajee.v35i1.15 ISSN 2411-5959:
<https://www.ajol.info/index.php/sajee/article/view/187217>

Porter, M.E., & Kramer, M. R. (2010). Creating shared value. In G. G. Lenssen & C. C Smith (Eds.), *Managing sustainable business* (pp. 232-346)
https://link.springer.com/chapter/10.1007/978-94-024-1144-7_16

Radicle Balance. (2021). *Learn the three key principles of the circular economy*.
<https://radiclebalance.com/resources/articles/the-3-principles-of-the-circular-economy>

Raworth, K. (2017). *Doughnut economics: Seven ways to think like a 21st-century economist*. Random House Business.

Ramsarup, P. & Ward, M. with contributions from Rosenberg, E., Jenkin, N. & Lotz-Sisitka, H. (2017). *Enabling green skills: Pathways to sustainable development. a source book to support skills planning for green economies*. <https://www.greenskills.co.za/wp-content/uploads/2018/08/GS-Sourcebook-LowRes-23jul18.pdf>

Rhodes University. (1998, v2015). *Environmental Sustainability Policy*.
https://www.ru.ac.za/media/rhodesuniversity/content/environment/documents/RU_Environmental_Sustainability_Policy_dd_2015-09-08_APPROVED.pdf

Rhodes University. (2017a). RU Environmental Award Winners 2017.
<https://www.ru.ac.za/environmentalsustainability/awards/2017awards/>

Rhodes University. (2017b). *Food for Us project report*.
<https://www.ru.ac.za/elrc/researchprojects/foodforus/>

Rhodes University. (2018). *Institutional Development Plan*.

- Rhodes University. (2019). *Constitution of Student Governance*.
https://www.ru.ac.za/media/rhodesuniversity/content/src/documents/Constitution_of_Student_Governance.pdf
- Rhodes University. (2020). *Environmental Sustainability Welcome*.
<https://www.ru.ac.za/environmentalsustainability/>
- Rhodes University. (2022). *Education Faculty Research Ethics Review Handbook*.
<https://www.ru.ac.za/researchgateway/ethics/>
- Rockström, J., & Karlberg, L. (2010). The quadruple squeeze: Defining the safe operating space for freshwater use to achieve a triply green revolution in the Anthropocene. *AMBIO*, 39, 257-265. <https://doi.org/10.1007/s13280-010-0033-4>.
- Rockström, J., Steffen, W., Noone, K., Persson, A., Chapin, F.S., Lambin, E., Lenton, T. M., Scheffer, M., Folke, C., Schellnhuber, H.J., Nykvist, B., de Wit, C.A., Hughes, T., van der Leeuw, S., Rodhe, H., Sörlin, S., Snyder, P.K., Costanza, R., Svedin, U., Falkenmark, M., Karlberg, L., Corell, R.W., Fabry, V.J., Hansen, J., Walker, B., Liverman, D., Richardson, K., Crutzen, P., & Foley, J. (2009). Planetary boundaries: Exploring the safe operating space for humanity. *Ecology and Society*. 14(2) 10.5751/ES-03180-140232.
<https://www.ecologyandsociety.org/vol14/iss2/art32/>
- Rosenberg, R. (2022). Standards and competencies for teacher development through the lens of a case study of sustainability education for a green economy in South Africa. *Ninth AFTRA Teaching and Learning Conference and Eleventh Round Table*. May 2022. Ghana
- Rosenberg, E., Ramsarup, P., & Lotz-Sisitka, H. B. (2019). *Green Skills Research in South Africa: Models, Cases and Methods*. Routledge.
- Rosenberg, E., Ramsarup, P., & Lotz-Sisitka, H. B. (2018). The green economy learning assessment South Africa: Lessons for higher education, skills and work-based learning. *Higher Education, Skills and Work-Based Learning*, 8(3), 243-258 Emerald Publishing Limited. 10.1108/HESWBL-03-2018-0041
<https://www.emerald.com/insight/publication/issn/2042-3896/vol/8/iss/3>

- Rudin, L. P. (2006). You can generalize stupid! Social scientists, Bent Flyvberg, and case study methodology. *Qualitative Inquiry*, 12(4), 797-812. 10.1177/1077800406288622
<http://qix.sagepub.com>
- Sfard, A. (1998). On two metaphors for learning and the dangers of choosing just one. *Educational Researcher*, 27, 4-13. <https://www.jstor.org/stable/1176193>
- Shenton, A. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education Information*, 22(2) 63-75.
file:///C:/Users/s1500117/Downloads/Strategies_for_Ensuring_Trustworthiness_in_Qualita.pdf
- Smith, D. (2021). *100 inspirational quotes by Maya Angelou: A boost of wisdom and inspiration from the legendary poet*. Amazon
- Sobuwa, Y. (2019). SA students vie for R15m business start-up prize. *Sowetan*.
<https://www.sowetanlive.co.za/news/south-africa/2019-08-05-sa-students-vie-for-r15m-business-start-up-prize/>
- South African Department of Higher Education and Training. (2015). National skills development strategy III. *Department of Higher Education and Training*.
<https://www.nationalskillsauthority.org.za/wp-content/uploads/2015/11/NSDSIII.pdf>
- Stats SA. (2020). SA economy sheds 2,2 million jobs in Q2 but unemployment levels drop.
<http://www.statssa.gov.za/?p=13633#:~:text=The%20significant%20changes%20in%20the,%25%20in%20quarter%202%3A2020.>
- Stats SA. (2021). Quarterly labour force survey, quarter 1: 2021. *Statistical Release P0211*
<http://www.statssa.gov.za/publications/P0211/P02111stQuarter2021.pdf>
- Steel, T. (2019). *WWF Manifesto*. https://www.wwf.org.uk/sites/default/files/2019-10/election_Manifesto2019.pdf
- Sterling, S, Dawson, J., & Warwick, P. (2018). Transforming sustainability education at the creative edge of the mainstream – A case study of Schumacher College. *Journal of*

Transformative Education, 16 (3).

journals.sagepub.com/eprint/6Yb8rVT5jAvSTV5Z2faa/full

Sterling, S. (2021). Panelist in the IAU 2021 webinar series: Acting and educating for sustainable development at universities. International Association of Universities.

<https://www.youtube.com/watch?v=g0Bnh8yUEZk>

Talloires Declaration. (n.d.). *University leaders for a sustainable future*.

<http://ulsf.org/talloires-declaration/>

Tbilisi Declaration. (1977). *First world intergovernmental conference on environmental education*. 14-26 October 1977. United Nations Education, Scientific, and Cultural Organization and U.N. Environment Programme.

<https://www.gdrc.org/uem/ee/tbilisi.html>

TheDodo.com. (2014). *Top of the food chain*. <https://www.thedodo.com/top-of-the-food-chain-877255355.html>

Togo, M. (2009). A systems approach to mainstreaming environment and sustainability in University: The case study of Rhodes University. [Unpublished Doctoral dissertation. Rhodes University]. Rhodes University Environmental Learning Research Centre Dissertation Archive.

www.ru.ac.za/elrc/ourpeople/alumni/phdandthesisarchive/#d.en.303493

Transforming Education for Sustainable Futures. (2020). Foundations Paper. TESF.

<https://tesf.network/resource/tesf-foundations-paper/>

United Nations. (1972). Declaration of the United Nations Conference on human environment. *United Nations Conference on Human Environment*. 1972 Stockholm, Sweden. https://www.soas.ac.uk/cedep-demos/000_P514_IEL_K3736-Demo/treaties/media/1972%20Stockholm%201972%20%20Declaration%20of%20the%20United%20Nations%20Conference%20on%20the%20Human%20Environment%20-%20UNEP.pdf

- United Nations. (2015). Resolution adopted by the General Assembly on 25 September 2015, Transforming our world: the 2030 Agenda for Sustainable Development.
https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf
- United Nations. (2017). Resolution adopted by the General Assembly on 6 July 2017, Work of the Statistical Commission pertaining to the 2030 Agenda for Sustainable Development.
<https://daccess-ods.un.org/tmp/5220115.18478394.html>
- United Nations Educational, Scientific and Cultural Organisation. (2010). International Task Force on Teachers for EFA. *Second International Policy Dialogue Forum on Providing Teachers for Education for All (EFA): Quality Matters*. Held in Amman, Jordan. 6-7 July 2010
- United Nations Educational, Scientific and Cultural Organisation. (2020). *Education for Sustainable Development: A Roadmap*. UNESCO. Paris.
<https://unesdoc.unesco.org/ark:/48223/pf0000374802.locale=en>
- United Nations Educational, Scientific and Cultural Organisation. (2021). *Reimagining our Futures Together: A new social contract for Education*. UNESCO.
<https://en.unesco.org/futuresofeducation/international-commission>
- University of New Hampshire. (2016). NEW Dual Major brings Sustainability to the Forefront .
<https://www.unh.edu/unhtales/new-dual-major-brings-sustainability-to-the-forefront/>
- Vygotsky L. S. (1930, transcribed 1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
<http://www.unilibre.edu.co/bogota/pdfs/2016/mc16.pdf>
- Wenger, E. (2000). Communities of practice and social learning systems. *Organization*, 7(2), 225-246. 10.1177/135050840072002
- Wenger, E. (2004). *Learning for a small planet: A research agenda*.
<https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.469.4664&rep=rep1&type=pdf>

- Wenger, E., Trayner, B., & De Laat, M. (2011). *Promoting and assessing value creation in communities and networks: A conceptual framework*. Ruud de Moor Centrum.
http://www.open.ou.nl/rs/mlt/Wenger_Trainer_DeLaat_Value_creation.pdf
- Wenger-Trayner, E., & Wenger-Trayner, B. (2014). Systems conveners in complex landscapes. In E. Wenger-Trayner, M. Fenton-O'Creivy, C. Kubiak, S. Hutchinson, & B. Wenger-Trayner (Eds.), *Learning in landscapes of practice boundaries, identity, and knowledgeability in practice-based learning* (pp.13-29). Routledge.
- Wenger-Trayner, E., & Wenger-Trayner, B. (2015). *Social learning – A framework*.
<https://www.youtube.com/watch?v=qvighN3BDml&t=733s>
- Wenger-Trayner, E., & Wenger-Trayner, B. (2020). *Learning to make a difference*. Cambridge University Press.
- Willard, B. (2002). *The sustainability advantage: Seven business case benefits of a triple bottom line*. New Society Publishers.
- World Bank. (2011). *Learning for all: Investing in people's knowledge and skills to promote development: World Bank Group Education Strategy 2020*. World Bank.
<https://documents1.worldbank.org/curated/en/685531468337836407/pdf/644870WP0Learn00Box0361538B0PUBLIC0.pdf>
- World Bank. (2018). Global data set on education quality (1965–2015). Policy Research.
<https://documents1.worldbank.org/curated/en/706141516721172989/pdf/WPS8314.pdf>
- Yin, R.K. (2003). *Presentation of the case study research: Design and methods*.
<https://www.slideshare.net/pavan7soni/case-study-research-by-robert-yin-2003>
- Zaleniene, I. (2021). Panelist in the IAU 2021 webinar series: Acting and educating for sustainable development at universities. International Association of Universities.
<https://www.youtube.com/watch?v=g0Bnh8yUEZk>

Appendices

- Appendix 1. Ethics Approval Letter
- Appendix 2. Permission Letter to Conduct Research with University Students
- Appendix 3. Permission Letter to Conduct Research with University Staff Members
- Appendix 4. Research Instrument: Semi-Structured Interview Guide and Consent Form
- Appendix 5. Study Activity & Progress Map
- Appendix 6. Value Creation Framework Exercise
- Appendix 7. Tagging Matrix
- Appendix 8. Uncovering themes – working document
- Appendix 9. Eyethu Project Art Poster
- Appendix 10. Nambu Project Art Poster
- Appendix 11. Tech-Waste/E-waste Project Art Poster
- Appendix 12. Stanley Kidd Residence Project Art Poster
- Appendix 13. Rhodes University Workshop 'Curriculum Transformation and Sustainability'
- Appendix 14. Declaration



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29 November 2021

Carlene ROYLE

Education Department

g20r3868@campus.ru.ac.za

Dear Carlene ROYLE

Re: Key features of social learning associated with Regenerative Sustainability practice. A case study at Rhodes University

APPLICATION NUMBER: 2021-5316-6411

This letter confirms that your research ethics application has been reviewed and **APPROVED** by the Education Faculty Research Ethics Committee (EF-REC). Your permission letter(s) where applicable have been received and you are free to proceed with your study.

Approval is granted for 1 year. An annual progress report is required in order to renew approval for an additional period. You will receive an email notifying you when the progress report is due.

Should any substantive change(s) be made during the research process, that may have ethical implications, you should notify the Education Faculty REC Chair via email. This includes changes in investigators. The REC Chair will advise as to whether a new application is necessary.

Do keep this clearance letter secure and accessible throughout your study and after its completion. It will be needed when a thesis is examined and when publications are submitted to journals.

Please also submit a brief report to the REC Chair on the completion of the research. This can be done via email. The purpose of this report is to indicate whether the research was conducted successfully and whether any ethics-related matters arose that the committee should be aware of, in order to guide future studies.

Sincerely,

Prof Eureka Rosenberg

Chair: Education Faculty Research Ethics Committee



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24 November 2021

Ms C Royle
Education Department

Dear Ms Royle

REQUEST FOR GATEKEEPERS PERMISSION TO CONDUCT RESEARCH WITH RHODES UNIVERSITY STUDENTS

Name of research proposal: Key features of social learning associated with Regenerative Sustainability practice.

This serves to confirm that you have been granted permission to conduct your proposed research at Rhodes University as requested.

Kindly be advised that the University is not obliged to make any arrangements in terms of this research, and that the onus is on the researcher. It is also your responsibility to protect the integrity of the University in the manner in which you collate and engage the data.

This letter is valid from 24 November 2021 to 23 November 2023.

Yours sincerely

Professor Adèle Moodly
REGISTRAR



23 November 2021

Carlene Royle,
Education Department
RHODES UNIVERSITY
c.royle@ru.ac.za

Dear Carlene

REQUEST TO CONDUCT RESEARCH WITH RHODES UNIVERSITY STAFF ONLY

This letter is to confirm that your request to conduct research on *“Understanding key features of social learning associated with regenerative sustainability practice. An embedded case study at Rhodes University, South Africa.”* topic has been approved by the Ethics Committee. In my capacity as Acting HR Director, I do not have any objection should you wish to follow a coordinated approach by surveying and/or interviewing staff.

Kindly note that this approval is for research with staff members only. For student-related research, approval must be sought with the office of the Registrar.

Yours sincerely



Mrs S Robertson
Acting HR Director

Interview Guide for Embedded Case Study Sustainability Projects on Rhodes University Campus**Section 1:**

Interviewer: Carlene Royle (Researcher)

Interviewee: _____

Date of Interview: _____

Project Name: _____

Consent:

I, _____ (full name) give permission to use the interview recording, notes and observations of date _____ for a Masters level research study at Rhodes University.

Below I note any exclusions and/or my preference for myself and/or the project being discussed to remain anonymous:

I am aware that at any stage of this study I can withdraw my participation should I so chose.

Signed: _____

Date: _____

Section 2:

Project Inception date: _____

Project Completion/ end (if relevant): _____

Number of team members (number and composition)

@ start of project	Now	Midway
Date:		
No:		

1. Tell me about this project, as if I don't know anything about it, and especially, what your role is within the project?

2. From your perspective, what was the initial motivation / motivational driver for this project? Put it differently, share with me the dream in a sentence: (Probes: Over-arching cause/ vision / reason for / thinking behind the project:)

3. **Summarised overview of project:**
 - 3.1 Tell me a little about the history of the project, how it unfolded over time? Just in broad strokes - and please assume I know very little about it.

 - 3.2 Now if we could perhaps hone in on some of the main highlights? What stood out for you as major progress or achievements along the way?

 - 3.3 Were there any major stumbling blocks or set backs along the way?

 - 3.4 What caused these, in your view?

 - 3.5 Similarly with the progress and achievements, with hindsight, what would you say contributed to them? Probe (once answers have been given): What about funding? Networks? Others forms of capital (human/ relational/ tangible/ reputational/learning? Possible university input that would support the project's journey? Anything else?

 - 3.6 How does this project define success? And how does it define failure? Why?

4. You might have already answered this, but, looking back over the project as a whole, is there or has there been any benefit, no matter how big or small, from this project, in your view?: Could you expand on that?
 - Were there any enabling factors in terms of the project's history, that are evident to you now in hindsight? Examples:

5. Tell me about your experience and learnings in this project? (success/ failure /barriers – then vs now)
 - Is there any evidence of an unseen/ hidden success (outside of financial measurables)? (reputation/ expertise/ confidence/ knock-on ideas/ etc

6. Any identifiable fulcrum leveraging that enabled the (little or big) successes

7. If you had opportunity to go back in time, what would you do differently?
 - What would you do the same?

8. In terms of then versus now, is there a change in your understanding or your perspective of (regenerative) sustainability? Would you say that your understanding of sustainability [they might use a different but comparable term here?] has changed over time, while you've been involved in this project? Could you say a bit more about that?

9. In the evolution of the project, can you think of any new tools, methods or processes that have evolved? How did these come about?

10. In your mind, has anyone or any group acquired a new voice or a new/altered identity through their association with this project?

11. Do you think this project has in any way influenced the greater field of regenerative sustainability, or could potentially do so? Please explain?

12. What, if anything, has changed as a result of this project?

13. How would you rate the below ideas for this project (5: Extremely important, to 1: not really important/relevant)? And Why?

- Collaboration
- Agency
- boundary crossing
- value co-creation
- social innovation
- transferring of learning practices/ knowledges (internally & possibly through regenerative sustainability networks)?
- Any other?

14. In what way has the university supported this project, if at all?
15. Would you say that this project has changed you in any way? / Probe: Have you perhaps acquired new skills/knowledge? Made new contacts, built networks? Gained insights on how to run or start such projects in future?
16. Has this project changed your team in any way? / Probe: For example, have they acquired new skills/knowledge? Gained confidence? Exposure? Made useful contacts? New understanding of change work or sustainability projects?
17. What difference has this project made to your life?/ Has this project led to a reflection or confirmation of what matters most to you?
18. Any shared learnings / pearls of wisdom for future regenerative sustainability projects?
19. Possible university input that would support the project's journey?
20. What are your thoughts on this image? Can your project add to it, or would your project possibly come up with a different image to demonstrate what is needed for change to happen?



