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Developing the Sustainability Mindset and Leadership

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Introduction

Building knowledge, understanding, and awareness are important aspects of learning, and the literature argues that these will in turn influence student attitudes. Tavanti and Davis (2018) developed the sustainability mindset matrix to demonstrate the critical links between a student's

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competence, their knowledge of specific management skills, their ability to use systems thinking, engage with stakeholders, and operate as a global citizen. While there is plentiful literature to support teaching sustainability, little of it demonstrates the effectiveness of assignments in building a sustainability mindset. This chapter provides an illustration of how three business schools (Canada, UK, and USA) have effectively embedded assignments that encompass practical sustainability issues to act as catalyst in developing a sustainability mindset within students.

Each school described in this chapter is committed to embedding the Sustainable Development Goals (SDGs) into the curriculum. Fostering awareness, understanding, and concern are key learning outcomes to an active learning student assignment incorporated into the Gustavson School of Business Bachelor of Commerce programme, the Nottingham Business School, and Seattle Pacific University School of Business, Government, and Economics programmes. The assignments ask students to assess their personal and business impacts on the planet and report their findings in a one-page reflection on the results. Every year students are stunned by the size of their footprints. The assignments develop their awareness of the differences that living conditions, food, transportation choices, and attitudes towards shopping and waste have on their individual scores. The assignments also probe for ideas students can implement to reduce their footprints.

This chapter will demonstrate that while curriculum helps build awareness and understanding of how businesses can have a positive effect on ecological and social issues, student reflection assignments also play a part in building awareness and knowledge. The longer-term aim is that increased student awareness will drive behavioural changes into their everyday routines, which encourages a more responsible mindset so that when students enter into the workplace, they can be more influential in promoting sustainable actions throughout their careers. This is accomplished through a review of the relevant literature, descriptions of the three universities, and the assignments used, followed by a discussion and conclusion.

Conceptual Framework

Kassel et al. (2016) define a sustainable mindset as:

> a way of thinking and being that results from a broad understanding of the ecosystem's manifestations, from social sensitivity, as well as an introspective focus on one's personal values and higher self, and finds its expression in actions for the greater good of the whole. (p. 5)

Their model breaks the sustainable mindset into three dimensions, thinking, being, and doing. They recommend that business school classes aiming to build a sustainable mindset in students, do so with activities in all three of these dimensions. This is supported by other literature on teaching sustainability topics. For example, Figueiro, and Raufflet (2015) discuss how to integrate doing, which they call "action learning" into the curriculum through debates, games, service learning, and problem-based learning. Kolb et al. (2017) describe the Cologne Business School as one that creates a "House of Vision". They use the case method, as well as connections to local businesses to build thinking, being, and acting (doing) into their curriculum. Baumann-Pauly and Posner (2018) in discussing teaching human rights, advocate for immersive studies such as role-play (being) and fieldwork (doing) that force students to make decisions based on their values as well as the situation at hand.

In addition to the three dimensions, thinking, being, and doing, the Kassel et al. (2018) sustainable mindset model utilizes four content areas or quadrants to help delineate the sustainable mindset. The quadrants are systems perspective, emotional intelligence, spiritual intelligence, and ecological worldview. Systemic perspective focuses on the interdependence of systems (economic, social, and environmental), where *knowing* is developing system thinking, *being* is developing a sense of interconnectedness, and *doing* focuses on stakeholder engagement. Ecological worldview focuses on *environmental conditions, trends, and challenges*, where *knowing* represents understanding ecology, *being* focuses on appreciating the worth of the natural world, and *doing* focuses on repairing environmental damage that has already been done. Spiritual intelligence focuses on values, meaning, and purpose, where *knowing*

represents making connections with a larger good, *being* is the ability to see ourselves as part of that larger good, and *doing* is practising mindfulness and reflective practices. Finally, emotional intelligence is defined as individuals realizing their own contributions to environmental problems, where *knowing* is developing self-awareness, *being* is embracing compassion, and *doing* personal action.