Study Activity, Progress Mapping

Royle, C. Student number: 20R3868



Date	Activity log	Corresponding Documents
2021.11.05	MEd Proposal submission to Education Higher Degrees Committee (EHDC)	1
2021.11.05	Submission of Ethics application	
2021.11.18	EHDC and tentative Ethics approval received (Ethics required institutional approval for campus focused study from Registrar (students) and HR Director (staff) interactions)	2,3,1
2021.11.22	Permission request sent to Dr Moody as Registrar and Ms Susan Robertson as Acting HR Director	3,1,4,5
2021.11.29	Institutional permission received from Registrar Division (Students)	5,1
2021.11.29	Institutional permission received from HR Division (Staff)	5,2
2021.11.29	Ethics Approval finalized and final letter received	3
2021.12.01	Courtesy Communication sent to Environmental Committee Chair	8, 1
2021.12.01	CFO Dir. Riga - Courtesy Communication and Permission to include and approach <u>FinCore</u> Project	9
2021.12.01	Permission to include and approach <u>FinCore</u> project from CFO Dir. Riga	9,1
2021.12.01	<u>FinCore</u> Project – Invitation to partake in <u>Masters</u> Level Study sent to [redacted] project lead)	9,2, 3, 6
2021.12.01	Kitchens Initiatives - Courtesy Communication and Permission to include and approach Kitchens team to [redacted]	10, 1
2021.12.01	Kitchen Initiative – Invitation to partake in <u>Masters</u> Level Study sent to Ms Lal Romkala and Ms Roulie Hattingh (Assistant Kitchen Managers)	10,1, 3, 6
2021.12.01	Recycling Project – Invitation to partake in <u>Masters</u> Level Study sent to [redacted] and Ms Nomonde Langeni	11, 3, 6
2021.12.01	Recycling Project – Invitation to partake in <u>Masters</u> Level Study sent to Stanley Kidd Res Warden Jonathan Helleman	11,2, 3, 6
2021.12.01	Recycling Project – Invitation to partake in <u>Masters</u> Level Study sent to GCUF Project team	11,3, 3, 6
2021.12.01	Nambu Project – Invitation to partake in <u>Masters</u> Level Study sent to Mr Lowell Scarr (Lead)	12, 3, 6
2021.12.01	E-Waste Project – Invitation to partake in <u>Masters</u> Level Study sent to Dr Gauta Matlou (was the project lead)	13, 3, 6
2021.12.01	CSD Eyethu Project – Invitation to partake in <u>Masters</u> Level Study sent to [redacted] Vatiswa Joni and Nolithando Shelle	14, 3, 6
2021.12.01	E-Waste Project – Dr Gauta Matlou agrees to partake (was the project lead)	13,1, 13
2021.12.13	Study progress report submitted via ROSS system (as per annual requirements)	
2022.02-7-11	MEd Study block	
2022.02.14	Schedule project interviews	
2022.02.15-16	Reflection exercises on projects where there is researcher involvement	
2022.02.17-18	Reflection exercise	
2022.02.21 13h30	Project 1 interview: Dr Gauta Au – <u>Hultz Prize</u> E-Waste repurposing initiative (Zoom)	
2022.02.28 – 8 March 2022	Interview transcription and soft analysis	
2022.03.07 10h00 – 11h30	Project 2 interview – Kitchen's Lala Rakoma & Roulie Hattingh	
2022.03.07 - 08	Interview transcription and soft analysis	
2022.03.09 11h10 – 12h00	Project 3 Grounds and Gardens - Interview Nomonde Langeni	
2022.03.10 - 11	Interview transcription and soft analysis	
2022.03.11	Supervisor meeting	
2022.03.14 09h00 – 10h30	Project 3 interview – Mr Jonathan Helleman – Stanley Kidd Recycling Project (@Stanley Kidd Res, RU)	
2022.03.14-15	Interview transcription and soft analysis	
2022.03.16 10h00 – 11h30	Project 2 Interview Lowell Scarr: Nambu Group Black Soldier Fly Larvae Worm farming project accepted	
2022.03.16-20	Interview transcription and soft analysis	
Monday	Public Holiday	
2022.03.22 10h00 – 11h30	Project 4: Interview: Eyethu: [redacted] Ms Nollie Shelle; Ms Vatiswa Joni	
2022.03.23 - 25	Interview transcription and soft analysis	
Wed 2022.03.23	Project 3 interview – [redacted] <u>email request sent</u> . No response received	

2022.03.23	Project: FinCare – excluded due to project-sensitive implementation pressures, as agreed with lead supervisor on 2022.03.11. CFO Mr Riga confirmed.	
2022.03.24 10h00 – 11h00	Project 5: Food for Us project – Sarah Durr accepted	
2022.03.24 - 25	<i>Interview transcription and soft analysis</i>	
2022.04.01 (Fri) 10h00 – 12h00	Project 3: GUCF/RSC EnvCallr Legacy Team – (at Provost, RU Campus)	
4-8 April 2022	MEd Week	
6-18 April 2022	VCF Analysis of the project interviews	
19 April 2022	Supervisor meeting	
25 – 26 April 2022 (2-5pm)	Invited to present interim findings to the Rhodes University hosted workshop: Curriculum Transformation and Sustainability. (... inter-university project to Professionals Undergraduate Academic Teaching (PUAT) of the United Nations Sustainable Development Goals) <i>"The intended outcome of the workshop, hosted over two afternoons, is to collaboratively develop tools for curriculum innovation that can be more widely shared across disciplines at Rhodes University."</i>	
2-6 May 2022	Write up x3 of the project into short stories	
10 May 2022	Met with Illustration artist (zoom) Elliot Taylor Jaydz for the stories to be illustrated into superhero posters (x1 poster per story = 6 +1 poster that captures context)	
11 – 13 May 2022	Write up final x3 project stories	
	Engagement with artist for 7-poster project throughout May/June/July	
30 May – 3 June	Start thesis development – work through chapters 1, 2 & 3, drawing on work and study notes over period of study	
6-13 June	Data analysis interrogated through the write up of the value creation framework weaving process. Build into chapter 4 of thesis development	
14 June >>	Chapter 5&6 draft – interpreting the data	
20 June	Thesis (DRAFT 1) sent to Supervisors	
27 June – 1 July	MEd block – additional reflections	
22 June – 8 July	Work on updated version of Draft 1 (with Critical friend initial comments <u>and also</u> the MEd block reflections included)	
11 July	Updated version of Draft 1 to supervisors	



E-Waste Repurposing Project. Based on Interview with Dr Gauta Matlou on 21 February 2022

The 'midi' system: enabler vs hindrance

The Heart beat

Fostering curiosity

Reputational Equity

Orienting Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Reframed / Transformational Value	Data code
<p>"Finding yourself in the broader landscape" (Wenger-Trayner and Wenger-Trayner, 2020, p113)</p>	<p>"What is the quality engagement with strategic shareholders?" (Wenger-Trayner and Wenger-Trayner, 2020, p106)</p>	<p>"What makes it all possible?" (Wenger-Trayner and Wenger-Trayner, 2020, p98)</p>	<p>"What is the experience like?" (Wenger-Trayner and Wenger-Trayner, 2020, p79)</p>	<p>"What comes out of it... yet to prove useful" (Wenger-Trayner and Wenger-Trayner, 2020, p84)</p>	<p>"What are you learning in the doing?" (Wenger-Trayner and Wenger-Trayner, 2020, p89)</p>	<p>"What difference does it make? ... seeing the result" (Wenger-Trayner and Wenger-Trayner, 2020, p94)</p>	<p>"Does the difference... have broader effects?" (Wenger-Trayner and Wenger-Trayner, 2020, p118)</p>	
	<p>-VE alludes to friction (possibly misalignment) in support structure, but this holds opportunity for policy development</p>	<p>Shuttle transfer assistance provided - but this proved to be a conflict within supporting department</p> <p>-VE access to physical space hindered implementation</p>	<p>Experience of despair and frustration</p> <p>(lost opportunity)</p>	<p>-VE opportunity in bringing together the network of diverse skills is lost due to no-space access</p>	<p>-VE: the system can actually hinder you from achieving your goals" 1:01:56</p>		<p>If reversed & if responsive, the system can amplify such projects</p>	VM1.1
<p>Ubuntu – all conversation is "we", "we are within this problem" 3:27</p>	<p><- Community</p>						<p>Environment is seemingly seen through the lens of community – is not a separated silo'ed thought process</p>	VM1.2
<p>Stewardship – pp & planet (toxicity to people & planet)</p>								
<p>Driver: meaningful impact "whatever I am researching, it must go to the community" 32:33</p>								
<p>Self-worth derived through service to others "I have this dream of wanting to solve a problem that affects the community" 14:46</p>								
		<p>The Greater Academy</p>	<p>Exposure > affirmation</p>	<p>Reinforced fostering of interest</p>	<p>Skills development (problem solving negotiation/ fund raising/ leveraging / systems navigation)</p>	<p>Application to - and progression through the competition Hult Prize levels</p> <p>Alternate pathways</p>	<p>Progression of language from E-waste > Tech-waste</p> <p>New language</p> <p>"Father" of Tech-waste conversation</p>	VM1.3
	<p>"Are you applying as a civilian, or are you applying as an academic under Rhodes university" 12:55</p>	<p>RU Reputational Equity</p> <p>"... So getting into Rhodes became a space where it allowed such things" 31:40</p>		<p>Opened up connections and networking opportunity with CSIR & DST</p>				VM1.4



'Seeing' zai Legitimization Reputational Equity Personal investment		Exposure to national Expo's	'Seeing' the possibility	Developing/ expanding networks through attending of Expos			Learnings hold transformative value in terms of other projects/ collaborations and transferal of knowledge	VM1.5
		Technical knowledge gained from and within RU Chemistry Department	Teaming up with x4 PhD Chemistry students: <i>legitimization</i> through fellow involvement <i>Legitimization</i>		Speaking at local school, on invitation from 'old' teachers		<i>Reinvesting</i> passion back into local schooling system	VM1.6
	Chemistry Department's reputational equity	Chemistry Department legitimized group project by raising the first R9k(/R62k) for travel costs to present at Regionals level " "...because most of our money, I think the first R9000 we got it from students, and members of the faculty chemistry department"20:06	Legitimized the project for other departments and divisions & peer <i>affirmation</i> & reputation		"we are able to know that I can get funding from this institution. Or if the project is aligned to them, I can get funding from them, but they will need a proposal" 14:46 – instinctively leaning towards <i>leveraging</i> systems	Presented at the regionals in Kenya, which resulted in further exposure and <i>networking</i> opportunity	Project led to awareness and influenced practices within the RU community (academics and support divisions) its understanding and influencing practices "we have brought this thing from the dark into the light" <i>influencing</i>	VM1.7
	Personally: Dr Gauta (Au) Matlou *meaning-making – personal alignment *Big picture mindset *Receptive to opportunity *Tenacious & committed to end goal *sees value in human connections		- <i>VE momentum</i> lost (networking & fundraising its expanding on project) due to timing between PhD focus & COVID "where they cannot be reused, we can find innovators to see how they can utilize these materials"8:06 <i>(comfortable with uncertainty)</i>	Where does the person end and the project begin? Blurring of this boundary... example of meaning-making, and how meaning making drives agency (WT, 2020) "Okay we are within this problem, and how can we take up our knowledge as Chemists, and then meet it up together with the demand for work, especially in South Africa and realising that youth unemployment is so growing"3:27 <i><- Problem solving for system change</i>	Project ideation came before the prize, rather than prize driving ideation. Example of applying <i>leveraging</i> of opportunity	"It seems like it's my life, <i>crossing boundaries</i> "	"I want to see it alive, I want to see it growing" <i>Meaning</i>	VM1.8



	Orienting Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Transformational Value	Data code
	<p>“Finding yourself in the broader landscape” (Wenger-Trayner and Wenger-Trayner, 2020, p113)</p>	<p>“What is the quality engagement with strategic shareholders?” (Wenger-Trayner and Wenger-Trayner, 2020, p106)</p>	<p>“What makes it all possible?” (Wenger-Trayner and Wenger-Trayner, 2020, p98)</p>	<p>“What is the experience like?” (Wenger-Trayner and Wenger-Trayner, 2020, p79)</p>	<p>“What comes out of it... yet to prove useful” (Wenger-Trayner and Wenger-Trayner, 2020, p84)</p>	<p>“What are you learning in the doing?” (Wenger-Trayner and Wenger-Trayner, 2020, p89)</p>	<p>“What difference does it make? ... seeing the result” (Wenger-Trayner and Wenger-Trayner, 2020, p94)</p>	<p>“Does the difference... have broader effects?” (Wenger-Trayner and Wenger-Trayner, 2020, p118)</p>	
Sight of the ‘Macro’	<p>Talking to the agricultural sector “... the majority of practices we use are unsustainable, exploitative, non-regenerative, and do not speak to the future that we need to be creating” 05:17-> macro perspective</p> <p>“... the use of large multinational logistics supply chains, the dependence that that creates in a context like South Africa, our dependence on external economies and volatility to shocks in our supply chains” 05:17-></p> <p>“environmental footprint, societal footprint”</p>				<p>“There’s been a lot of interesting work done on the power or the impact of local circulation of money... this creates resilience in your local economy that’s creating circularity within...” 11:09</p> <p>“The power of R1 spent in local context and held in your local community essentially has a multiplier effect... there are aspects of erosion ... but you’ve got 70% staying local...then get reinvested... so you recycle money that way” 11:36-></p> <p>Power of local</p>	<p>“Large global supply chains, have huge carbon footprint, as opposed to things that are produced locally. The biggest driver with (this) business is to set up where we operate... we (try) keep the supply chains local” 06:37-></p> <p>Unintended consequences</p>	<p>-VE “the citrus industry in South Africa, which is a huge earner of foreign revenue, but essentially we are exporting water from a water scarce country – if you look at the water consumption that is used to produce a bag of oranges” 08:03-></p> <p>alternate metrics Seeing</p>	<p>Talks to socio and enviro and econo in same description “exploitative”, “non-regenerative”, “do not speak to the future we need to be creating” ... not a compartmentalised thinking. All the concerns are knitted together, there is a ‘one-ness’.</p> <p>Convergence</p> <p>Western thinking silo’s whereas the ‘wicked problem’ forces to ‘see’ the whole interconnectedness of People, Planet, Profit crises.</p> <p>“The market doesn’t know the value of what I’m doing yet” 1:07:50 Seeing Backing intuition</p>	VM2.1
Origins: Curiosity			<p>Course: Masters in Agricultural Economics offered at Rhodes University</p> <p>“6-7 years ago when I was completing my Masters in Agricultural Economics” 00:22-></p>		<p>“opened my eyes to the opportunity that the emerging insect industry presented... for food or feed” 00:22-></p> <p>Seeing</p>	<p>“I started looking at producing insects for animal feed, because animals consume insects much more readily, it’s part of their natural diet” 00:22-></p> <p>Curiosity</p>	<p>“to use otherwise wasted on low value substrates, (and) turning that into a high value protein oil” 00:22-> Reframing value</p>	<p>“very high rates of bioavailability within the opportunity” 00:22></p> <p>Opportunity presented to offer a new economy for an alternate future, within a regeneratively sustainable paradigm. Showing the world a successful alternative.</p> <p>Alternative futures</p>	VM2.2
Origins : Fostering curiosity		<p>Investment in self</p>	<p>“about to start my PhD” PhD course offered at Rhodes University 00:22-></p> <p>“it was a funded study... the business being the central case study of the PhD itself” 00:22 -></p>	<p>“I wanted to use that time (period of PhD) to establish a business idea...” 00:22-></p>	<p>“...being that when I finished my PhD, I could step into the business full time” 00:22-></p>	<p>“I put the (PhD) on hold last year, just because the business developed much more rapidly than I’d expected... it meant that I needed to go full time into the business before I could complete my PhD” 00:22-></p> <p>Negotiation</p>	<p>“...which is really good for the business perspective...” 00:22-></p>		VM2.3
The Power of Peer affirmation			<p>The current (RU MEd) study offering an insight of another project (within same study) – sharing a regret of that project lead was that he pursued his</p>	<p>“so he actually put the business on hold in preference of the PhD?”... “That makes me feel a lot better” 00:22-></p>		<p>-VE “And that is a hugely important support network, to be able to speak to people and say, I’m really struggling with this thing, lets have a coffee and just</p>		<p>Networking opportunities to share stories between similar projects offers support and spurs project progress.</p>	VM2.4

Fostering new knowledge



Support system: enabler vs hindrance

	<p>Peer affirmation - ></p>	<p>PhD and placing business on a few months-long temporary hold – which resulted in loss of momentum in solidifying networking opportunities for the business and the funding that was probable (the timing of completing PhD + and the immediate unforeseen Covid-19 pandemic that struck straight after PhD submission)</p>	<p>Legitimization through shared experience</p> <p>Relief in hearing of a similar situation and the regret experience – offered validation in the choice made to place PhD temporarily on hold</p>		<p>bitch-a-bit (connect) sometimes. I have not found that in Grahamstown- and that has been particularly frustrating, isolating in many ways” 1:14:45</p>			
<p>Reputational value of RU in connecting with Agricultural Research Council (external entity)</p> <p>Reputational equity</p> <p>Opportunity to partner between inter-departments (Economics + Philosophy)</p> <p>Institutional responsivity</p>	<p>“(The PhD study is) an auto ethnographic study, quite different for the economics discipline, but basically writing my own experience, and comparing that to the experience of other people/enterprise.. looking particularly at the support environment for early stage rural entrepreneurs. I fall across three different departments... economics department... philosophy department... and through Agricultural Research Council”” 00:22-></p>	<p>Undertaking this study</p>			<p>“We do quite a lot of training households or small holdings, small scale chicken farmers (at the Grahamstown site)” 41:59-></p> <p>Social commons</p>	<p>Value this holds in growing the ‘field’</p> <p>Social commons</p> <p>New knowledge holds transformative potential</p>	<p>VM2.5</p>	
<p>There’s this huge downward pressure on the (Rhodes University and it’s) financial resources, (this project has) a third income stream (potential for the University). 19:50-></p> <p>Macro lens</p> <p>-VE There is actually legislatively a big risk in that because the dining halls also have pork and pork is going back to pig farmers who are feeding it to pigs – they can’t distinguish between the pork and other meats. So the disease risk of (this practice) is really high. 19:50-></p> <p>Risk in silo practices</p>	<p>-VE “Rhodes (Uni) from a business and a network perspective, did very little. “(with) an entrepreneur coming out of your (Rhodes) university (&) as one of your students” 19:50-></p>	<p>-VE difficulty in access to:</p> <ul style="list-style-type: none"> * kitchen food waste (through the formal systems) * research relationships & collaborations/ IP negotiations <p>19:50-></p> <p>System inertia</p> <p>Navigating landscapes</p> <p>Absence</p>		<p>“(this project has) a third income stream (potential for the University)” 19:50-></p>	<p>In practice experienced “inertia” in the (administrative) systems 19:50-></p> <p>“(Rhodes University) are not geared for these (types of enquiries or requests to collaborate)”. 19:50-></p> <p>Priorities</p>	<p>If addressed and reversed- a responsive system can amplify such projects</p>	<p>VM2.6</p>	

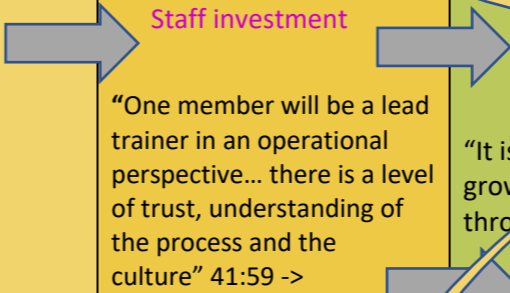


Parallel support: Incubators as enablers


A new way of 'seeing'

Direct social impact

Orientating Value (cont)	Strategic Value (cont)	Enabling Value (cont)	Immediate Value (cont)	Potential Value (cont)	Applied Value (cont)	Realised Value (cont)	Transformational Value (cont)	Data code
		<p>"The real enabler that I found, I was fortunate to have been selected the end of high school to join the Allan Gray Orbis Foundation - they are focused on development of what they term as future high impact entrepreneurs. They've got an entrepreneurial development program that runs alongside your academic career. It is a 4 year funded university scholarship, you then graduate to become a life-long fellow of the foundation"</p>	<p>"(Without this support) I would not probably be doing what I'm doing now" 33:11</p>	<p>"So as a fellow I've now got access to enterprise development support (including) business development courses and programs to assist you going from having an idea, then validating that idea, then turning that then validated idea into something basic"</p>	<p>"that's when I started operating on my stoop, from my stoop to a single garage, from a single garage to triple garage, and from a triple garage to where we are now - off the back of that they call the IVC (ideation validation creation) program that's an incubation type program that I went through with this business in particular"</p>	<p>"That was really the enabling environment for me that created the opportunity space - mindset development to take this risk. It gave me a cushion, because I had a really strong sense of their backing if I gave it enough effort. And through the IVC program I was able to demonstrate that (the effort) and demonstrate my resilience, ability to create something, to demonstrate the proof of what I was wanting to develop, off the back of that was then able to then get funding"</p>	<p>"Off the back of that we've now been able to get financing for our East London facility, Port Elizabeth facility that will start during the course of next year and potentially either scaling of either of those two or third (additional) facility in George or KZN."</p>	VM2.7
<p>Grahamstown (compared to larger city such as East London) "it's seen as if they're (RU & local business) doing you a favour" ... In larger centres like East London, people will pay us to take waste away because it is a real issue for them – it's a challenge to manage waste – and they recognise that" 28:32-> Seeing</p>	<p>"(Grahamstown is) small and I've been able to develop networks easily, I've been able to develop a presence, and all those sorts of things, which has been awesome - But there have been real challenges in the growth and scaling and willingness of people to really think out of the box" 1:18:06 Seeing</p>	<p>On current environment cost of importing, war in Ukraine and how it affects South Africa "we're going to have to save the <i>"bunnies"</i> because it is the only option we've got" 59:20 (save the bunnies meaning to live more environmentally friendly) Eco-consciousness</p>			<p>"...around the education of separation of waste sources, for example, one of the (local) private schools ... the schoolchildren... have access to all the resources and knowledge and information... There food waste is largely separated but there's (still a lot of contamination of) plastic spoons and plastic papers and plastic knives and all these other things that go into that food waste. 28:32</p>	<p>Carlene Royle 32:50 "(In response to 28:32) Its almost like we've been born into a system and the system just doesn't allow us to think three steps further" Lowell Scarr 33:11: "No not (...agreeing with statement made) Seeing</p>	<p>"I essentially view myself like a dairy farmer... (there are) slight differences in the operations but essentially doing the same thing... so there's no reason why we shouldn't be sharing information" 1:01:53 Seeing, navigating landscapes, new paradigm language Carlene Royle: "You are creating a new market and by extension you are creating new terminology" (a new way of 'seeing') "The market doesn't know the value of what I'm doing yet" 1:07:50</p>	VM2.8
	<p>"The employees that started with me are still with me, Nosipho, Ntombi & Atti" 41:38</p>	<p>Impact investors "A lot of our investment has come from impact investment... we employ a lot of unskilled young people, particularly women." 51:57 Impact investment</p>	<p>"We have developed really strong relationships" 41:59 Meaningful relationships</p>	<p>"We focussed a lot on seeing how we can actually assist the team in developing themselves... I want us to have here from this team our future facility managers" 41:59 Staff investment</p>	<p>"...the take up from the team has been relatively low to upskill in that way. But that's something we have started navigating" 41:59-> Navigating landscapes (intl)</p>		<p>I want us to have here from this team our future facility managers" 41:59 Social investment</p>	VM2.9