There is much research to support the benefits of considering all four quadrants. Steffen et al. (2015) reminds us that the earth, especially when we consider the nine planetary boundaries, is an ecological system and any changes to one part of the system impact other areas, often profoundly. Further, anything other than an ecological worldview will mean the eventual end to a livable earth. Other authors have supported teaching sustainability using systems thinking (Porter & Cordoba, 2009, Starik & Rands, 1995; Waddock, 2008) . Shrivastava (2010) makes a case for students seeking spirituality and developing emotional intelligence as part of their business school experience, arguing that this will make them better managers in the workplace.

While there is support for considering all four quadrants, emotional intelligence is the primary focus of the assignments outlined later in this chapter. To more fully explore this quadrant, Kassel et al. (2018) define emotional intelligence as the understanding that "sustainability encompasses not only planet and prosperity but also people, and for many individuals, realizing their own personal contributions to the problems by scrutinizing their values and behaviours is the most completing motivation to act (p. 11)". In emotional intelligence, knowing is described as self and other awareness. Developing self-awareness can be accomplished through self-assessment (e.g. calculating a personal carbon footprint) or journaling about a situation (Bahmani, 2016; Wedgeworth et al., 2017). Being is described as values and compassion. Kassel et al. (2018) suggest that compassion can be developed through students evaluating their own environment or conducting participatory action research. The last dimension, doing (also labelled proactive glocal sensitivity), is described as where the understanding of personal contributions (knowing) and the pursuant emotional reactions (being) leads to action (doing). The Kassel et al. (2016, 2018) sustainable mindset model provides an effective framework to understand and review the sustainability assignments

from the three schools described in this chapter. It provides a strong action-oriented approach that facilitates student reflectivity.

The Kassel et al. (2018) sustainable mindset model also relies on students reflecting on the concepts they have learned. The importance of reflection to learning was introduced by David Kolb's Learning Cycle (1984) where he describes that students first have a concrete experience, then reflect to further understand the experience, then generate a new idea or modification of what they have conceptualized, and finally apply their new idea to the real world to see what happens. Watson et al. (2019) used Kolb's learning cycle in an engineering classroom to demonstrate the effectiveness of the cycle to increase sustainability knowledge. Other scholars, such as John Biggs (2012) have developed tools such as journaling and portfolios to support student reflection. Swaim et al. (2014) offer a table of pedagogical activities that support teaching sustainability and all eleven activities lend themselves to reflection. Mezirow (1991), applied reflective activities to adult learners and found that they had transformative experiences because of their experiences, but especially when they reflected on these experiences. The literature is in agreement that reflection is a valuable part of the learning cycle and developing a sustainable mindset.

An active learning tool focusing on raising awareness and engagement with carbon literacy is the Wackernagel and Rees Ecological Footprint tool (1996). This tool offers an easy-to-use web-based calculator that allows one to measure one's impact on the earth, that is, the total land area required to support a person, city institution, or even a country. The tool measures the natural resources that are consumed and the waste that is produced in a given area. Lambrechts and Van Liedekerke (2014) used the ecological footprint tool to measure the campus operations at KHLeuven, a university in Belgium and suggested that it could be used in the classroom to raise awareness among students of their overall impact on the planet. Galli et al. (2019) used the Ecological Footprint analysis tool to measure the footprint of six cities in Portugal. While this was not a student assignment, it could easily be turned into a practical, experiential real-world assessment tool for a university sustainability class. Thinking, doing, and being are inherent in the ecological footprint

tool. Reflecting on one's results from the tool is an additional way to build a sustainability mindset.

The assignments described in the chapter support development of a sustainability mindset by utilizing assessment, journaling, and reflection. Journaling and student reflections are techniques to initiate critical reflection, where students make connections between learning and experience at a deeper level (Brunstein, Sambiase, & Brunnquell, 2018; Brunstein, Sambiase, Kerr, Brunnquell, & Perera, 2018). Further, critical reflection can lead to critical action. The level of action may vary, however. One assessment tool identifies four levels of response: habitual action, understanding, reflective, and critical reflection (Kember et al., 2000). Habitual action refers to routine action that occurs with little awareness. Understanding refers to a cognitive process that does not necessarily translate into action. Reflective refers to more intense cognitive activity, new understandings, and meanings and may lead to an increased desire to change. The last level, critical reflection refers to a process that transforms perspectives, changes beliefs, and is more likely to motivate action.