	Orientating Value (cont)	Strategic Value (cont)	Enabling Value (cont)	Immediate Value (cont)	Potential Value (cont)	Applied Value (cont)	Realised Value (cont)	Transformational Value (cont)	Data code
Expanded social impact	<p>"... In larger centres like East London, people will pay us to take waste away because it is a real issue for them – it's a challenge to manage waste – and they recognise that" 28:32-></p>		<p>The success of Grahamstown facility is allowing for expansion in East London, but with additional value-adds.</p>	<p>"Grahamstown is a bit of a <i>Heath Robinson/ MacGuyver Deluxe</i>... This is where we have proved that we can do what we want to do" 41:59-></p>	<p>"We are setting up in East London, a much larger scale facility" 41:59-></p> <p>In East London we are pushing toward 10-15+ tons of waste per day, for processing, depending on availability."</p> <p>"(In addition) we are going to be setting up our own poultry production... alongside that a development of pet food, and agricultural feed too" 41:59 -></p>	<p>"In Grahamstown we processes between 1-2 tons of waste per day..." 41:59-></p> <p><- Expansion</p>	<p>"We do have customers in East London that will be taking both live and dried larvae- the feed mills in particular want dried larvae in very large volumes that we could only supply from a facility like East London... (East London will) use improved systems" 41:59-></p> <p>Incoming legitimization</p>	<p>"It is going to run much more efficiently, but still very labour absorbing" 41:59-></p> <p>Social commons</p>	VM2.10
The person	<p>Personally: Lowell Scar</p> <p>*Economics+Agriculture+Philosophy "always with a strong focus on the development side of it"</p> <p>*Big picture mindset</p> <p>*always sees the impact on enviro and socio</p> <p>*resilient</p> <p>*meaningful impact</p> <p>"At the core I have always been purpose driven... establishing something that in our context is labour absorbing... I want my kids to have a future in South Africa ... I want a future that is good for South Africans. One way that I can do that is by creating jobs, particularly for young unemployed, unskilled people, that can be my contribution from a societal perspective" 50:58</p> <p>"I built something that can sustain itself" 41:59-></p>	<p><- Meaning</p> <p><- Social commons</p> <p><- Patriotism</p>	<p>"... at the end of the day, the money is out there, the support is out there, the enabling environment is actually there. Despite everyone blaming policy and the government, it's actually there." 19:02</p> <p>Seeing Resourcefulness</p>			<p>"Keep at it, that's the biggest thing -... It takes time, you have to keep picking yourself up every single day, every single time you're knocked down. There have been times when I've woken up in cold sweats, they've been times that I've gone to bed crying, because it's just it's a high pressure environment, there's nobody else really to lean on, in many ways - what I'm doing and what I'm say - not that I'm unique- but there aren't blueprints out there for what we're doing. There aren't the standard operating procedures, they aren't people that particularly know much more than what you do. So that means you're going out there and pioneering and having to figure things out as you go. That means you get knocked down a lot of times." 1:11:42</p> <p>Tenacity</p>	<p>"At first I was focusing more on the policy and enabling environment and actually come to realize that, to be honest, that stuff's all secondary to the individual (& his/her preparedness) and the perspective they're going (in) with ... because at the end of the day, the money is out there, the support is out there, the enabling environment is actually there. Despite everyone blaming policy and the government, it's actually there." 19:02</p>		VM2.11

			<p style="text-align: center;">Convergence -></p>	<p>Distributive, regenerative, resilient systems: "the business model we have is to be able to run these facilities in as many areas as possible wherever we can get 2+tons of waste/day, we can set down a facility and produce, that output isn't always going to go into that specific local economy. It's not always going to be viable. But we can aggregate that output from a bunch of different sites and then (should) the grain belt in South Africa need fertilizer, let's take output from all these different regions and send it over there. Although its not local, it is still local, from a domestic national food sovereignty perspective" 59:51</p>		<p style="text-align: center;">Convergence -> Problem solving for system change Alternate futures</p>	<p>"So I see all these challenges in the agricultural system... on the way we produce food... it is completely counter to being able to produce food in 50 years time... We need to have new models of agricultural production, resource usage and recycling that can support 50-100 years in time, for our kids, our grandkids, stretching across South Africa, (for) a country that is socially stable, and a country that is environmentally sustainable, and a world that is environmentally sustainable" 51:57</p> <p>"Its is a blue ocean opportunity... (which) sits at the base of the entire agriculture value chain" 54:31</p>	<p style="text-align: right;">VM2.12</p>
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Notes to the Nambu VCF Analysis

¹ "Going back to university operations, on **the one hand (Res-Ops) itself with we found the receptivity** and the ability to work with, however, administration - so here I'm making a distinction between university (res) operations and university administration - Administration being the research office, being those central administrative functions that direct how does for example, a student who wants to set up a business interact with the university? How does that support or potential engagement get directed? How do we engage with the Tech-Transfer office? Or the IP Office? That is where the challenge really was, **that is where I just I gave up ... just is not actually worth it.** What they want from me and what I would have to give up in the long term in terms of ownership of the IP and partial ownership of the business actually not worth this engagement. **So in that regard, I found a lot of limitation in engaging with the university, in (me) providing a space where students can come and learn, do research, develop research projects, develop insights into a new industry that's busy emerging. Those are skills that they can take out and either work for us or take out into the industry, in (I'm) providing a site like a living lab where we can work on different things. I'm was not too stressed about what but I wanted to create that space. And from an administrative perspective, it's just it was way too much of a headache to actually really pursue that any further like, and this was in a way, as well, an aspect of resistance within academic project...** But at the same time, again, from a departmental level, here is this opportunity, can you not direct me to somebody or direct somebody to me that we can develop this relationship and work on something at this together because there is real value in the long term. I'll give you a profit share - if we can develop a feed, I'll give the university whatever percentage we negotiate on, of future sales... but again, **that the structure wasn't there.** So I found the university to be limiting in that regard" 33:11

Prioritising energy

Access

VM2.13

² Carlene Royle 1:08:59 Transferring of learning practices and knowledge?

Lowell Scarr 1:09:07 Four. Really important, really important. Maybe not a five exactly, but right up there, because what prevents me from saying a five is that **although we do a lot of training and a lot of sort of consulting - which is all really valuable - It's important for us as a revenue generator to support the industry because it creates more interest and activity in the sector with more awareness and demand. But every person we trained is a potential competitor. That's something we have to be aware of- which is not bad thing at this stage of the sector. And through it, we are able to create really strong partnerships and relationships so it does sort of balance out actually in favour of us doing the stuff but there is the reality that we are actually just training competitors**

³ **Alternate model: team up with incubators?**

The real enabler that I found, I was fortunate to have been selected the end of high school to join the **Allan Gray Orbis Foundation - they are focused on development of what they term as future high impact entrepreneurs. They've got an entrepreneurial development program that runs alongside your academic** career. It is a 4 year funded university scholarship, you then graduate to become a life-long fellow of the foundation. Anyone can apply at high school or first year level, and they have a list of 2 – 3 or 400 schools that they engage with on a yearly basis, to bring in a pool of applicants. 33:11 **(Researcher inputs/insights: Is this something that could be modelled??)**

VM2.14

Navigating landscapes

So as a fellow I've now got **access** to enterprise development support (including) business development courses and programs to assist you going from having an idea, **then validating that idea**, then turning that then validated idea into something basic - that's when I started operating on my stoop, from my stoop to a single garage, from a single garage to triple garage, and from a triple garage to where we are now - off the back of that they call the IVC (ideation validation creation) program that's an incubation type program that I went through with this business in particular, at the end of that, there's then access to E-squared. E-squared is the largest private venture fund in South Africa, founded by Allan Grey when he wanted to do something philanthropic. (Without this support) I would not probably be doing what I'm doing now. I would still have gone into business at some stage but I probably would have first ended up going into corporate or doing something else. **That was really the enabling environment for me that created the opportunity space - mindset development to take this risk. It gave me a cushion, because I had a really strong sense of their backing if I gave it enough effort. And through the IVC program I was able to demonstrate that (the effort) and demonstrate my resilience, ability to create something, to demonstrate the proof of what I was wanting to develop, off the back of that was then able to then get funding from E-squared.** Off the back of that we've now been able to get financing for our East London facility, Port Elizabeth facility that will start during the course of next year and potentially either scaling of either of those two or third (additional) facility in George or KZN. 33:11



Orienting Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Transformational Value	Data code
<p>“Finding yourself in the broader landscape” (Wenger-Trayner and Wenger-Trayner, 2020, p113)</p>	<p>“What is the quality engagement with strategic shareholders?” (Wenger-Trayner and Wenger-Trayner, 2020, p106)</p>	<p>“What makes it all possible?” (Wenger-Trayner and Wenger-Trayner, 2020, p98)</p>	<p>“What is the experience like?” (Wenger-Trayner and Wenger-Trayner, 2020, p79)</p>	<p>“What comes out of it... yet to prove useful” (Wenger-Trayner and Wenger-Trayner, 2020, p84)</p>	<p>“What are you learning in the doing?” (Wenger-Trayner and Wenger-Trayner, 2020, p89)</p>	<p>“What difference does it make? ... seeing the result” (Wenger-Trayner and Wenger-Trayner, 2020, p94)</p>	<p>“Does the difference... have broader effects?” (Wenger-Trayner and Wenger-Trayner, 2020, p118)</p>	
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">The Project Overview: an exercise of reframed value</p> <p>South Africa, two case studies:</p> <ul style="list-style-type: none"> - Raymond Mhlaba municipality, Eastern Cape (Sarah’s case study) - Worcester in the Western Cape (Stephanie Swanepoel’s case) <p>(The interview focuses to the Raymond Mhlaba case study)</p> <p>“In a country that produces more than enough food to feed everybody how is it that just under 50% are nutritionally poor” (Rhodes University, 2017)</p>	<p>UNEP Project Sponsored, led by Rhodes University’s ELRC (Environmental Learning Research Centre) and Rhodes University and following external partners:</p> <ul style="list-style-type: none"> • Nicola Jenkin: Pinpoint Sustainability • Mike Ward: CSV (Creating Sustainable Value) • Carbon Calculated • Sustainability Institute • Lead Associates • Feedback <p>Multi-Stakeholder Engaged Participation</p> <p>“Rhodes University, I think gave a project huge amount of legitimacy because it was under the Rhodes University name ... (Additionally) that the ELRC was one of the partners and stakeholders in the project development, so we had the admin (support), the admin was all done by ELRC, the management of funds was all done by ELRC, the (broader) finance management in terms of Rhodes University, so the salaries were paid by Rhodes University, there was a lot of partnership and negotiation between UNEP and Rhodes University and the ELRC.” 37:24</p> <p>Reputational Equity System’s enabling effect</p>	<p>UNEP funded project – “the goals behind it were firstly to reduce food waste; (secondly) to develop social learning research around food waste and mobile learning; and then thirdly, to create good metrics on food, food wastage, and then the carbon calculations that (could) be monitored, good metrics and data capture.”1:09</p> <p>Problem solving for large scale change</p> <p>Anticipatory</p> <p>“The funder was “totally flexible with where the project ended up. And I think because it was a social learning project, there was space to learn things that were ‘not there’, which you know, was big, because in the end the app didn't work. But it was still (a) successful project. The project was successful in the learnings that emerged, and there was still value that developed out of it, so I think also just a flexible funding partner, and also a (partnering) team that was very innovative, exciting, supportive team, in terms of in terms of all those stakeholders who were involved. Everyone was very ready to do whatever to make things happen - and that I think enabled quite a lot of value. Everyone put in a lot of energy in”25:05</p>	<p>“...it was a good mix of people (project partners), we got together and did brainstorming” 02:59</p> <p>Diverse expertise</p>	<p>The goal was “to understand the social learning of our sustainable systems, sustainability, the environmental component”12:38</p> <p>“So we were developing the idea for a while, specifically looking at a much more holistic approach to market transformation and not using an app by itself, but using the app connected with a whole-systems approach” 27:37</p> <p>Holistic</p>	<p>“the project was conceptualised, the proposal accepted and what we hoped to develop was a mobile app”</p> <p>UNEP & RU legitimization led to further connections “I was connected with Spar, and we did a scoping report where we investigated a whole lot more potential farmers and stakeholders that could be involved. But (focussed) more at the logistics component, creating a site where there’s a hub to bring all these people together - so it wasn't only virtual, but more an actual space”27:37</p> <p>Legitimization</p> <p>-VE “But unfortunately taking this hub idea - and a mobile app within our hub- further (stalled). We didn't continue much further because we knew we needed (additional) funding, so unfortunately, the sustainable business model ... even though it held a lot of potential it wasn't taken much further than that.” 27:37</p> <p>Project extension – 2nd iteration of system support (absence)</p>	<p>“there was transferring of knowledge between old-time farmers who have been farming for a long time, and the new Nkumbo Youth. So they were transferring knowledge in terms of practices, farming practices, and all those sorts of things. But not only that, there was also transfer of knowledge in terms of technical skills of how to use mobile apps in certain way, how to use the Food for Us app and that was also a transfer of knowledge. So there was this wonderful thing of intergenerational transfer of knowledge...” 35:20</p> <p>Knowledge transfer Community</p>	<p>VM3.1</p>	

Stakeholder Commons

Orientating Value (cont)	Strategic Value (cont)	Enabling Value (cont)	Immediate Value (cont)	Potential Value (cont)	Applied Value (cont)	Realised Value (cont)	Transformational Value (cont)	Data code
	Stakeholder (along the value chain) engagement and participation in the workshop	<p>“The idea was not to come up with a ready-made app for the communities that we would be working with, but rather to develop something together.” 02:59</p> <p>Social commons</p>	<p>“Introductory workshop held where the two case studies were identified, bringing in a variety of stakeholders into discussions” 02:59</p> <p>Diverse participation</p>		<p>“Acquired a good understanding of context” 02:59 Honouring context</p> <p>Convergence</p> <p>“...we designed an app together discussing what type of functionalities one would need, discussing the different mechanisms ...to address this food waste, and we pin-pointed the need for market transformation- and one of the issues being that the local people's produce was not being sold by local retailers and therefore there was very little market for their produce, which was why it was being wasted on the farm because of the issues with market access” 02:59 -></p> <p>Problem solving for system change</p>	<p>“So I think the biggest progress that I saw or that I experienced was a shift in mindset... not necessarily amongst the youth but more amongst the older the farmers – it was ‘okay we can use this as a tool for business - we can be part of WhatsApp groups and develop our business through developing networks through WhatsApp groups, and we can maybe find more information through different channels online through their mobile and looking at the mobile phones as a tool for marketing and a tool for business development’ ” 14:17-></p> <p>Seeing</p>	<p>“The other thing is it really did bring in the younger people into the agricultural space and selling of produce, because (this) industry in practice was quite dominated by older farmers (and now) started to attract a much younger crowd, because they (younger) were able to introduce the technology / technological space to the older farmers – (and they were) working together.”14:17-></p> <p>New players</p>	VM3.2

Honouring the Social Web – building on trust to amplify collaborations

Having access to established networks, developed over time through authentic engagements in past project collaborations	<p>“Dr Tichaona Pesanayi (a PhD Scholar at the ELRC, who worked on the Amanzi for Food project) “was a fantastic mentor in that space”. 09:55</p> <p>ZPD</p>	<p>“We worked very strongly with the networks that have already established thanks to the (ELRC’s) Amanzi for Food project...” 09:12</p> <p>Leveraging existing networks</p> <p>“The success of the Eastern Cape (case study), (access to the) network, or being involved (able to draw on the) existing Amanzi for Food Network was a huge enabling factor. Having (access to) those existing partnerships – with Busi and other really important farmers was, (in other words) without those initial network relationships, I don't think we would have gotten as far”23:59</p>	<p>“So we were working with a network that we were really was quite familiar with and there was a lot of trust.” 09:55</p> <p>Trust</p>	<p>“...trying to ensure that we had representat(ion) of every component of the communities farming area” 09:12</p> <p>Diverse representation</p>	<p>“The Nkombe Youth Cooperative really grew after being involved in the Food for Us project ... And I think they really were inspired by getting involved in the network and ... project... (they) developed a really important space, they got very excited about not only being in the Food for Us network, but also being connected with the Amanzi for Food Network, being connected to older farmers and learning new farming techniques, and then they took it further to other youth groups who they then started to train so they've now gone into a training space”23:39</p> <p>New players</p>	<p>“... there needs to be really robust social infrastructure and social tools behind the app that can facilitate the app introduction into communities, especially when you're working in developing communities where technological know-how and technological culture isn't that strong.” 16:04 Social commons</p>	<p>“We have been able to broaden that network slightly by bringing a new element to the network, looking more at sustainable business (and) how to develop (one’s) farming business, and how to use technology and mobile technology to do that. So that was great. (It) brought a whole other scope of looking at building partnerships, building business partnerships, creating communities and transforming the value chain in the market.” 09:55</p> <p>New dimensions</p>	VM3.3
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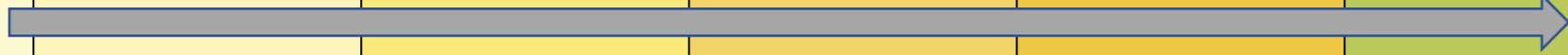
The mobile application (app) vs voice of the Social Commons

New collaborations

Orientating Value (cont)	Strategic Value (cont)	Enabling Value (cont)	Immediate Value (cont)	Potential Value (cont)	Applied Value (cont)	Realised Value (cont)	Transformational Value (cont)	Data code
			<p>“...every time that people got excited about it, there would be this stumbling block and oh, the apps not working. Oh, the app crashed. Oh, I didn't see my thing there. That was very frustrating because as soon as I was put onto the WhatsApp group and (I could see how) it sort of hindered the confidence of the other stakeholders to go onto the app and try. So that was tricky, and was difficult. But you know, I think if maybe the app would be more stable, we would maybe not have that had that challenge, and there might have been more momentum and activity on the app”20:08</p> <p>momentum</p>	<p>“But I think what people were interested in was using mobile technology to try and grow these small businesses. So the business component did play an important role. I think what was great is that we were able to pull in the importance of sustainability and look at this developing-your-business and economic-component-of-your-business in a sustainable manner.” 11:21</p> <p>Alternate futures</p> <p>Importance of systems/social infrastructure is again raised in this project, even though back ground systems were in place.</p>	<p>-VE “The app development process was quite tricky and quite difficult and quite long, much longer than we anticipated, and a couple more stumbling blocks than we anticipated” 02:59-></p> <p>Anticipatory</p> <p>“...there was a couple of sales on the app, but a lot through the WhatsApp group and in the matchmaking event (alternatives to the app). And therefore when they calculated those savings, there were notable, there wasn't a massive decrease, but I think that was also because there were stumbling blocks around the app development, which we really struggled with.” 18:59</p> <p>Alternate technologies</p>	<p>“Strictly speaking the app didn't work. But the amount of learning that we did, when we came out of it, was amazing in terms of understanding that you can't just give people an app and expect it to go viral and everything to happen”16:04</p>	<p>“But there was a huge amount of social learning, and the community was brought together, because there was this realization, (that) technology and development of partnerships and relationship building is possible through technology and it's so important to develop local business” 16:04</p> <p>Technology as a change agent Seeing</p> <p>“... this new idea of using technology for businesses and for using it for connections and using the phone and mobile app as a tool was incredibly important and that required you to boundary cross” 33:21</p>	<p>VM3.4</p>
							<p>“There was the development of a lot of relationships between local farmers and local buyers - so retailers - and also just the connection of farmers to different farmers who met through the project and started working together; and connection of farmers to retailers there was a lot of (this), after the project there was connections with Spar (stores) - farmers were now selling direct to Spar, which was great. It started to open the dialogue between how to decide on your pricing and there was more open dialogue between the two entities” 17:54</p> <p>Relations</p>	<p>VM3.5</p>