The Universities

Three universities, with a common interest in delivering quality sustainability education to business students, offer a perspective on using assignments to develop a sustainable mindset.

Seattle Pacific University (SPU) in the USA, The University of Victoria (UVic) in Canada, and Nottingham Trent University (NTU) in central England are all signatories of the Principles of Responsible Management Education (PRME) and participate as Champions in that organization. The mission of the PRME Champions group is to contribute to thought and action leadership on responsible management education in the context of the United Nations sustainable development agenda.

The three schools differ in size (SPU has about 5000 students, UVic has about 20,000, and NTU has 27,000), and two are public institutions while one is a private, Christian school. However, all three are accredited

by AACSB and two have additional EFMD accreditation. SPU and UVic offer four-year degrees where the students come into the business school after their second year. NTU students begin their business education in year one and also complete four years of study.

Seattle Pacific University

Seattle Pacific University (SPU) is a faith-based, private, four-year comprehensive university.

The key mission of SBGE is to "…develop leaders who advance human flourishing…." SBGE puts its mission and values to work through the introduction of various aspects of responsible business principles into its curriculum and its membership in Principles of Responsible Management Education (PRME). It was the first Northwest college or university to adopt the Principles for Responsible Management Education (PRME) in 2007 and has been a PRME Champion from 2018. SBGE also places emphasis on social enterprise and on integrating the UN's Sustainable Development Goals across its curriculum. This is manifested in several classes (including one of the first-ever business school undergraduate courses in microfinance), an undergraduate business administration concentration in global development, an interdisciplinary Global Development major, a social venture business plan competition, and participation in related conferences and activities.

University of Victoria

The Gustavson School of Business at the University of Victoria offers a general undergraduate programme as well as an MBA in Sustainable Innovation, and several other graduate programmes.

Sustainability is a key pillar of the business school and has been since its early days. The undergraduate programme has a mandatory Business and Sustainability course that is taught in the third year of the programme. In addition, other core business courses also relate their content to sustainability.

The school has been a member of PRME since 2009 and was a Champion Group member from 2018 to 2020. The school supports the Centre for Social and Sustainable Innovation (CSSI), an intra-faculty research centre that concentrates on building the sustainability education, research, and governance of the school. A key phrase at Gustavson is "doing good by doing better". This is impressed upon the students throughout their degree but drives faculty engagement with sustainability as well.

Nottingham Business School

Nottingham Trent University (NTU) is a self-governing public university and, like all other public universities, which form the majority of the higher education sector in the UK, it adheres to the UK higher education regulatory environment. The school has been a signatory of PRME since 2015 and is in its second cycle of being a PRME Champion.

Nottingham Business School (NBS) is the largest school within Nottingham Trent University and is recognized internationally as one of the UK's most contemporary and ambitious Business Schools. The NBS philosophy emerges from the intersection of research, education, and collaborative business/community engagement. Reflected in the mission of delivering education and research that combines academic excellence with impact upon business and society, NBS sees itself as the Business School for Business Impact and Engagement.

NBS' strengths lie in its use of experiential and personalized approach to learning, encouraging students to operate as global citizens and as part of this deliberately embeds the values of global citizenship, sustainability, and responsibility in all its activities. Ethics, Responsibility, and Sustainability (ERS) are important areas to NBS and faculty embed the UN's Sustainable Development Goals in all qualifying undergraduate and postgraduate courses in order to "develop graduates that can lead and succeed in businesses with a strong sense of social responsibility and sustainability". ERS constitute a major focus for research at NBS, delivered mainly but not exclusively through the Responsible and Sustainable Business Lab.

The Assignments

The three universities that are case studies in this chapter have years of experience assessing student learning. As research-based institutions, they balance academic rigor with practical application. Their desire to use experiential learning activities has led them to develop assignments that involve students in data collection, analysis, and communication. Reflection has developed into an important part of building sustainable mindsets at these business schools. In each of the following assignments the focus is on a reflection of the assigned activity, and how that develops a sustainable mindset. The assignment instructions are included in Appendix A.