System responsibility : an amplifying mechanism

Orientating Value (cont)	Strategic Value (cont)	Enabling Value (cont)	Immediate Value (cont)	Potential Value (cont)	Applied Value (cont)	Realised Value (cont)	Transformational Value (cont)	Data code
<p>“Because of the long standing history of the ERC having such good social learning projects and brilliant relationships with the different partners, I think it was definitely why there was some sort of legitimacy and as you, as you said, why we attracted the project, why the proposal was approved, and why we ended up getting the funding, definitely a huge role to play. All the professors in ELRC Prof. Heila Lotz-Sisitka who was the main person on this project - I think reputation was also very influential and ELRC as a whole, super influential.”38:46</p> <p>Reputation as an enabler</p>	<p>The ELRC managed the project from within Rhodes University system. The planning was designed to allow for flexibility and unplanned expenses. “which was more of a reactive component that we were dealing with - I think there had been budget set aside for those sorts of logistics which was then drawn upon from the Rhodes University admin staff who assisted with that” 22:50</p> <p>Anticipatory system</p>	<p>“when one looked at the (distributing) the data and things like that - which was more of a reactive component that we were dealing with - I think there had been budget set aside for those sorts of logistics which was then drawn upon from the Rhodes University admin staff who assisted with that. So it was the (ELRC) team that bought the bundles and then we sent them out to the participants so that they could access the (required) data, and make more data available”22:50</p> <p>System responsivity</p>			<p>“We did have data issues, but we tried to address those through giving out data bundles to the participants”21:48</p> <p>Anticipatory and responsive systems</p>			VM3.6





	Orienting Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Transformational Value	Data code
	<p>“Finding yourself in the broader landscape” (Wenger-Trayner and Wenger-Trayner, 2020, p113)</p>	<p>“What is the quality engagement with strategic shareholders?” (Wenger-Trayner and Wenger-Trayner, 2020, p106)</p>	<p>“What makes it all possible?” (Wenger-Trayner and Wenger-Trayner, 2020, p98)</p>	<p>“What is the experience like?” (Wenger-Trayner and Wenger-Trayner, 2020, p79)</p>	<p>“What comes out of it... yet to prove useful” (Wenger-Trayner and Wenger-Trayner, 2020, p84)</p>	<p>“What are you learning in the doing?” (Wenger-Trayner and Wenger-Trayner, 2020, p89)</p>	<p>“What difference does it make? ... seeing the result” (Wenger-Trayner and Wenger-Trayner, 2020, p94)</p>	<p>“Does the difference... have broader effects?” (Wenger-Trayner and Wenger-Trayner, 2020, p118)</p>	
Communities of Practice		<p>“Mainly we work with ECD practitioners (Early Childhood Development) – the pre-schoolers” 05:44</p>			<p>“Everyone can go look (and collect) for whatever he or she can use to make a better, improvised material (including for) a lesson plan in our schools” 01:22 Empowerment</p>	<p>“...we (also) suggest to the teachers (to) just give them (children) the waste - Don't tell them anything, don't instruct them, allow them to play freely ...you will see the different things that they (will) do with that waste.”26:00 social innovation Empowerment Social commons</p>	<p>In the take up of sharing the knowledge: “And we also communicate by means of WhatsApp groups. They send things via whatsapp groups...Sharing to one another... Within a group (from in the workshop classroom) ... and they can share the ideas” 1:02:30-> Social innovation Technology enabling new knowledge Community of Practice</p>		VM4.1
Legitimization by formalizing the informal						<p>“Firstly Eyethu was helping the practitioners to make better education (using) improvised materials because what we found is that most schools didn't have funding for resources and a decision was taken to meet them halfway, (empowerment) (by) show(ing) them how to use their waste material and recycle that material so that then they can be things which the children can play with, and at the same time it can be user-friendly to the (school teaching) lesson, so that the children they can do their own toys out of that waste – like a box to make a car or a tractor or whatever. That is when the program was started. Firstly, it was done by Sarah (who created displays that were) themes related... and (focus included) counting, language, colours and life-skills. So that they could be taken to the schools” 02:31 Problem solving for system change</p>	<p>“There is also a BEd (Bachelor of Education) and when they are supposed to do something with their children some come and ask for the materials relevant to the activity or project.”06:28 Project interest has expanded to (& used by) BEd teachers-in-training. Incoming legitimization</p>	<p>“About three years ago, we were invited by Mrs. Khuhlana – a lecturer for the B.Ed 4th year (teaching) group - she gave us about four to six weeks (on a weekly basis) where we worked with the students to make improvised resources that were user friendly to the children and learners.” 07:16 Project legitimised by this recommendation to include in formal teaching degree</p>	VM4.2

Investing in the Social Commons

Orientating Value (cont)	Strategic Value (cont)	Enabling Value (cont)	Immediate Value (cont)	Potential Value (cont)	Applied Value (cont)	Realised Value (cont)	Transformational Value (cont)	Data code
<p>“Eyethu is an isiXhosa (word) and its (direct) interpretation is ‘our’ or ‘ours’. We are saying (this is) for ‘everyone’” 01:22</p> <p>Community/ Ubuntu</p>	<p>“In this (Eyethu) project I (Nollie) work closely with Vatiswa. The Eyethu project is her baby, but I work closely with the parents when it comes to (supporting the) reading, writing, the toy library and all of that.” 10:29-></p> <p>‘togetherness’ - although the projects connect they are separate but Sis-Nollie is present in, is a key figure, and takes the lead contributor role in this Eyethu interview</p> <p>System ubuntu Responsiveness</p>	<p>“Working with the communities is not easy – you need build and build until they trust you” 51:45</p> <p>Meaningful relations Trust</p> <p>Collective goal of the centre</p>		<p>“Because now we are not talking only about Eyethu (project), we are talking about the parents – so that they know what is taking place at schools- so that if the child is from school and talking about something (then) the parent needs to know what is taking place at school. So that the parent is able to help her child.” 09:39</p> <p>Strong emphasis on the ‘whole’ system. Not silo’ed/ compartmentalised</p> <p>Holistic whole-system Community Empowerment</p>	<p>“And when the child is asking for waste for school, the parent (understands) why this child carrying waste. Because at the end of the day, the word waste to us it means something that you need to throw away...”</p> <p>Seeing</p>	<p>“We work together to help the parents and the practitioners to have a better understanding of what we are talking about... With the parents, we teach them how to use waste. They can make books out of waste material, especially those who cannot read and write” 10:29</p> <p>“...they (parents) make wordless books and stories to read for their children. Just pictures... (So the child sees a picture of an) apple - so you can talk about the apple – the shape, the colour, the texture and the taste... It is language development. And when we are talking about health” 12:27-></p> <p>Holistic approach... Empowering parents... and possibly an example of social innovation – using pictures/word-less books to assist with language development</p> <p>Social innovation</p>	<p>“So we give magazines (so) they can collect some pictures relevant to what they are doing – (topics include) food they love, their families, their homes and other stuff. We are always encouraging the parents even if the parent is illiterate, but the parent can see the pictures... then (parent and child) will talk more about it” 12:27</p> <p>Empowering social systems</p>	VM4.3

A new way of ‘seeing’

<p>“If you don't have enough space at home, you can use that as your vegetable garden. You don't have to have a piece of land. You can even use a shoe bag... Let us show you outside” 17:22-></p> <p>Social accountability Jungaard?</p>		<p>“Success is defined by “good working relationship with the practitioners, the parents and their children... long term relationships” 22:20</p> <p>Relationality Seeing</p>	<p>On experiencing how recycled materials were used in a classroom environment</p> <p>Vatiswa Joni: “It was so exciting - it opens your mind” 42:35</p> <p>Nollie Shelle: “Yes, it opens your mind” 42:35</p> <p>Seeing is:</p> <ul style="list-style-type: none"> - Inspirational - empowering 	<p>A new way of looking at “waste” – as a potential resource</p> <p>Seeing</p>	<p>“Two years ago, we encouraged them to use waste materials to make their vegetable gardens because they don't have space in their homes or in some of the preschools so they can use containers or tyres ... Some parents have done it and are still continuing to do that “ 12:27-></p> <p>Reframed value Empowering Meaningful partnerships Social commons</p>		<p>“Which means poverty can run away if we are together doing this.” 19:31</p> <p>Problem solving for system change</p>	VM4.4
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Multi-dimensional convergence

<p>“In our schools, there is a project with my colleague, Boniswa, whereby they are encouraging their schools, the teachers to take part in gardening ...for example, a preschool in extension 6 have divided their land into three parts... for their children's garden, for the</p>			<p>“Using waste material opens your mind and it also helps your environment... If we can work together...”1:05:40</p> <p>Convergence Jungaard</p>	<p>“When we meet them (parents), (we) encourage them, even if it's just a door-sized garden - more especially as now the (food) prices are going up. Therefore we are not only focusing in the classroom, we (have a) holistic focus, so that the parent can also</p>	<p>“If you share ideas we can make it happen”19:31</p> <p>Social commons</p>		<p>“Which means poverty can run away if we are together doing this.” 19:31</p>	VM4.5
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<p>community which is the parents, and the other part is for the practitioners.” 12:27-></p> <p>CSD projects and practices are intertwined, and look to the social & environment in addressing a need that cannot be met due to lack of finance</p> <p>– benefit to broader community, togetherness</p>				<p>benefit in what we are talking about.” 12:27-></p>				
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Emphasising voice</p>				<p>(Adult workshoping) “...it's not something we are instructing , we do it together so that you can see that change your way – not Nollie or Vatiswa’s way. Most of the time we will be saying now that we are taking things home when we meet again, we are interested to tell us more – or bring us what you've done with your family” 28:00 Empowerment Outward legitimization Social commons</p>	<p>“We've got technology now. The (new generation) can Google now - now that there is technology, that will be telling you - then that is why I'm saying most of the time we are helping each other. Because if we sat down and then say, This is what I would love to do, then there will be saying, Okay, let's Google it - what we want to do - it's no more now something which is going to be my advice, it will be our advice to each other, so that then we can achieve the goal which want” 1:05:40 Technology & the Social Commons</p>		<p>“If you share ideas we can make it happen”19:31 Social commons</p>	<p>VM4.6</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Leveraging projects for deeper reach</p>					<p>“At Papane Pre-school... we had the workshops... and then after that, they were continuing to do things on their own. But kept (giving feedback on) what (they) are doing.... And in our visits (with other projects) we could see that they are still using the waste material.” 1:02:30</p> <p>“If then when we are at that area. When we were working with, for example, a few schools, (and) when we are passing (by) (and one of the team would ask) is there something new which you have done – or are you still stuck with what we have shown you?” 1:02:30-> Care</p>	<p>Papane Pre-School would send the feedback to CSD updating them</p>  <p>Continuous reinforcement Meaningful relationships Social Commons</p>		<p>VM4.7</p>

Note: **EXPLORE THE VALUE FOR RU IN THE SUCCESS OF THIS PROJECT - ?**



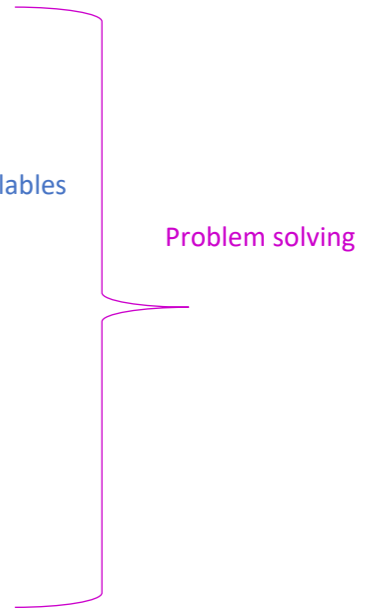
	Orienting Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Transformational Value	Data code
Responsibility & Reciprocity	<p>"Finding yourself in the broader landscape" (Wenger-Trayner and Wenger-Trayner, 2020, p113)</p>	<p>"What is the quality engagement with strategic shareholders?" (Wenger-Trayner and Wenger-Trayner, 2020, p106)</p>	<p>"What makes it all possible?" (Wenger-Trayner and Wenger-Trayner, 2020, p98)</p>	<p>"What is the experience like?" (Wenger-Trayner and Wenger-Trayner, 2020, p79)</p>	<p>"What comes out of it... yet to prove useful" (Wenger-Trayner and Wenger-Trayner, 2020, p84)</p>	<p>"What are you learning in the doing?" (Wenger-Trayner and Wenger-Trayner, 2020, p89)</p>	<p>"What difference does it make? ... seeing the result" (Wenger-Trayner and Wenger-Trayner, 2020, p94)</p>	<p>"Does the difference... have broader effects?" (Wenger-Trayner and Wenger-Trayner, 2020, p118)</p>	
		<p>Speaking to the Community and the trampoline image: "I think support is very key. ... you need the support of others.... stakeholders around you. It's very important" 28:52 Internal partnerships</p>	<p>Speaks to caring for and being cared for Communal Responsibility & Reciprocity</p>	<p>"I think (recycling) is important in its own aspect, but the fact that it would be generating employment for someone, especially in these days (of hardship)." 13:17 Community</p>					VM5.1
Impact of an unresponsive system	<p>"At the beginning of each year, all the students... come with all sorts of ideas, including recycling (the) waste that they generate in the residences... they are still trying to fit in to the university systems" 01:47 (implies that this is expected, and that the University systems (culture) dissuade this rather than nurture this incoming culture Expectation</p>	<p>-VE A positive practice for one stakeholder group (1st yr students), through lack of (enabling) system, then becomes a negative experience/burden for the res-op stakeholder group</p>	<p>-VE: (absence of recycling system) system absence</p>	<p>"At the beginning of each year, all the students... come with all sorts of ideas, including recycling (the) waste that they generate in the residences... they are still trying to fit in to the university systems ... mostly it's the first year (students)... And as the year goes by, they become swamped with their (studies), they (start to) neglect the project... And those projects always (seem to) fail... it becomes the responsibility of the housekeepers in the residences" 01:47-> Unexpected consequences</p>					VM5.2
Multi-stakeholder project	<p>"(This) is where environmental educators come in, (to create) awareness" 06:15 System absence Perception: "Your guys (ELRC) are environmental educators" 22:33</p>	<p>"Awareness is key... But, I don't think ... that it needs to be formal... Posters... it's awareness... sharing of ideas on platforms" 22:23-></p>	<p>"You cant do it alone ... you need relevant stakeholders to assist for support" 17:59 Stakeholder importance</p>	<p>Important considerations in having a recycling partner: <ul style="list-style-type: none"> • "Where would they be stationed..." • And then what is their schedule" 16:03 Contractor responsiveness</p>					VM5.3

	Recycling partner/G&G/ SRC Env/ Academia							
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Testing researcher reflections against NL interview offerings and summarised as:

- A past negative experience with the proposed third party, that if the project collapsed again, the responsibility would again be shouldered by the division. So a lack of confidence in the third party
Response: there is a way to rebuild that trust.
- Water as a scarce resource, especially considering the town we live in with all the focus on water (conservation at Rhodes University) and then the water that would be required to clean the recyclables
Response: yes
- Recycling is assigned under waste management and waste is perceived to be dirty -
Response: countered in seeing somebody collect as they saw value in disposed items - so maybe that's not a big issue.
- Feasibility of recycling? Is it not just treating a symptom rather than the cause?
Response: it can create jobs

VM5.4



	Orienting Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Transformational Value	Data code
	<p>"Finding yourself in the broader landscape" (Wenger-Trayner and Wenger-Trayner, 2020, p113)</p>	<p>"What is the quality engagement with strategic shareholders?" (Wenger-Trayner and Wenger-Trayner, 2020, p106)</p>	<p>"What makes it all possible?" (Wenger-Trayner and Wenger-Trayner, 2020, p98)</p>	<p>"What is the experience like?" (Wenger-Trayner and Wenger-Trayner, 2020, p79)</p>	<p>"What comes out of it... yet to prove useful" (Wenger-Trayner and Wenger-Trayner, 2020, p84)</p>	<p>"What are you learning in the doing?" (Wenger-Trayner and Wenger-Trayner, 2020, p89)</p>	<p>"What difference does it make? ... seeing the result" (Wenger-Trayner and Wenger-Trayner, 2020, p94)</p>	<p>"Does the difference... have broader effects?" (Wenger-Trayner and Wenger-Trayner, 2020, p118)</p>	
Compartmentalised perspectives	<p>"...the waste that is collected by contractors for the (local) pig farming (businesses)" 02:45</p> <p>NAMBU Interview cross reference: There is actually legislatively a big risk in that because the dining halls also have pork and pork is going back to pig farmers who are feeding it to pigs – they can't distinguish between the pork and other meats. So the disease risk of (this practice) is really high. 19:50-></p> <p>Risk in silo-systems</p>		<p>Driver is likely to be economical benefit to the university whilst disposing of a 'waste' product.</p> <p>"All of this has to go through the procurement office... (the contractors) are buying (the waste)... But I don't think it is a lot of money. It will also depend on the size of the kitchen. I know there are different charges depending on the size of the kitchen" 04:15-></p> <p>"they(contractors) are not allowed to come directly to the Kitchens" 04:15</p>	<p>Contractors need to be responsive</p>					VM6.1
Community centric culture	<p>Very Community Centric Culture: "I remember previously, I don't know who it was, but one of the hall administrators email to say they've got a project for a wheelchair drive collect(ing) the bottle caps or the bread tags, and they requested kitchens to have an ice cream tub where they could collect these. So I think, you know, everybody was willing to do that, because they understood the benefits of collecting the caps." 8:22</p>		<p>"Also encouraging staff, in those meetings you encourage and inform them around the good cause, and that they will be part of the process, where we will know (collectively) what we have achieved. And we need to remind ourselves, "Oh yes, I was part of that team that managed to achieve that" 14:53</p> <p>Relations</p>				<p>"...when such a project will come to your place of work, then it's easier for one to buy-in to it knowing that Oh, my neighbour also benefited from this. They got a wheelchair and so I think... the size of the town also helps that information is quickly spread out and people are aware of what's happening" 16:01</p> <p>Community</p>	<p>Speaking to the Community and the trampoline image: "Why is the other person jumping on their own? Why not grab the other person and work together to achieve?" 28:40</p>	VM6.2
Culture of Care, Service & Professionalism	<p>Implies strong, hands-on, empathetic divisional leadership</p>	<p>Experience in engaging with university structures: "...if (you can get the) university (to see the benefits of) support(ing), as in this instance, with this (pilot recycling project), they always to try and get funding (but it would need to be planned</p>	<p>1) narrative is 'service' orientated 2) proactive 3) "our students" implies personal, caring investment) 4) culture of continuous training</p>	<p>"... the momma's, generally the older ladies, ...mostly when you hear them speak about our students, it's not like students. It's like, no, these are our kids. We need to care for them. We</p>		<p>"In terms of hygiene that is something that we will teach as well, around cross contamination and all of that. We need to have a hygienic environment because we are providing a service to our students so we really can't afford to</p>			VM6.3

The Cost(s) of 'Change':
the iterations & the bearer

The Commons

Leadership as an enabler

	for the following year budget) because, you know, we do have our yearly budgets and (it would not have been) budgeted for." 24:00 System navigation		need to provide for them. And I think that also plays a huge role in the work that we are doing as well." 19:07 Community Care		have waste collecting" 7:07 Risk management			
	Dir. Jay Pillay's name came up in Nambu interview – as an enabling influence Leadership	"we have a great support system" 4:46 (3 rd recording) Relations Leadership	"...we have a very good relationship within res-ops as a whole, all the managers share one office, in one building. And everybody has a really good sense of humour, good sense of communication and a good sense of willing to help another..." 1:57 (3 rd recording)				"and I think maybe for us it's easier because she (D.Dir. Pillay) was once a food service manager. She understands the food services and the challenges that comes with it" 5:03 Institutional knowledge Honouring context	VM6.4
				"When you understand that it's a chain, you know, you generate waste and that waste is not really waste, to somebody else they can use it for good. So I think we were conscious of that, and we are aware of how we are all interlinked " 09:56 Seeing	"You need to get people involved. Because you know, you cannot just run the show by yourself. Get the buy-in of people that you expect to assist you with your projects, (so as) to run smoothly and for you to achieve that goal. So getting the buy in from staff, involving them, getting the ideas (from them)" 25:28 Relations		"Everything is evolving and you have to go with the flow, you have to accept the change that comes with it." 2:48 (2 nd recording) Adaptability Receptivity Anticipatory	VM6.5
			"(at that time) I was looking into biodegradable (alternatives) so let's say I'm buying a bottle for R3. Now I need to buy it for R5, which means that you also going to be paying the R2 (balance). Do you want to pay that extra money? So the answer was no from most people, and I was like, okay, I can give you water containers. They (the water containers) never came back. My glasses never came back. So spending every month to buy new glasses and new containers (fell to our budget). People like to take things home or keep them in their offices" 02:16 (4 th recording)	<- Eco-conscious			The concern is raised, but the implementation & the (hidden) costs of the 'new' / alternative fall on the operational departments who may/may not have the: - resources - capacity - expertise - legitimization - motivation - energy for the suggested/required change management/ social learning Reputational cost also factored in in this interview	VM6.6



	Orienting Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Transformational Value	Data code
	<p>"Finding yourself in the broader-landscape" (Wenger-Trayner and Wenger-Trayner, 2020, p113)</p>	<p>"What is the quality engagement with strategic shareholders?" (Wenger-Trayner and Wenger-Trayner, 2020, p106)</p>	<p>"What makes it all possible?" (Wenger-Trayner and Wenger-Trayner, 2020, p98)</p>	<p>"What is the experience like?" (Wenger-Trayner and Wenger-Trayner, 2020, p79)</p>	<p>"What comes out of it... yet to prove useful" (Wenger-Trayner and Wenger-Trayner, 2020, p84)</p>	<p>"What are you learning in the doing?" (Wenger-Trayner and Wenger-Trayner, 2020, p89)</p>	<p>"What difference does it make? ... seeing the result" (Wenger-Trayner and Wenger-Trayner, 2020, p94)</p>	<p>"Does the difference... have broader effects?" (Wenger-Trayner and Wenger-Trayner, 2020, p118)</p>	
<p>Culture of Care & Agency</p>	<p>"... when I arrived at Stanley Kidd (Residence) in April 2017, there was a very basic recycling project that was on the go - people were collecting plastic and paper... So there was already that culture (and) a conscious awareness of the environment, taking care of their environment, and part of that was the recycling aspect" 02:09 Culture</p> <p>"COVID definitely disrupted our way of doing things. And it disrupted that culture ... trying to re-establish that culture of recycling... when you lose a culture, it's difficult to bring it back" 32:24 Culture</p>	<p>"... for me personally, recycling and environment is majorly important. I've been recycling personally in my own capacity for the last 10 years" 03:23 Resonance</p>	<p>A fit in culture amplifies the practice.</p> <p>"...when I arrived, and I started interacting with the different portfolios that exist, when I interacted with that portfolio, I (asked), What do you guys do? Or like how (do) you guys operate together? They told me and then I was like, cool, I love this. I want to support it. And that's when I said, Okay, how can we make this bigger or how can we make a better, more effective? They (then) told me what they were wanting to achieve" 03:39 Responsive ZPD</p>	<p>Affirmation of project ideas</p> <p>support from the "hierarchical structure" in that they</p> <p>Not alone... use of "we" and not <i>you</i> (in this together)</p> <p>and then challenged to better them</p>	<p>"And that's when I said, Okay, how can we make this bigger or how can we make a better, more effective? They (then) told me what they were wanting to achieve" 03:39</p>	<p>-VE "We looked but there was nothing operational (formal recycling system at Rhodes University) at that time. There used to be though, at some point there had been drop off points/ collection points, but that was not functional anymore.</p> <p>(AGENCY) So the guys would fill two or three black bags, and I would take it to Leonard's site downtown (the recycler). I would ask, Can we drop this off? And he said yes. After about two or three months of doing that, it just exploded." 04:26</p>	<p>"After about two or three months of doing that, it just exploded" 04:26 (extreme expansion of the project)</p> <p>"At month three or four the guys were taking (the recycling project) very seriously and I couldn't keep up with the demand. So (I arranged with) Leonard his really big (bags) that they use, I set up a space at Res and (arranged) for recycling committee fill the bags, and call (Leonard) to collect when full... We had four or five of those big bags; one for plastics, one for tin, one for glass and one for paper. It got to the point where the recycling committee had to empty out the recycling bins within the res at least twice a week." 07:56</p> <p>Culture amplifies agency</p>	<p>Compared to G&G interview where there was an absence of recycling culture and thus no fostering of new students' interest, here the reverse is happening. "it just exploded" implies buy in from others – further implying that people do intrinsically care and will support if there is a system in place – AND if the culture is fostered.</p> <p>Also, the project stemmed from the res-community, was supported and fostered – resulting the "it just exploded"</p>	VM7.1
<p>The Commons Collective-Ownership (Informal-vs-Formalised) -> Expanding-Agency</p>	<p>"We never involved (house cleaning) in the management (of the recycling project). Essentially, we (let them know) the bins over here are for recycling - this is not your responsibility. I said (that) this is a students project (and which the students) are running – the (students) will empty these bins out. It's not your (house cleaning's) responsibility. (But we did invite them to use the system) if you come across plastics, put it over here... we let them know what we were doing, (invited them to support, in a way that)</p>	<p>-VE Struggle in formalising structure (question of system responsiveness?)</p> <p>"Last year, after we had met, and I was reporting back to my committee that we ran the Hall with, people have great buy-in, the students are interested. And I know that with the right structure and with the right buy in from the different areas, housekeeping, catering and the students, I think there would be great benefit in our Hall in terms of the way we've spoken about things. Students are (continuing</p>	<p>"I think in terms of meeting you for 2020/21 and talking (referring to the recycling pilot conversations) (and) when you had those meetings with the dining and kitchen staff... that instance has reignited student's interest to do something, but in a different way, like think of it more holistically, (ito the whole system) housekeeping, kitchen staff, Mandela Hall - and not just Stanley Kidd." 34:08</p>				<p>"I did notice (an) occasion I think in 2019 that some of the cleaning staff from other res' started bringing (recyclables) from their res dustbins because none of the other res' were recycling - we were the only ones recycling. Some of the cleaners, especially the 5l water bottles, if they found a whole lot of damaged (ones – because sometimes they like to keep them, so those they did not keep) I would see them coming there to Stanley Kidd Res and drop them off in the (outside) recycling bags. So in some maybe in very informal way that had seen what we</p>	VM7.2	

Social Innovation

Stewardship: Socio+Enviro

	<p>didn't add extra to their workload . We are not their bosses, so just wanted them to be aware of what we were doing and why there was a pile of rubbish" 17:56</p> <p>Respect Ubuntu</p>	<p>this) conversation, they still ask when are we getting (recycle) bins... And I keep on saying, I'm waiting to see what what's coming from Carlene and what's happening with the project on that side" 35:40</p> <p>Expectation</p>					<p>were doing and ... to walk from there res up to ours to come and drop it off there." 19:21</p> <p>Growing practice</p>	
			<p>"Collaboration is definitely high up on the agenda. On our house comm (committee) there is an Environmental Rep (Representative), when I arrived he was very, very active (in this role) and really set the culture, push(ing) it in a big way. He came to me one day saying that he can't keep up with (moving the recyclables collected from res) into the (outside collection) bags. I suggested to him to involve other students in the house. We already had the students (separating their 'waste') but now we need to ... create a subcommittee of students that are interested... (an)informal (sub)structure, (without) meetings" 14:31-></p> <p>Innovative Growing system is a form of legitimization</p>			<p>"the people from that sub-structure ran for environmental rep for the following year, because now they had been part of that substructure, they saw this was interesting, was worth while, was of value" 15:39</p> <p>Voice Empowerment</p>		VM7.3
<p>"in essence (the motivation) was (responsible citizenship)." 07:5</p> <p>"I think the primary concern is the environment, knowing that the community will be negatively affected ... we talk about the dumpsite here not been able to function properly... And we know directly <u>it has an impact on the community because environment and community are not separate. They're not separate.</u>" 48:03</p> <p>Convergence Seeing</p>	<p>"It was not about the (potential for earning) money - we could have asked Leonard for money, but we thought if (the Recycling business) could make a couple of extra rands out of it (then rather let them) keep for themselves, (their) staff, or whatever. That's essentially where we left it." 06:35</p> <p>Greater good</p> <p>-VE Need a mechanism/ system to enable the practice</p> <p>Absence</p>	<p>"I think for the students it was (considering recycling) packaging instead of throwing it in the normal dustbin. If it's going into recycling, then it's going somewhere to get processed, (compared) to land up in the normal rubbish. (From what I can) remember from 2017 2018 2019 (the period) when were the most active (in recycling) prior COVID." 11:48</p> <p>Responsible citizenship</p>		<p>If 'processed' then the extension in awareness is 'into what'??</p> <p>Next level awareness</p>	<p>"...what I'm saying is that if people see other people doing it, (so that) we're not just talking about (we're doing it, then there's a realisation of) oh, we need to recycle, but there's (also) a mechanism in place for recycling to happen." 25:24</p>			VM7.4

Spaces to practice agency (in the Hidden Curriculum)

Hidden Curriculum

Orientating Value (cont)	Strategic Value (cont)	Enabling Value (cont)	Immediate Value (cont)	Potential Value (cont)	Applied Value (cont)	Realised Value (cont)	Transformational Value (cont)	Data code
<p>"The students in the Mandela Hall are very conscious of the community in general" 40:30</p> <p>"...Looking at how res' work when you create an intentional culture of change, and (if/when) students can see the inherent value in it, then they buy into it. And it's not just with recycling – (as an example) when we have had discussions around community engagement or around gender based violence - when you have those intentional discussions, where we're saying, Guys, this is the topic for discussion/debate... how are we going to make sense of it in our res? What are we going to do? We can talk about it? But then what do we do?" 15:39</p> <p>Social Commons Responsivity</p>	<p>Needs to be a partnership between shareholders (Uni & student) because "Part of the learning, and I always say we need to make things sustainable (but with realisation that students) are here for academic purposes, to get an education. It can't be a situation (where) the project dominates your life (and negatively) effects academics. If you fail at the end of the year you cant blame this (the project)." 45:13 The student cant carry the burden so that it jeopardises their study.</p> <p>Realism</p>	<p>"Everything must be sustainable... it (also) cant (be doing) for the sake doing.... <i>It needs to be for the inherent good of the immediate participants, but also the wider community, their environment.</i>" 38:13</p>		<p>"As I say, the students of today are very aware of societal issues, of injustices (and) this kind of stuff. The biggest challenge is getting them to actually do (something about) it... You need to highlight 'spaces' where they can do/ (put into) practice... to practice that agency that they want " 43:19 -></p>	<p>"So that's why I support these kinds of projects, I always say to the students, your primary reason for being at university is to get an to get a degree... but there are opportunities here, where you (could) learn other skills that you won't learn by going to lectures and those skills are picked up by joining societies, joining sport, getting involved in house comm, by supporting projects " 46:40</p> <p>Hidden Curriculum</p>	<p>"So that inherent consciousness of the community here inside the hall, but also the community that exists out there as well. So I think there's just a natural extension, ... when they do community projects with our school partner that we have a (sanitary) pad drive or stationary drive (as an example) the one time when they went (along) they did a (environmental) clean-up (of litter) around the immediate school so I think the two are interchangeable, they're in a symbiotic relationship" 40:44</p> <p>Convergence</p>	<p>"two (community & environment) are interchangeable, they're in a symbiotic relationship" 40:44</p> <p>Convergence</p>	VM7.5
		<p>"There is definitely a link (between voice and agency) . The way students are thinking, in my interactions (with students) they want their voice to be heard. They want to be heard. They want to be involved in the decision making. They don't want other people making the decisions. They also want to be at the table contributing because the thing affects them where they are. The recycling thing is affecting them here. ... with blanket decisions or top down approach, (one) needs to be careful because sometimes there are nuances that only exist in this environment, but they don't exist in another one"52:40</p> <p>Social Commons</p>		<p>"Its about what opportunities you are creating for (a) future economy..." 00:02 (3rd recording)</p> <p>"...I want (a focus) around the environment, because it will have an inherent benefit to the (local community), it can lead to new skills transfer (for a) future economy, a green economy, future jobs. That's what we have to think about now in education - in how this must be able to lead to something more not just have a piece of paper (degree). I think (this is) the challenge that we have."02:42-> (3rd recording) Problem solving for system change</p> <p>Problem solving for system change, hidden curriculum</p>				VM7.6



	Orienting Value	Strategic Value	Enabling Value	Immediate Value	Potential Value	Applied Value	Realised Value	Transformational Value	Data code
	<p>“Finding yourself in the broader landscape” (Wenger-Trayner and Wenger-Trayner, 2020, p113)</p>	<p>“What is the quality engagement with strategic shareholders?” (Wenger-Trayner and Wenger-Trayner, 2020, p106)</p>	<p>“What makes it all possible?” (Wenger-Trayner and Wenger-Trayner, 2020, p98)</p>	<p>“What is the experience like?” (Wenger-Trayner and Wenger-Trayner, 2020, p79)</p>	<p>“What comes out of it... yet to prove useful” (Wenger-Trayner and Wenger-Trayner, 2020, p84)</p>	<p>“What are you learning in the doing?” (Wenger-Trayner and Wenger-Trayner, 2020, p89)</p>	<p>“What difference does it make? ... seeing the result” (Wenger-Trayner and Wenger-Trayner, 2020, p94)</p>	<p>“Does the difference... have broader effects?” (Wenger-Trayner and Wenger-Trayner, 2020, p118)</p>	
Navigating without a compass	<p>“It’s (Environmental portfolio) the least considered portfolio in the SRC. A lot of people will tell you that if there is no environmental councilor we won’t see any difference. And they are not wrong - because of the little scope that the Constitution of student governance gives us. You really can’t do much with it.” 12:46 Seeing Lack of awareness</p>	<p>“if you did Environmental Science then you have some of your lectures to lean on. But I'm thinking of the student that's just interested in environmental work and hasn't done Environmental science. They will be stuck practically” 02:44 Anticipatory System network absence</p>	<p>“...so you kind of inherit some of the initiatives ...but obviously you are going to do them in your own way, but also pushing the same message”06:37 Knowledge transfer</p> <p>“For example, the project manager will have a project team. The Community Engagement councilor has RUC – an entire division to back that portfolio. The residents councilor has the hall representatives that assist them in their work, the sports counsellors has the sports. We don't have an office to lean on”15:07 Absence</p>	<p>“It's a bit of an overwhelming space. You have to create your own kind of dynamic of how you want to operate your own office in your term. Because you have what the Constitution tells you to do - make sure that people are aware of environmental programs, make sure that they are integrated into the academic curriculum, but the ‘how’s’ and ‘who-do-I-talk-to’ isn't really communicated. So you have to find your feet, create your own direction, so that makes it very difficult because as a person, your knowledge of the environment by connections is limited. You do need a larger team to work with.” 01:44 Absence</p>	<p>“... the positive is that you can build your own vision and try execute your own vision as you see. But the downside is you don't know where to go, you don't know who was going to support you” 03:15 Network absence Agency</p>				VM8.1
Mentorship			<p>“And also there is the official orientation where other people from back in the day, let's say the environmental councilor from 2010, for example, to give you a different perspective... it's like over three days. So you have that. So that's portfolios specific ... This is who you go to if you need a certain thing, and now because they are in the workspace they are quite clued up as to who to go to to get certain things done. So that support is there. And then there's overall training as a councilor, this is what you do as a counsellor - not portfolio specific. And you must</p>	<p>Milca Matariro (2021 SRC Enviro Councilor) 08:38 Oh, is that how they made it (this year)? We just needed to choose one (last year) - SRC or academic</p> <p>Anda Mtshintsho (2022 SRC Enviro Councilor) 08:48 We have two for us (this year). It's so good.</p> <p>Milca Matariro (2021 SRC Enviro Councilor) 08:57 The two mentors is an excellent idea...</p> <p>(The academic mentor) looks after the student (the person) Mentorship</p>		<p>Anda Mtshintsho (2022 SRC Enviro Councilor) “My academic mentor is Professor Pedro Dubinsky is (different) to what I do. He does philosophy but he's an environmentalist. I relate to him on a personal level, but (he is) also academically so smart. He brings in the social aspect, which I always say it's great to bridge with the environmental aspect. So I come in with that (enviro sciences) knowledge, and he comes in with that (social/ Philosophy knowledge) and we merge it.” 12:04 Diverse expertise Convergence</p>	<p>Convergence Social and environmental “and we merge it”</p>	VM8.2	

		<p>have a SRC mentor - if you know someone for example, they ask us to suggest who we want for ourselves. So you must have an academic one – a staff member - and then an SRC alumni.”06:37 ZPD?</p>						
<p>“My interest is the socio ecological aspect of environmental science. I love understanding people's perceptions and minds in relation to the environment.” (Anda Mtshintsho) 22:33 Convergence</p>			<p>Highlights: But I think one thing I'll forever be proud of is representation. I want to be that one different individual in a group. I wanted to prove that this can work in that structure as representing the minority in terms of gender, race, ethnicity, sexuality, all those things, and views as well. The one other thing that I'm proud of portfolio specific, is first year's (students) extravaganza – it went so well. We got about 800 first year students and that is not counting returners” 12:54 (2nd recording) self-awareness/diversity</p>		<p>Upskilling includes communication, interpersonal skills, networking skills, improved articulation, finding balance</p>			<p>VM8.3</p>
	<p>“(When I first arrived at Rhodes, seated at the monument, Putuma) spoke so passionately about her environmental journey. So then I started studying environmental science.” 33:04 Resonance</p> <p>And then in 2020 (Putuma) came into office – I followed her whole campaign on Facebook ... her individual Facebook profile. And then the pandemic hit then Putuma started moving environmental engagement into the social media arena where like people could participate with environmental things online. I was like, this is my</p>		<p>“...I came here (Rhodes University) to do law” 51:08</p> <p>“When I saw Putuma integrating on-campus-work with social media, I felt this is something I can do. (Over her term of office) I watched the videos about how we can individually participate in her project at home. And then I thought this is actually a good idea. I think I can go far with this. And so when 2021 started and we're still in the pandemic, that's when I ran for SRC because I wanted to move Rhodes SRC space into a more digital arena. And also because I wanted to learn</p>		<p>“The first semester for me was really terrible. I underestimated SRC... when SRC actually started (I realised that) there is so much work, and so many environmental problems. and then that's when I started to do my research and make connections with people. So my highlights was more in my second half of term in office because I think that's when I actually managed to get students on board. Because my events now we're now more student centric. Most students attended even students that didn't know anything about environmental stuff would still come and make eco-</p>	<p>“(would help me) decide if I want to do environmental science or go back to law or mid point - and I chose the midpoint” 33:04 Hidden curriculum</p> <p>Highlights: “So I entered (the eco-bricks competition) for the Environmental Committee Awards (but the awards were cancelled) and I (felt that) I can't just let this go because I've worked so hard, so I created a students' environmental awards. And I was so shocked (impressed) by the attendance – there were a lot of people (on</p>		<p>VM8.4</p>

	<p>style! ... moving environmental engagement into the more digital space and I'm a social media fan..."33:04 Resonance</p>		<p>how to use the skills I had been learning in environmental science in actual practice"33:04 Resonance Agency</p>		<p>bricks & come to see what's going on. So it moved from just being myself and the environmental reps to be students from residences " 07:34 (2nd recording)</p>	<p>Zoom for these awards)" 11:42 (2nd recording) Alternative pathways</p>		
<p>"From (primary and high school) wanting to be a leader and not getting it because I was this thin, small thing and leadership had to do (with) someone who is taller. So it was not based on my brains or capabilities. So I thought that once I get to university, people will start seeing me for my brains and not for my body. And also, where I come from you had to be a man in most (leadership) positions. So getting into university I had that hope that I will start being seen for what I can do, but not getting elected into house comm, I started asking myself (maybe) people (back then at my previous schools) were telling the truth that I'm not capable because I am a woman, because I am small girl? " 46:55 Coming into self</p>	<p>Speaking the 'language' of peer Navigating the landscape</p>	<p>"Because of my friend – she said "Go do better (than what was being perceived by SRC)" 48:16 (AFFIRMATION)</p> <p>"So another thing was that (when I first arrived at Rhodes University), (although) I definitely could construct sentences in English, I couldn't speak like majority of the students at Rhodes... that's why I didn't voice myself... when I (decided to apply in 2019) into the SRC I was by that time more confident in myself. Even if I were to lose this campaign I was more confident in what I can do, even if I didn't get into that office, it's something I (believed I was) still able to do. "51:55 Time in an enabling environment builds confidence</p> <p>Finding voice</p> <p>Reputational influence of Rhodes University and also the SRC within Rhodes Uni. Reputational equity</p>	<p>"...I really wanted to serve. When I looked (again) I saw the environmental (portfolio). But I never knew from the previous years that such a position existed. I read through it and felt this is something I could definitely do, and something I am studying and something I am living. "37:56</p>	<p>"I live within the environment. I'm part of e environment and I'm studying it. And now I'm going to be leading in that same path. So it all made sense for me. " 42:42 Resonance Convergence</p>	<p>"... I struggled to get the signatures – I think you need 6 signatures... But it was not from them not believing in me, it was them not believing in the institution and the SRC. I did not find fault in them (my classmates) because after seeing that portfolio and what I could do for it, and people not believing in the SRC, I started campaigning, it was it was weird, because during the campaign itself, I started getting people (supporting) me now ... I started to think how can I incorporate the students in my ideas and my visions? " 42:42 Self belief</p>	<p>Highlights: (innovative)</p> <ul style="list-style-type: none"> - Plastic-free July - No-meat-Mondays - "For me it was hosting the webinars... I had to move bricks and walls to make that happen"00:14 (2nd recording) <p>curiosity</p> <p>... we wanted to understand how we can still be environmentally conscious while at home in lockdown... how do we integrate environmentalism with the pandemic? So it was a 3-day webinar. We invited speakers from (all over) South Africa. We had Miss Earth that year. I (contacted her through) Instagram . I also worked with Access - an Alliance for Climate – at CSIR - they responded saying they didn't have anyone, so I went to their webpage and approached someone directly, and sometimes when you say 'Rhodes University' it opens (avenues), so I called and it says on the phone Rhodes University SRC President, and then he checked the diary and agreed in the end... Empowered</p> <p>I actually even (emailed) the President's Office, who they then sent an email to Barbara Creecy (Minister of Forestry, Fisheries and Environmental Affairs) but she was unavailable for that day. So maybe when Anda does it she will come. " 00:14-> Commons</p>		<p>VM8.5</p>

Orientating Value (cont)	Strategic Value (cont)	Enabling Value (cont)	Immediate Value (cont)	Potential Value (cont)	Applied Value (cont)	Realised Value (cont)	Transformational Value (cont)	Data code
	<p>Q: how can the Uni support this office?</p> <p>-VE Milca Matariro (2021 SRC Enviro Councilor) And also the University can assist with is basically creating a department (that the Environmental Councilor can work with)</p> <p>Anda Mtshintsho (2022 SRC Enviro Councilor) 34:11 Yes, and funding for the initiatives.</p> <p>Milca Matariro (2021 SRC Enviro Councilor) 34:20 Yes, the green fund - (but the funds are) so difficult to access.</p> <p>Absence</p>			<p>Anda Mtshintsho (2022 SRC Enviro Councilor) 30:21 “It has to be part of the (university-wide) curriculum. The Constitution says that its our (Environmental Councilor) responsibility – but I as a student, how do I do this? Which channels would I go through... for instance – history/fine arts/economy/ humanities/ journalism – environmental sustainability and awareness should feature– but how do I (as a student) do this?”</p> <p>Putuma Balintulo (2020 SRC Enviro Cllr) 31:08 “It says work with academia... but how”</p> <p>Milca Matariro (2021 SRC Enviro Councilor) 31:09 “you want this - but how?”</p> <p>Anda Mtshintsho (2022 SRC Enviro Councilor) 31:12 “As I said, it must be relatable education. It shouldn't be what we do as environmental science majors, because that's intense , but how do you (simplify) and ensure that everyone understands...”</p> <p>Putuma Balintulo (2020 SRC Enviro Cllr) “Their impact on the planet” Relatable education Planet sharing</p>				VM8.6

Orientating Value (cont)	Strategic Value (cont)	Enabling Value (cont)	Immediate Value (cont)	Potential Value (cont)	Applied Value (cont)	Realised Value (cont)	Transformational Value (cont)	Data code
			<p>Carlene Royle So where do you feel this all came from?</p> <p>Putuma Balintulo (2020 SRC Enviro Cllr) 50:13 It was timing...</p> <p>Anda Mtshintsho (2022 SRC Enviro Councilor) 50:33 It's many things, the people around you, what you believe in. You just wake up one day, and you feel it. And something tells you that you should go for it</p> <p>Milca Matariro (2021 SRC Enviro Councilor) Umm – that this is yours...</p> <p>Putuma Balintulo (2020 SRC Enviro Cllr) 50:49 I often refer to the universe, it could be God, it could be my ancestors</p> <p>Milca Matariro (2021 SRC Enviro Councilor) Exactly... Its like a calling</p> <p>Putuma Balintulo (2020 SRC Enviro Cllr) 50:58 And you have to answer – that's the thing with a calling...</p> <p>Milca Matariro (2021 SRC Enviro Councilor) 51:08 And everything around you starts leaning towards that thing only. Because I came here (Rhodes University) to do law – I don't know how I even ended up in environmental sciences (laughter) Calling/ Meaning</p>			<p>Anda Mtshintsho (2022 SRC Enviro Councilor) 49:14 "... you bring to me (that) what affects or impacts me...the solution (should) come from those affected... you cannot think for that community. They know their lives better than you do. Until you have been one of them you can't speak for them... it's the value co-creation - I love how you put the 'co-' before creation..." Social commons</p> <p>Putuma Balintulo (2020 SRC Enviro Cllr) 50:24 And they think they bring the solutions ... But just like with committees here they make decisions on behalf of students, but for many years they've (not) been students university"</p>		VM8.7

Orientating Value (cont)	Strategic Value (cont)	Enabling Value (cont)	Immediate Value (cont)	Potential Value (cont)	Applied Value (cont)	Realised Value (cont)	Transformational Value	Data code
<p>“When you say environmental - what are you referring to? Is it conservation? Or is it social environment? Or is it economic environment? Or is it social economy or socio ecological? What do you mean?” 17:25</p>						<p>Anda Mtshintsho (2022 SRC Enviro Councilor) “to be eco-conscious, you (don’t have to just be) be vegan, or must do environmental science. Your everyday practices should be informed ...our ways of consumption- what does that speak on?... transportation, buying local, - all those thing. My biggest concern is eco-conscious people use all these terms that (ordinary) people do not understand – (we need everyday language that speaks to the ordinary person, you know, for them to understand.”25:52 (2nd recording) (LANGUAGE)</p> <p>Putuma Balintulo (2020 SRC Enviro Cllr) “Yes ... relatable and inclusive (education). Because most of the time this environmentalism thing (it is perceived to be) number one it’s for whites, it’s for the rich, it’s for the vegan people because it’s so expensive... it automatically excludes the ordinary person from the environmental stuff. People will tell me you are doing white things ...” 29:08</p> <p>Anda Mtshintsho (2022 SRC Enviro Councilor) Exactly</p> <p>Putuma Balintulo (2020 SRC Enviro Cllr) ... but the environment is not white” 29:08 Decolonisation of perception</p> <p>“Putuma Balintulo (2020 SRC Enviro Cllr) 29:38 It separates ordinary people from nature, because (it’s thought) there is mother-nature and then there is us – no we are nature ourselves. But we are the</p>		VM8.8

						most destructive part of nature"29:38 (2 nd recording). Convergence		
			Milca Matariro (2021 SRC Enviro Councilor) 18:10 "So you are environmental and wellbeing [this year]... [compared to last year] we were environmental and community engagement... so there isn't that uniform in how they name the environmental councilors." <i>(responding to Anda re portfolio scope)</i>					

Appendix 7. Tagging Matrix (after First order of analysis)

Overview of the coding (from the first order of analysis VCF exercise/ project)

Project:	Nambu-Project											
Sub-Theme:	Seeing the 'Macro'	Origins: Curiosity	Origins : Fostering curiosity	Peer affirmation	Fostering new knowledge	Midl' system: responsivity as an enabler	A new way of 'seeing'	Social impact (direct)	Social impact (Expanded)	The person	Impact potential / new economies for alternate future	Other
Coding	macro perspective	Investment in self	Investment in self	Legitimization through shared experience	Reputational equity	Macro lens	Seeing	Impact investment	Expansion	Meaning	Convergence	Access
	Power of local	Seeing	Negotiation		Institutional responsivity	Risk in silo practices	Eco-consciousness	Meaningful relationships	Incoming legitimization	Social commons	Convergence ->	Seeing
	alternate metrics	Curiosity			Innovation / Jungaard?	System inertia	Seeing	Staff investment	Social commons	Patriotism	Problem solving for system change	Prioritising energy
	Seeing	Reframing value			Social commons	Navigating landscapes	Seeing	Navigating landscapes (intnl)		Seeing	Alternate futures	Recitivity
	Convergence	Alternative futures			Social commons	Absence	Seeing	Social investment		Resourcefulness		Navigating landscapes
	Seeing					Priorities	navigating landscapes			preparedness		
	Backing intuition					Relations	new paradigm language			pioneering		
Project:	E-Waste-Project											
Sub-Theme:	The 'midl' system: enabler vs hindrance	The heart beat	Fostering curiosity	Reputational Equity	Seeing	Legitimization	Navigating landscapes	Personal investment momentum				
Coding	hinder	Community	fostering	Reputational Equity	Seeing	Legitimization	Access	meaning				
	responsive		leveraging	networking		Reinvesting	Affirmation	leveraging				
			new language				leveraging	leveraging				
			alternate pathways				networking	crossing boundaries				
							influencing	comfortable with uncertainty				
								problem solving for system change				
								time				
Project:	Food-for-Us-Project											
Sub-Theme:	Project overview	Stakeholder commons	The Project with in the project	Social Web	Alternative pathways	System responsivity amplifier effect						
Coding	Multi-stakeholder engaged participation	Social commons	Anticipatory	ZPD	Alternative technologies	Anticipatory						
	problem solving for system change	diverse participation	Alternate futures	Leveraging existing networks	new dimensions	Anticipatory						
	anticipatory	honouring context	seeing	Trust	relations	Reputational Equity						
	diverse expertise	convergence	technology as a change agent	Diverse representation		System responsivity						
	sustainability	new players	momentum	Social commons								
	whole-systems	Seeing	social infrastructure	social infrastructure								
	holistic	problem solving for system change		New players								
	legitimization											
	knowledge transfer											
	community											
Absence												
Reputational equity enabler												
Project:	Evethu-Project											
Sub-Theme:	Communities of Practice	Legitimization through informal > formal	Empowering the social web	A new way of seeing	Multi-dimensional convergence	Social commons	Leveraging projects for deeper reach					
Coding	Empowerment	Empowerment	Community/Ubuntu	Social accountability	Convergence	Social commons	Continuous reinforcement					
	Social innovation	incoing legitimization	System ubuntu	Jungaard	jungaard	Empowerment	Meaningful relationships					
	Empowerment	formalized	Responsiveness	Relationality	social commons	Outward legitimization	Social Commons					
	Social commons	Problem solving for system change	Meaningful relations	Seeing	intertwined	Social commons	Care					
	Social innovation		Trust	Seeing	holistic	technology and the social commons						
	Technology enabling new knowledge		Holistic	seeing								
	Community of practice		whole-systems	Inspiration								
			Community/Ubuntu	empowering								
			Empowerment	Reframed value								
			Seeing	empowering								
		Social innovation	meaningful partnerships									
			social commons									
Project:	Grounds and Gardens (services perspective)											
Sub-Theme:	Responsibility & Reciprocity	Impact of an unresponsive system	Multi-stakeholder project	Other								
Coding	Internal partnerships	Unexpected consequences	System absence	Problem solving for system change								
	Community	system absence	Awareness									
		Expectation	Perception									
		Burden	Stakeholder importance									
		Contractor responsiveness										
Project:	Kitchens Team (services perspective)											
Sub-Theme:	Silo'ed Practices	Community Centric Culture	Culture of Service, Care and Professionalism	Leadership as an enabler	A new way of seeing and engaging	Cost of Change: iterations & bearer						
Coding	Risk	Community	Service	Leadership	Seeing	Eco-conscious						
	Responsivity	Relations	System navigation	Relations	Adaptability	Cost of Change: iterations & bearer						
	Silos	Community	Leadership	Leadership	Recetivity	hidden						
		Community	Care	Institutional knowledge	Anticipatory	resources						
			Community	Honouring context		capacity						
			Risk management			expertise						
						legitimization						
					motivation							
					energy							

Emerging Themes -->					
Case-Studies	Meaning making ET 1 ↓	Convergence of socio and eco ET 2 ↓	Holding sight of- / in service to- the social commons ET 3 ↓	In service to whole-systems/ a whole-systems perspective ET 4 ↓	Reframing value / New way of 'seeing' ET 5 ↓
<p>E-Waste Repurposing Project</p> <p>Interview with: Dr Gauta Matlou</p> <p>CS 1 --></p>	<p>Dr Gauta Matlou displays intuitive stewardship through problem solving for a greater good.</p> <p>"I have this dream of wanting to solve a problem that affects the community" (Matlou, T1.14:46, VM1.2).</p> <p>"whatever I am researching, it must go to the community" (Matlou, T1.32:33)</p>	<p>The environment is seen through the lens of the social commons, rather than as a separated, silo'ed concern.</p> <p>Dr Gauta Matlou explains "So the most challenging thing is that [the e-waste]... consist of hazardous materials... such as lead and mercury... we then said, 'Okay, we are within this problem, and how can we then take up our knowledge as chemists, and then meet it up together with the demand for work, especially in South Africa and realizing that... youth unemployment is growing" (Matlou, T1.3:27, VM1.2).</p>	<p>"...because I've got dream of wanting to solve a problem that affects the community" (Matlou, T1.14:46, VM1.2)</p> <p>The concept of Ubuntu, "the belief in a universal bond of sharing that connects all humanity" (The Living Archives, n.d) emerges over the duration of the interview, with the conversation centring around "we", and the example of "we are within this problem" (Matlou, T1.3:27, VM1.2).</p>	<p>The nature of the project could be explained as a whole-systems perspective. It takes an environmental concern, reframes it so that it has economic benefit, and provides jobs for unemployed youth in local communities.</p>	<p>Dr Gauta Matlou saw opportunity in unused and discarded E-waste, and linked it to the challenge of youth unemployment, showing ability to reframe value.</p> <p>"So the project was on electronic waste, recycling, repairing and repurposing" (Matlou, T1.3:27)</p> <p>"... we are within this problem, and how can we then take up our knowledge as chemists, and then meet it up together with the demand for work, especially in South Africa and realizing that youth employment is youth unemployment is so growing" (Matlou, T1.3:27)</p>
<p>Nambu Animal Protein Feed Project</p> <p>Interview with: Lowell Scarr</p> <p>CS 2 --></p>	<p>"At the core I have always been purpose driven... establishing something that in our context is labour absorbing... I want my kids to have a future in South Africa... I want a future that is good for South Africans. One way that I can do that is by creating jobs, particularly for young unemployed, unskilled people, that can be my contribution from a societal perspective" (Scarr, T2.50:58, VM2.11)</p>	<p>Lowell Scarr talks about socio and enviro using same descriptors "exploitative", "non-regenerative", "do not speak to the future we need to be creating" (Scarr, T205:17, VW2.1).</p> <p>Another quote lends further evidence:</p> <p>"So I see all these challenges in the agricultural system... on the way we produce food... it is completely counter to being able to produce food in 50 years time... We need to have new models of agricultural production, resource usage and recycling that can support 50-100 years in time, for our kids, our grandkids, stretching across South Africa, [for] a country that is socially stable, and a country that is environmentally sustainable, and a world that is environmentally sustainable" (Scarr, T2.51:57, VM2.12)</p>	<p>Same as quotes in theme Convergence of socio and eco commons</p> <p>Lowell Scarr talks about socio and enviro using same descriptors "exploitative", "non-regenerative", "do not speak to the future we need to be creating" (Scarr, T205:17, VW2.1).</p>	<p>Lowell Scarr speaks to the whole-system perspective. He says "the citrus industry in South Africa, which is a huge earner of foreign revenue, but essentially we are exporting water from a water scarce country—if you look at the water consumption that is used to produce a bag of oranges" (Scarr, T2.08:03, VM2.1). His mention the citrus industry's high use of water to grow a product that is exported, in a water scarce country, and expands on this raising questions around social justice and a more accurate costing in this practice.</p> <p>In this same thread he speaks of the power of keeping R1 local describing the impact of local circulation of money and the resilience this creates in the local economy. (Scarr, T2.11:36, VM2.1)</p> <p>He also speaks to the cost of large supply chain footprints on global scales, and explains the socio and eco exploitation (in the same breath) in ideas such as economy of scale. (Scarr, T2.06:37, VM2.1)</p> <p>Finally, in speaking to the agricultural sector "... the majority of practices we use are unsustainable, exploitative, non-regenerative, and do not speak to the future that we need to be creating" (Scarr, T205:17, VW2.1).</p>	<p>"I essentially view myself like a dairy farmer... (there are) slight differences in the operations but essentially doing the same thing... so there's no reason why we shouldn't be sharing information" (Scarr, T2.1:01:53., VM2.8)</p> <p>"The market doesn't know the value of what I'm doing yet" (Scarr, T2.1:07:50, VM2.8)</p> <p>"Its is a blue ocean opportunity ... [which] sits at the base of the entire agriculture value chain" (Scarr, T2.33:11) ('Blue Ocean' is business speak for an as-yet-untapped-market).</p>
<p>Food for Us – farm waste reduction project</p> <p>Interview with: Sarah Durr van Lingen</p> <p>CS 3 --></p>			<p>The project's aim is to address the nutritionally poor in society. Deeper engagement within the communities was made possible through existing networks that had been developed over past project collaborations with Rhodes University's Environmental Learning Research Centre. "The success of the Eastern Cape [case study], [was due to access to the] network... [this] was a huge enabling factor ... without those initial network relationships, I don't think we would have gotten as far" (Durr van Lingen, T3.23:59, VM3.3)</p> <p>"So we were working with a network that we were really quite familiar with and there was a lot of trust" (Durr van Lingen, T3.9:55, VM3.3)</p> <p>"The idea was not to come up with a ready-made app for the communities that we would be working with, but rather to develop something together." (Durr van Lingen, Food for Us Project, T3.02:59, VM3.2)</p> <p>Also notes contained in theme around voice & agency</p>	<p>The project is an example of a whole-systems perspective in action. Sarah Durr van Lingen says, "So we were developing the idea ... looking at a much more holistic approach to market transformation... with a whole-systems approach" (Durr van Lingen, T3.27:37, VM3.1)</p> <p>"they [younger] were able to introduce the technology / technological space to the older farmers – [and they were] working together" (Durr van Lingen, T3.14:17, VM3.2)</p>	<p>'Seeing' a new paradigm: The project is an example of reframing value. "In a country that produces more than enough food to feed everybody how is it that just under 50% are nutritionally poor" (Rhodes University, 2017) (VM3.1). The project saw opportunity in the farm produce excess, and saw its (reframed) value should avenues be created to transfer this excess into the surrounding community.</p> <p>Another example of reframing value is seen in the high value placed on building of trust within the stakeholder relationships: "Having [access to] those existing partnerships – with Busi and other really important farmers, was, [in other words] without those initial network relationships, I don't think we would have gotten as far" (Durr van Lingen, Food for Us project, T323:59)</p> <p>"So we were working with a network that we were really quite familiar with and there was a lot of trust" (Durr van Lingen, Food for Us project, T3.9:55)</p>
<p>Eyethu Project – repurposing recyclables for teacher training aids</p> <p>Interview with: Nollie Shelle and Vatiswa Joni</p> <p>CS 4 --></p>	<p>"We work together to help the parents and the practitioners to have a better understanding of what we are talking about..." (Shelle, T4.10:29, VM4.3)</p> <p>"If you share ideas, we can make it happen" (Joni, T4.19:31)...</p> <p>"Which means poverty can run away if we are together doing this" (Shelle, T4.19:31)</p>	<p>Eyethu is an isiXhosa (word) and its (direct) interpretation is 'our' or 'ours'. We are saying (this) is for 'everyone'</p> <p>"Using waste material opens your mind and it also helps your environment... If we can work together..." (Joni, T4.1:05:40)</p> <p>This is an example of the convergence of socio and eco at play.</p>	<p>"...it's no more now something which is going to be my advice, it will be our advice to each other, so that then we can achieve the goal which want" (Shelle, Eyethu Project, T4.1:05:40, VM4.6)</p> <p>"Working with the communities is not easy – you need build and build until they trust you" (Joni, T4.51:45, VM4.3)</p> <p>"Everyone can go look [and collect] for whatever he or she can use, to make a better, improvised material [for] a lesson plan in our schools" (Shelle, T4.01:22, VM4.1) "... we also communicate by means of Whatsapp groups... sharing to one another... the ideas" (Joni and Shelle, T4.1:02:30, VM4.1)</p>	<p>Caring for the child is expressed in the engagement and investment across the whole-system that holds the child - from the parent to the teacher, to the local 'village that raises the child'. It further crosses the varying needs of the child, from a full 'belly', to healthy nutrition, to social engagement skills (language development) to self empowerment and sustainability skills. (VM4.5). This is a multi-dimensional convergence in service offering, in serving and in service of whole-systems.</p> <p>Examples of this are seen in the following: "We work together to help the parents and the practitioners to have a better understanding of what we are talking about..." (Shelle, T4.10:29)</p> <p>"... the parent needs to know what is taking place at school. So that the parent is able to help her child." (Shelle, T4.09:39),</p> <p>"In our schools, there is a project with my colleague... whereby they are encouraging their schools... to take part in gardening ...[they] divided their land into three parts... for their children's garden, for the community (which is the parents), and the other part is for the practitioners" (Shelle, T4.12:27, VM4.5)</p> <p>And also, "When we meet [the parents, we] encourage them, even if it's just a door-sized garden - more especially as now the [food] prices are going up. Therefore we are not only focusing in the classroom, we [have a] holistic focus, so that the parent can also benefit in what we are talking about." (Shelle, T4.12:27, VM4.5)</p>	<p>Value is reframed in the manner in which the participants view success. Success is measured in levels of trust between the project and the community, as explained "[Success is defined by] good working relationship with the practitioners, the parents and their children... long term relationships" (Joni, T4.22:20, VM4.4)</p>
<p>Stanley Kidd Residence Recycling Project</p> <p>Interview with: Jonathan Hellemann</p> <p>CS 5 --></p>	<p>The Stanley Kidd Residents engage in good citizenship, in the responsible manner in which they dispose of their waste, and diverting recyclables from the waste stream. This is an activity that they see is valuable, and therefore may be considered meaningful to them.</p> <p>Link between meaning-making and the social commons: "It needs to be for the inherent good of the immediate participants, but also the wider community, their environment" (Hellemann, T7.38:13).</p>	<p>Jonathan Hellemann says, "we talk about the dumpsite here not been able to function properly... And we know directly it has an impact on the community because environment and community are not separate. They're not separate." (Hellemann, T7.48:03, VM7.4)</p> <p>And as an example: "So I think there's just a natural extension, ... when they do community projects with our school partner that we have a [sanitary] pad drive or stationary drive [as an example] the one time when they went [along] they did a [environmental] clean-up [of litter] around the immediate school so I think the two are interchangeable, they're in a symbiotic relationship" (Hellemann, T7.40:44, VM7.4)</p>	<p>"I think the primary concern is the environment, knowing that the community will be negatively affected ... we talk about the dumpsite here not been able to function properly... And we know directly it has an impact on the community because environment and community are not separate. They're not separate." (Hellemann, T7.48:03)</p>	<p>Jonathan Hellemann explains "Everything must be sustainable... It needs to be for the inherent good of the immediate participants, but also the wider community, their environment." (Hellemann, T7.38:13), and also, "I think the primary concern is the environment, knowing that the community will be negatively affected ... we talk about the dumpsite here not been able to function properly... And we know directly it has an impact on the community..." (Hellemann, T7.48:03)</p>	<p>Linked to the above, but in the context of reframing value: "Its about what opportunities you are creating for (a) future economy..." (Hellemann, T7.00:02 3rd recording)</p>
<p>SRC Enviro Councilor Legacy team</p> <p>Interview with: Putuma Balintulo Milca Matariro Anda Mtshintsho</p> <p>CS 6 --></p>	<p>Speaking to resonance, of being in service, and of a calling, "...everything around you starts leaning towards that thing only" (Matariro, T8.51:08, VM8.7). "... You just wake up one day, and you feel it. And something tells you that you should go for it" (Mtshintsho, T8.50:33, VM8.7). "Its like a calling" (Matariro, T8.50:49, VM8.7). "And you have to answer – that's the thing with a calling..." (Balintulo, T8.50:58, VM8.7).</p>	<p>Putuma Balintulo explains, "[Current thinking] separates ordinary people from nature, because [it's thought] there is mother-nature and then there is us – no we are nature ourselves..." (Balintulo, T8.29:38 2nd recording, VM8.8).</p> <p>And a practical example is seen in the following offering by Anda Mtshintsho, "[Within] the residences the two portfolios are [also] linked ...community-engagement and environmental reps." (Mtshintsho, T8.14:57 2nd recording)</p>	<p>"... you bring to me [that] what affects or impacts me [no]... the solution [should] come from those affected... you cannot think for that community. They know their lives better than you do. Until you have been one of them you can't speak for them... it's the value co-creation - I love how you put the 'co-' before creation..." (Mtshintsho, T8.49:14, VM8.7)</p>	<p>Evidence is presented here in two instances:</p> <p>Putuma Balintulo's insight of how we relationally fit within nature: "Current thinking] separates ordinary people from nature, because [it's thought] there is mother-nature and then there is us – no, we are nature ourselves..." (Balintulo, T8.29:38 2nd recording).</p> <p>Speaking to incorporating this subject in to the university-wide curriculum, as per the constitutional framing, Mtshintsho says "It has to be part of the [university-wide] curriculum. The Constitution says that its our [Environmental Councilor] responsibility" (Mtshintsho, T8.30:21, VM8.6).</p>	<p>Same as problem solving for system change.</p> <p>Putuma Balintulo engages with eco activities because she cares for the ecological environment, but when she interacts with her social commons she is challenged for engaging in activities that are viewed as exclusive and burdened in historical injustices. Balintulo challenges the social commons to reframe the perspective and see that this is not exclusive or owned by any one demographic in the general population, is should be owned collectively because "no, we are nature ourselves" (Balintulo, T8.29:38 2nd recording).</p>

Emerging Themes -->

Case studies continued from page 1 ↓	Evolution of language/ Language as an enabler ET 6 ↓	Problem solving for system change ET 7 ↓	Link between voice, agency and the informal curriculum (learning opportunities created outside of the formal curriculum) ET 8 ↓	Navigating landscapes: Operational support. structures as an enabler/blocker ET 9 ↓
<p>E-Waste Repurposing Project</p> <p>(continued from page 1)</p>	<p>The E-Waste project is abbreviated from electronic waste. Post project and speaking in our interview, Dr Gauta interestingly adds an insight "It would have been a space where this generation can come and learn that there are ways to handle e-waste, let me just say 'tech-waste', because it is relevant to all technology in our homes" (Matlou, T1.26:41, VM1.3). Dr Gauta Matlou changes/evolves his terminology from E-waste to a more inclusive Tech-waste.</p>	<p>Same as with 'Seeing' or reframing value</p>	<p>The Department of Chemistry supported this initiative thus legitimizing it both in the eyes of the PhD scholars and the university (VM1.6). This legitimization of the PhD scholars' display of agency led to learning opportunities which were created outside of the formal curriculum.</p> <p>"...I was thinking about it (the project) way before the actual start... although we did brainstorming, ... the Hult prize was another way of finding a way of starting this project, but in a different angle" (Matlou, T1.16:27)</p>	<p>A sense of dissonance in the university administrative support-systems (from travel fundraising to travel coordination, to mentorship, and also project implementation) is evidenced in the following:</p> <p>"the system can actually hinder you from achieving your goals" (Matlou, T1.1:01:56, VM1.1).</p>
<p>Nambu Animal Protein Feed Project</p> <p>(continued from page 1)</p>	<p>Referring to the dairy-farming quotation. This speaks new/evolution of language, because where one sees new possibilities it then pre-supposes a need for new understanding and by extension new language.</p>	<p>"... the majority of practices we use are unsustainable, exploitative, non-regenerative, and do not speak to the future that we need to be creating" (Scarr, T205:17).</p> <p>"So I see all these challenges in the agricultural system... on the way we produce food... it is completely counter to being able to produce food in 50 years time... We need to have new models of agricultural production, resource usage and recycling that can support 50-100 years in time, for our kids, our grandkids, stretching across South Africa, (for) a country that is socially stable, and a country that is environmentally sustainable, and a world that is environmentally sustainable" (Scarr, T2.51:57)</p> <p>Also see themes focussed to Whole-systems perspective, and Convergence of Socio & Eco</p>	<p>The scholarly journey through undergraduate, then Masters, and culminating in a PhD study provided an avenue for agency to take place. (VM2.3)</p> <p>However, the "inertia" experienced in the administrative systems in the practical side of the project hindered learning opportunities outside of the PhD study's recognised scope (crossing over of university activity: academia vs operations) (Scarr, T2.19:50, VM2.6)</p>	<p>A dissonance between the academic project journey where the learning was encouraged, but at the implementation stage of the project, the university administrative support-systems held "inertia". (Scarr, T2.19:50, VM2.6). Lowell Scarr explains "[The University is] not geared for these [types of enquiries or requests to collaborate]" (Scarr, T2.19:50, VM2.6)</p> <p>Parallel support structure, as an enabler: "The real enabler that I found... [was] the Allan Gray Orbis Foundation - they are focused on development of what they term as future high impact entrepreneurs. They've got an entrepreneurial development program that runs alongside your academic career. It is a 4 year funded university scholarship, you then graduate to become a life-long fellow of the foundation" (Scarr, T2.33:11, VM2.7, VM2.14)</p> <p>"[Without this support] I would not probably be doing what I'm doing now" (Scarr, T2.33:11, VM2.7)</p> <p>"Off the back of that we've now been able to get financing for our East London facility, [and] Port Elizabeth facility that will start during the course of next year, and potentially, either a scaling of either of those two, or a third (additional) facility in George or KZN." (Scarr, T2.33:11, VM2.14)</p>
<p>Food for Us – farm waste reduction project</p> <p>(continued from page 1)</p>	<p>Learning to use the digital app is not a new language (as coding would be) but it is learning to communicate in a new way.</p>	<p>Same as with Reframing value ('seeing' a new paradigm)</p>	<p>(Not tied to curriculum)</p> <p>"The Nkombu Youth Cooperative really grew after being involved in the Food for Us project ... [they] developed a really important space... [in] being connected to older farmers and learning new farming techniques, and then they took it further to other youth groups who they then started to train, so they've now gone into a training space". (Durr van Lingen, T3.23:39, VM3.3)</p> <p>"The other thing is it really did bring in the younger people into the agricultural space... because [this] industry in practice was quite dominated by older farmers..." (Durr van Lingen, T3.14:17, VM3.2)</p>	<p>The project planning was designed to allow for flexibility and unplanned expenses, as is evident in Sarah Durr van Lingen's comment, "which was more of a reactive component that we were dealing with - I think there had been budget set aside for those sorts of logistics which was then drawn upon from the Rhodes University admin staff who assisted with that" (Durr van Lingen, T3.22:50, VM3.6)</p> <p>"We did have data issues, but we tried to address those through giving out data bundles to the participants" (Durr van Lingen, T3.21:48, VM3.6)</p> <p>"the Rhodes University admin staff who assisted with that. So it was the [admin] team that bought the bundles and then we sent them out to the participants so that they could access the [required] data, and make more data available" (Durr van Lingen, T3.22:50, VM3.6)</p>
<p>Eyethu Project – repurposing recyclables for teacher training aids</p> <p>(continued from page 1)</p>	<p>See Convergence of socio and eco</p> <p>The project name speaks to a social focus, yet the project purpose also has an eco focus. This thus provides space or a launchpad for new language.</p>	<p>Evidence is provided as "If you share ideas, we can make it happen" (Joni, T4.19:31, VM4.5) "Which means poverty can run away if we are together doing this" (Shelle, T4.19:31, VM4.5)</p>	<p>(Not tied to curriculum)</p> <p>In describing the name of the project Nollie Shelle says, "Eyethu is an isiXhosa (word) and its [direct] interpretation is 'our' or 'ours'. We are saying (this is) for 'everyone'" (Shelle, T4.01:22). This is further evident in the conversation around adult workshops, evidence of individual and community voice emerges;</p> <p>"...it's not something we are instructing, we do it together so that you can see that change your way – not Nollie or Vatiswa's way." (Shelle, T4.28:00, VM4.6)</p> <p>"We've got technology now. The [new generation] can Google now... most of the time we are helping each other. Because if we sat down and then [they] say, 'This is what I would love to do', then [we] will be saying, 'Okay, let's Google... what we want to do' - it's no more now something which is going to be my advice, it will be our advice to each other, so that then we can achieve the goal which want" (Shelle, T4.1:05:40, VM4.6)</p>	<p>An internal systems ubuntu</p> <p>"In this [Eyethu] project I [Nollie Shelle] work closely with Vatiswa [Joni]. The Eyethu project is her baby, but I work closely with the parents when it comes to [supporting the] reading, writing, the toy library and all of that" (Shelle, T4.10:29)</p>
<p>Stanley Kidd Residence Recycling Project</p> <p>(continued from page 1)</p>			<p>Jonathan Hellemann links opportunity for learning to the informal curriculum.</p> <p>"There is definitely a link [between voice and agency]. The way students are thinking, in my interactions [with students] they want their voice to be heard... They want to be involved in the decision making. They don't want other people making the decisions. They also want to be at the table contributing because the thing affects them where they are..." (Hellemann, T7.52:40, VM7.6)</p> <p>"... the students of today are very aware of societal issues, of injustices [and] this kind of stuff. The biggest challenge is getting them to actually do [something about] it... You need to highlight 'spaces' where they can do/ (put into) practice... to practice that agency..." (Hellemann, T8.43:19, VM7.5)</p> <p>"...there are opportunities here where you [could] learn other skills that you won't learn by going to lectures and those skills are picked up by joining societies, joining sport, getting involved in house comm, by supporting projects" (Hellemann, T7.46:40, VM7.5) "...I want [a focus] around the environment, because it will have an inherent benefit to the [local community], it can lead to new skills transfer [for a] future economy, a green economy, future jobs. That's what we have to think about now in education - in how this must be able to lead to something more not just have a piece of paper [degree]. I think [this is] the challenge that we have." (Hellemann, T7.02:42 3rd recording, VM7.6)</p>	<p>(Read in conjunction with Link between voice and agency, and the informal curriculum)</p> <p>Jonathan Hellemann explains that the recycling project requires a 'mechanism' (a system) that enables this citizenship, "we need to recycle, but [where] there's a mechanism in place for recycling to happen" (Hellemann, T7.25:24, VM7.4).</p>
<p>SRC Enviro Councilor Legacy team</p> <p>(continued from page 1)</p>	<p>Relatable language as an enabler: "...people use all these terms that [the greater community does] not understand – [we need] everyday language that speaks to the ordinary person, you know, for them to understand." (Balintulo, T8.25:52:2nd recording)</p> <p>Anda asks "When you say environmental – what are you referring to? Is it conservation? Or is it social environment? Or is it economic environment? What do you mean?" (Mtshintsho, T8.17:25, VM8.8)</p>	<p>Demystifying a curated reality: Putuma Balintulo offers "Because most of the time this environmentalism thing [it is perceived to be] number one it's for whites, it's for the rich, it's for the vegan people because it's so expensive... it automatically excludes the ordinary person from the environmental stuff. People will tell me you are doing white things..." (Balintulo, T8.29:08, VM8.8)</p>	<p>In speaking to applying for the Environmental Portfolio role offered by Rhodes University "... everything around you starts leaning towards that thing only" (Matariro, T8.51:08, VM8.7). "... You just wake up one day, and you feel it. And something tells you that you should go for it" (Mtshintsho, T8.50:33, VM8.7)</p> <p>Milca Matariro spoke of how the term in office allowed a better understanding of where she would like to pursue her personal growth – environment or law. "And also because I wanted to learn how to use the skills I had been learning in environmental science in actual practice – [which would help me] decide if I want to do environmental science or go back to law or mid point - and I chose the midpoint" (Matariro, T8.33:04, VM8.4)</p>	<p>Speaking to the portfolio role, Milca Matariro explains "It's a bit of an overwhelming space. You have to create your own kind of dynamic of how you want to operate your own office in your term... the 'how's' and 'who-do-I-talk-to' isn't really communicated. So you have to find your feet, create your own direction, so that makes it very difficult" (Matariro, T8.01.44, VM8.1)</p> <p>However, it was also noted: "... the positive is that you can build your own vision and try execute your own vision as you see. But the downside is you don't know where to go, you don't know who was going to support you" (Matariro, T8.03:15, VM8.1)</p> <p>Speaking to incorporating into the curriculum as per the constitutional framing, Anda and Putuma say "It has to be part of the [university-wide] curriculum. The Constitution says that its our [Environmental Councilor] responsibility" (Mtshintsho, T8.30.21, VM8.6). "It [the constitution] says work with academic... but how?" (Balintulo, T8.31.08, VM8.6)</p>

EYETHU

Repurposing recyclables for teacher training aids



A Centre-Led Project

Iziko loPhuhliso lweNtlobo (GSD) kwiYunivesithi yaseRhodes lisabele kungo ngophalo lwezibonelelo ezifumanekayo kootitshala abakumaziko ezemfundo yabakhasayo, kwaye ekuphenduleni, lasungula inkqubo ephinda isebenzise izinto ezinokurisayikliswa zibe zizixhobo zoqeqesho lootitshala. I-Eyethu ithetha 'yethu' kwaye iphefumlelwe ngokuthi "sibanye". Le yindlelambini yokwabelana ngolwazi noluntu lwasekuhlaleni, ikwaliphulo kunye noluntu. Uphulo elifuna ukutyala imali kwimiba yentlalo ngeli lixa izama ukulungisa inkxalabo yokusungqongileyo ngokuphambukisa izinto ezinokuphinda zisetyenziswe ziphume kumjelo wenkunkuma.

The Centre for Social Development (GSD) at Rhodes University responded to the shortage resources available to teachers at Early Childhood Development Centres, and in response, launched a programme that repurposes recyclables into teacher training aids. Eyethu means 'ours' and is inspired by 'we are one'. This is a two way knowledge sharing 'contract' with the local community, a project of and for the community. It is a project that seeks to invest in the social commons whilst attempting to address an environmental concern through diverting recyclables out of the waste stream.

Eli ziko liqeqesho abasebenzi be-ECD abangaphezulu kwamakhulu asixhenkxe (700), bafikelela kubantwana abaphantse babe ngamawaka angamashumi amibini (20,000) nabazali abangamawaka angamashumi amane (40,000). Ootitshala besigaba seSiseko bakwaqeqeshwa kwinkqubo yoqeqesho lwemithombo yenkunkuma, kwiinkqubo zokufundisa zaseMpuma naseMatia Koloni.

The centre has trained over 700 ECD practitioners, reaching nearly 20,000 children and 40,000 parents. Foundation phase teachers are also trained in the waste resource training programme, in the Eastern and Northern Cape teaching programmes.

Impumelelo yeprojekthi ibangelwa lugxininiso oluqinileyo kwiziseko zenkxaso yoluntu 'ebambe' umntwana. I-Eyethu iqhuba iindibano zocweyo ezithi 'Play to Learn' ezibonelela ngoqeqesho oluphuculileyo kubakhathaleli, kwaye zibandakanyiwe kule nkqubo zicwadi ezisebenzisa imifanekiso ngaphandle kwamaga ezenziwe ngezinto ezilahliweyo, olu luncedo noluxhobisayo kubakhathaleli abangafundanga ukuba bathathe inxaxheba kwimfundo yabantwana babo.

The project's success is attributed to the strong focus on the community support structures that 'hold' the child. Eyethu runs 'Play to Learn' workshops that provide upskilling training to care givers, and included in this programme are wordless-picture-books created from discarded materials, which is a fun and empowering aid for illiterate caregivers to participate in their children's education.

Abantwana bayakhuthazwa ukuba baqokelele imathiriyeli enokurisayikliswa kumakhaya abo, bekhuthaza indlela entsha 'yokubona' amandla okuba nezinto ezinokuphinda zisetyenziswe ukuze zibe nenjongo entsha nokusetyenziswa

Children are encouraged to collect recyclable materials from their own homes, inspiring a new way of 'seeing' the potential for recyclables to have a new purpose and use.

THE STORY

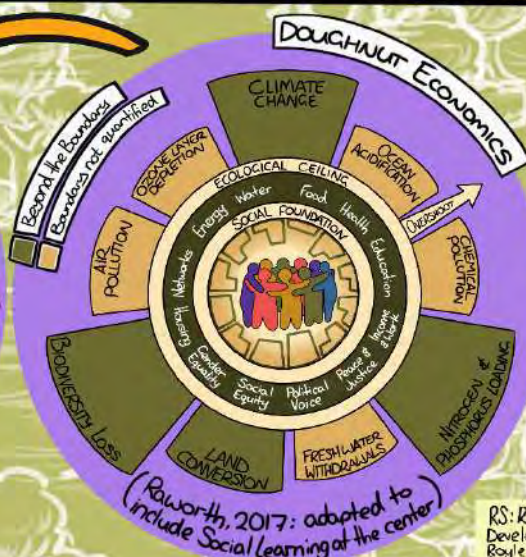
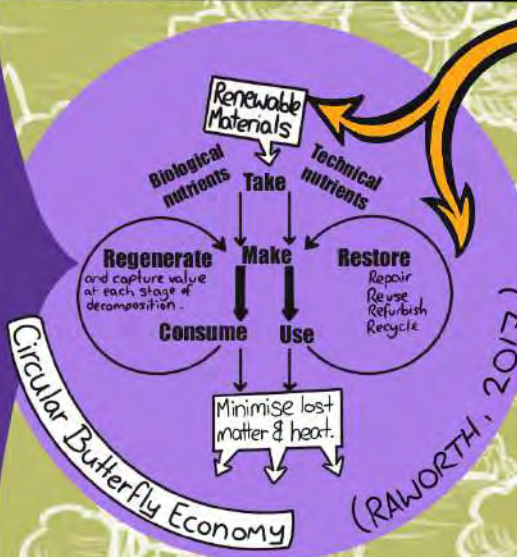
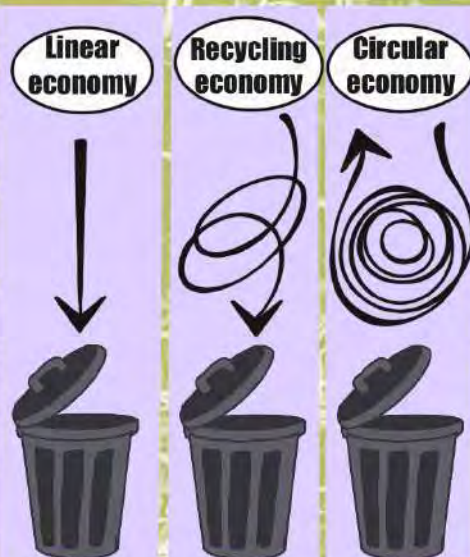


SUPER POWERS

Nexus of RS and social learning theory



Aligned RS Thought



RS: REGENERATIVE SUSTAINABILITY Developed from Masters Study, Boyle (2023), Artist: Elliot Janda Oliver

NAMBU

Alternative animal feed for a sustainable future



A student-led project

Imisebenzi yezolimo yangoku ayinakukwazi ukugcina ilizwe lethu, okanye ihlabathi lethu, kwiminyaka engamashumi amahlanu ukuya kwalkhulu (50 – 100) ezayo. Kufuneka siphinde sicinge ngezenzo zezolimo.

The current agricultural practices cannot sustain our country, or our world, over the next 50 – 100 years. We need to re-imagine agricultural practices.

Iqela leNambu licela umngeni kwizenzo zezolimo ezingazinzanga, ngokuyilwa ngokutsha inkunkuma yokutya kwihlole nakwintawo zokutyela. Ngokunyusa inkunkuma yokutya kwasekhitshini badala isondlo sezilwanyana, kwaye ngokwenza oko bancephisa kakhulu unyawo oluyingozi olukhoyo kwinkqubo zemveliso kunye nokubonelela ngemveliso eveliswa yintengiso yangoku.

Nambu Group is challenging the unsustainable agricultural practices, by re-inventing the food waste in dining-halls and restaurants. By upcycling kitchen food waste they create an alternate animal feed, and in so doing greatly reduce the harmful footprint that exists in the production and supply chain processes that the current market offerings produce.

Lo ngumzekelo wethiyori yeSetyuhula yoQoqosho, apho izondlo zeBhayoloji zibotshelelwa kwinqanaba ngalinye lokuhola. Esi shishini jasekuhlaleni livelayo ilicela umngeni kule meko. Esi phulo laqala njengephulo elincinane lamadoda amabini kwigaraji yaseMakhanda, lakhula laba liziko lenwello lasekhaya ellompumelelo. Ngoku bandisa amaziko abo emveliso kwizixeko ezithathu eziselunxwemeni eMpuma Koloni.

This is an example of Circular Economy theory, where biological nutrients are harnessed at each stage of decomposition. This emerging local business is challenging the status quo. The project started as a small two-man operation in a Makhanda garage, growing into a successful local production centre. They are currently expanding their production centres in three coastal cities in the Eastern Cape.

Ekudaleni uqoqosho olutsha lwale nkunkuma yasekhitshini, eli phulo livelisa ixabiso lezoqoqosho eMpuma Koloni. Umseki weli phulo ngumphengululi wePhD kwiYunivesithi yaseRhodes, uLowell Scarr, ngokumangalisayo ubona ukulana kweshishini lakhe nelokutya ngobisi – eli phulo lityasikhuthaza ukuba siqale ngokutsha indlela esibujonga ngayo ubomi benweli.

In creating a new economy for this kitchen waste, this project generates economic value for the Eastern Cape. The founder of the project is a Rhodes University PhD scholar, Lowell Scarr, surprisingly sees similarities of his business to that of dairy farming – this operation challenges us to reframe the way we view traditional life.

Sivuyisana noqoqosho oluluhlaza olukhathalela umhlaba wethu nabantu bethu... namhlanje kunye nekamva lethu elilqakazayo!

Cheers to greener economies that care for our planet and our people... today and for our future commons!

THE STORY



SUPER POWERS

Nexus of RS and social learning theory

Challenging curated reality! Problem solving for system change

Holding sight of social commons

Voice and agency

Meaning making (Wenger, 2000) (Guanais Sanchez, 2011)

Planetary Lens

Social Lens

Convergence of socio and eco (Adapted from Cranvolds, 2010)

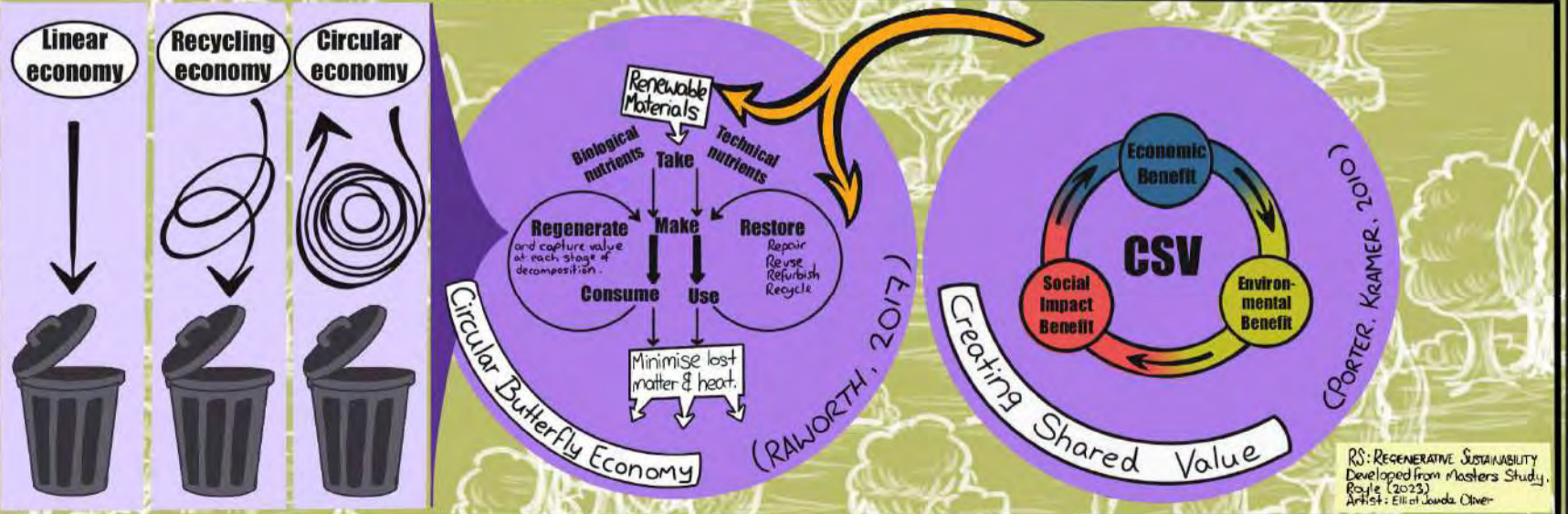
In service to whole systems

New and relatable language (Spear, 1997)

Navigating landscapes (Wenger-Trayner & Wenger-Trayner, 2014)

New ways of seeing and reframing value (Wenger-Trayner & Wenger-Trayner, 2014)

Aligned RS Thought



TECH WASTE

AKA: Team E-Smart

Upcycling and Repurposing E-Waste



Eli phulo lazalwa ngenxa yenkxalabo yokukhula kwentswela-ngqesho kulutsha ekuhlaleni. Iqela labaphengululi beYunivesithi yaseRhodes, PhD Chemistry, bangenele iHultz Prize, ukhuphiswano lwamazwe-ngamazwe. Ukungena kwabo kujolise ekudaleni imisebenzi kulutsha kuluntu lwengingqi, luphucula izakhono zabo (ngokusebenzisa ulwazi lwabo lwekhemistri oludityanisiweyo) ukuze baphinde basebenzise inkunkuma yombane engasetyenziswanga (ingozi enokubakho kokusingqongileyo).

This project was born from the concern of growing youth unemployment in the local community. A team of Rhodes University PhD Chemistry scholars entered the Hultz Prize, an international competition. Their entry aimed to create employment for youth in the local community, upskilling them (by drawing on their collective chemistry knowledge) to repurpose unused electronic waste (a potential environmental hazard).

Lo ngumzekelo we-thiyori yoqoqosho lwesetyhula, apho 'izondo zobugcisa' (umz. isinyithi neplastiki) ziphinda zisetyenziswe kwezinye imveliso. Eli phulo nalo lingumzekelo wokudala i-Shared Value (Porter & Kramer, 2010) ithiyori, lijonge ixabiso lezoqoqosho ngokujongana nenkxalabo yokusingqongileyo enefuthe elihle kwintalo-ntle yoluntu.

This is an example of circular economy theory, where 'technical nutrients' (eg. metals and plastics) are repurposed for alternate products. This project is also an example of Creating Shared Value (Porter & Kramer, 2010) theory, looking for economic value by addressing an environmental concern that has positive social impact.

Eli phulo liphumelele inqanaba lesizwe laseMzantsi Afrika kunye nenqanaba lommandla elalibanjwe eNairobi, eKenya ngonyaka u-2017. Elokugqibela lwabanjwa kamva eYurophu, kwaye oku kwakhokelela ekubeni amalungu athathe inxaxheba kwinkqubo yeHult-Accelerator eLondon, e-UK ngonyaka u-2019.

This project won the South African national stage and also the regional stage which was held in Nairobi, Kenya in 2017. The finals were later held in Europe, and this led to member participation in the Hult-Accelerator programme in London, UK in 2019.

Ukuphunyezwa kweliphulo kubonakalise owona mceli-mngeni unzima, kunye ne-Covid ithintele amandla ephulo.

The implementation of the project proved the most difficult challenge, with Covid hindering the project's momentum.

Iqela libandakanya: uGauta Matlou, uNobuhle Ndebel, uReitumetse Nkhahle noLindokuhle Nene.

Team acknowledgement: Gauta Matlou, Nobuhle Ndebel, Reitumetse Nkhahle and Lindokuhle Nene

THE STORY

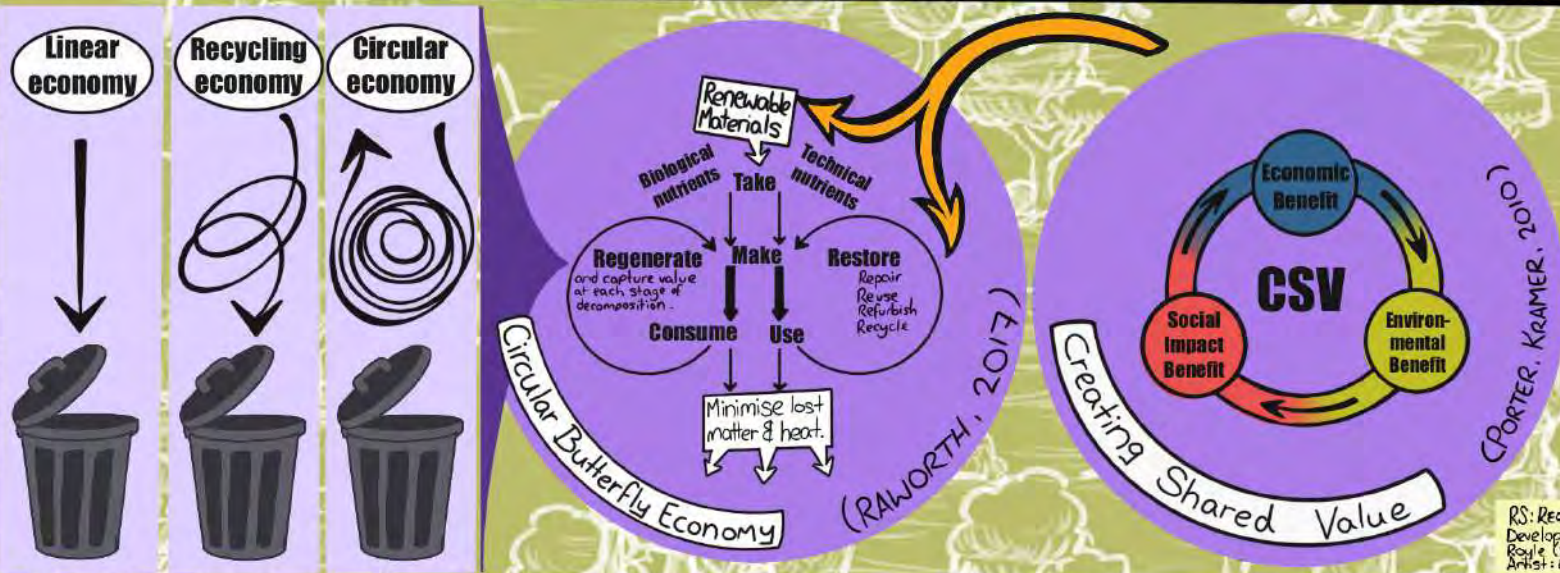


SUPER POWERS

Nexus of RS and social learning theory



Aligned RS Thought



RS: REGENERATIVE SUSTAINABILITY Developed from Masters Study, Boyle (2023), Artist: Elliot Jwala Oliver

STANLEY KIDD RES

Environmental Stewardship



A student-led project



THE STORY

Every choice makes a difference!

MAKING NEW STUFF FROM OLD STUFF!

USE
PURCHASE
RECYCLE
REUSE
REDUCE
REUSE
RECYCLE

For a sustainable campus and future

Imi kwindawo yokuhlala eRhodes University Campus, le ndawo yokuhlala ihube ngokuzimelevo iphulo lohlayo kule minyaka isixhenxe idlulileyo... oko kwade kwafika ubhuhani we-Covid-19!

Ngoku iStanley Kidd Res ifuna ukwandisa kwikhampasi ngokubanzi eliphulo!

Iingxoxo phakathi kwabathathi-nxaxheba boDyunivesity sole ziqalisile ukulinga inkqubo esesikweni yohlayo neza kunceda kwikhampasi yeyunivesithi ngokubanzi, neza kuvavanya kwiHolo yokutya iNelson Mandela (iHolo yabo). Le holo ityisa iindawo zokuhlala ezisibhozo (8) kwaye izakuqalisiphulo lofavanyo ngethemba lokwandiswa iphulo lokurisayikilisha kwikhampasi iphela.

Iqeta le-SK liyayixabisa imingcipheko yokusingqongileyo kunye neengazi ezibangelwa zizenzo ezingazinzanga, kwaye linqwenela okulungileyo ngakumbi. Ekuboneni ukuba ukurisayikilisha kona kunyanga iimpawu, babuye banemibono abayiphakamisileyo yokutshintsha inkunkuma bayenze iibhentshi zangaphandle zokuhlala kwiindawo zokutvela ezinokunceda unxibelelwano neentizngano zoluntu.

Lo ngumzekelo woQoqosho lweSetyhula, ngokudala uqoqosho olutsha lwenkunkuma (kumzekelo weebhentshi). Ekusetyenzweni kwenkunkuma enokurisayikilishwa ibe ziindlela ezidala ixabiso lezoqoqosho, ngokusebenzisana namashishini asekhaya, kuthetha ukuba i) kucuthwe indawo ekhoyo kwiinkqubo zobonelelo, kunye ii) nokuphinda kusetyenziswe amandla e-R1 ngokuwagcina esekhaya.

Ezinye iimveliso ezinokuthi zenziwe ngokwenziwa ngokutsha kwenkunkuma zizinto zokwakha izindlu.

Yonke le nto iqala ngokusetyenziswa okunoxanduva kwaye ixhaswa ngokulahlwa okunoxanduva kumjelo 'wenkunkuma' enokuphinda isetyenziswe kuqoqosho olutsha noluhlaza! Masenze oku Rhodes

Stanley Kidd Res Recycling Project

Situated within the Rhodes University Campus living system, this residence has independently run a recycling project over the last 7 years... that was until the Covid-19 pandemic struck!

Now the Stanley Kidd Res wants to expand the project campus wide!

Conversations among University stakeholders have commenced to pilot a formalised recycling programme that will service the university-wide campus, and which will be piloted at the Nelson Mandela Dining Hall (their Hall). This dining hall services 8 residences and will form a test project in the hopes of expanding toward a campus wide recycling project.

The SK team appreciates the environmental risks and hazards that unsustainable practices pose, and aspire to the greater good. Recognising that recycling is treating the symptom, an idea they raised is to upcycle the 'waste' and create outside-benches for communal eating areas and social interactions.

This is an example of Circular Economy, by creating a new economy for waste (in the example of benches). In processing the recyclable waste into avenues that create economic value, through partnerships with local business, means that i) reduced footprint in supply chain processes, and ii) recycling the power of R1 by keeping it local.

Other products that could be created by the recycling of waste is housing construction materials.

It all starts with responsible consumption and supported by responsible disposal in channelling 'waste' recyclables for a new and greener economy! Lets do this Rhodes!

SUPER POWERS

Nexus of RS and social learning theory

Challenging curated reality! Problem solving for system change

Holding sight of social commons

Voice and agency

Meaning making
(WENGER 2004) (GRANADOS-SANCHEZ ET AL, 2011)

Social Lens

Planetary Lens

Convergence of socio and eco
(ADAPTED FROM GRANADOS, 2010)

In service to whole systems

New and relatable language
Ola!
Mhoro
Bonjour
Hello!
Dumela
Mabweni
Sawubona

Navigating landscapes
(WENGER-TRAINER & WENGER-TRAINER, 2014)

New ways of seeing and reframing value
(WENGER-TRAINER, DE LUIGI, 2011)

Aligned RS Thought

Linear economy

Recycling economy

Circular economy

Renewable Materials

Biological nutrients
Take
Technical nutrients

Regenerate and capture value at each stage of decomposition.

Make

Restore Repair Refurbish Recycle

Consume Use

Minimise lost matter & heat.

Circular Butterfly Economy (RAWORTH, 2017)

Sustainability in Higher Education (STIRLING, 2011)

RS: REGENERATIVE SUSTAINABILITY
Developed from Masters Study, Royle (2023)
Artist: Elliot Janda Oliver

Curriculum transformation and sustainability ... Rhodes University in focus!

There is global agreement that education system transformation needs to take both concerns of social justice and planetary well-being into consideration¹. These issues come strongly into focus with international and nationally policy initiatives that set aspirational goals for transforming societies. These are not uncontested and require critical as well as co-constructive engagement at all levels of the education and training system.

To date not much discussion has taken place at Rhodes University on the implications of including sustainability in its institutional development plan, and especially what this means for curriculum (both the explicit, hidden and null curriculum!). This workshop co-ordinated by CHERTL seeks to probe this question with participating academics who are making interesting contributions in the area of sustainability and planetary well-being as well as social justice. In particular we are interested in probing the intersectionality of these concerns, as they relate to enhancing the quality and relevance of undergraduate education, and curriculum transformation more widely.

The intended outcome of the workshop, hosted over two afternoons, is to collaboratively develop tools for curriculum innovation that can be more widely shared across disciplines at Rhodes University.

PROGRAMME :	
Monday 25 April, 14:00 – 15:00 Sustainability in focus at Rhodes University – seen from a history of sustainability in University education world-wide and in Africa	Heila Lotz-Sisitka
15:00 – 17:00 Sustainability and curriculum innovations at Rhodes University: some examples and questions focussing on the explicit, implicit and null curricula <i>Workshop: Co-constructing a set of ‘cards to share’ –</i> <i>What principles can we surface together to support education at the intersection of planetary well-being and social justice?</i>	Facilitators: Lynn Quinn and Jo-Anne Vorster Jen Snowball Gladman Thondhlana Liesel Jacobs Shuaib Rahim Outcome: Sustainability Principles for Education Transformation (co-developed cards to share)
Tuesday 26 April,	

¹ <https://en.unesco.org/futuresofeducation/> - see the UNESCO Futures of Education report

<p>14:00 – 15:00</p> <p>Connections between curriculum, campus sustainability practice and community sustainable development actions:</p>	<p>Di Hornby, Ingrid Schudel and Carlene Royle, James Gambiza and the SDG 'wheel' for monitoring and sharing practices</p>
<p>15:00 – 17:00</p> <p>Workshop: Transforming University Education for Sustainable Futures - A start small, think big, and act now workshop. What can we each do going forward, and what can we do better together?</p>	<p>Facilitators: Heila Lotz-Sisitka, Jo-Anne Vorster and Mandy Hlengwa</p>



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Information

Student Name: Carlene Royle
First Name *Middle name/s or Initial* *Surname*

Student Number: 20R3868

Title of thesis: Social Learning and Regenerative Sustainability: Unlocking value created in sustainability projects
in higher education.

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