Seattle Pacific University: Individual Carbon Footprint Assessment and Journal Reflection

The School of Business, Government, and Economics requires Business Administration majors to participate in a signature experience. Students can choose from the following experiences: (1) study abroad, (2) participate in the Social Venture Plan Competition, or (3) take three one-credit spirituality in business classes. Each of the spirituality in business classes has a different theme and is taught by a variety of faculty. One such course is Faith, Sustainable Development Goals, and Business. The learning objectives for this course are to explore Christian themes (e.g. stewardship, creation, care) and how they align with sustainability, gain an understanding of the United Nation's (UN's) Sustainable Development Goals (SDGs), and examine how students individually can contribute to furthering the achievement of the SDGs.

During the course, students have an opportunity to reflect on their own faith traditions and values (being), learn about the SDGs through video presentations and from portions of NTU's Carbon Literacy Training (knowing), investigate personal and business efforts towards the achievement of the SDGs (knowing and doing) and then put what they have learned into action (doing). A goal of the class is to help students take action by practising or trying out new behaviours. The specific

assignment outlined below seeks to meet that goal and fits well within the sustainable mindset model developed by Kassel et al. (2018). Of all the content areas, the course assignment best fits in the emotional intelligence content area.

The course assignment translates the emotional intelligence content area and three dimensions of the sustainable mindset into an Individual Carbon Footprint Assessment and Journal Reflection. After the students complete the class, they are asked to assess their own carbon footprint, which raises the student's awareness of their own contribution to the issue of climate change (thinking). Based on the results of their personal assessments, students are then asked to choose and commit to two or three action items to reduce their own carbon footprint for a three-week period. While students are making a commitment to act (doing) based on a self-assessment (thinking) they may not at this point have integrated this knowledge into their own personal values (being). To help students make these connections they are asked to keep a journal during the three-week action period to record their efforts, feelings, and attitudes. Journaling helps students develop commitments to their own values and choices (Bahmani, 2016), connect knowledge content with their own lives (Angelo & Cross, 1993), and gain a sense of their own emotional reactions to the situation (Kassel et al., 2018). As Mezirow states: "The most significant learning involves critical premise reflection of premises about oneself" (1991). Mezirow is firm that "discourse" is necessary as part of reflection. It is not enough to think about one's emotions or reactions, one must speak or write about them to understand them. Journaling is the mechanism designed to help students be accountable for practising new behaviours and getting in touch with how they feel about the process and their role in the process (being). The three-week period gives students time to practise new behaviours as well as reflect on how they think and feel about the new behaviours. Finally, at the end of the three-week period, students write a reflection summarizing their journey. This final part of the assignment is meant to help students summarize their entire experience and hopefully, based on their experience, commit to further action (doing).

Nottingham Business School: Certificate in Sustainable Tourism

The Certificate in Sustainable Tourism (CiST) is an initiative of Nottingham Business School on the BA (hons) International Business course and was launched in September 2013 as part of an academic module called International Tourism: sustainability, development, and impact. The year-long module is a 20-credit point course and aims to provide an insight into the global patterns of tourism development and the impacts (economic, environmental, and social) that can result at a destination level. The teaching and learning on the module are quite intense and steers an academic route through the syllabus which informs the student (knowing).

As these students have not studied tourism previously, they need to acquire a solid knowledge of key academic modules fairly quickly. A formal lecture each week often draws in guest speakers or academic experts to deliver a state-of-the-art oversight of the discourse in a particular field. In addition, students have a weekly one-hour seminar with a group of approximately 18 students and a specialist tutor. The seminar provides an opportunity for students to consider and apply their knowledge gained during the lectures. Students conduct directed preparation reading and research around a particular case study that illustrates the theme of the main subject. The International Tourism: sustainability, development, and impact module ran for a couple of years without the CiST, but the students were passionate and very engaged in the subject feeding back that they wanted to spend more time exploring their personal positions on these issues. As time was limited within the seminars it was difficult to channel this enthusiasm around the subject and this thirst for exploration by the students led to the seeds for the module leader to develop the Certificate in Sustainable Tourism. Relating back to the sustainability mindset model, the students' *thinking* would be prioritization in the ecological worldview and systems perspective, with less directed concentration on the emotional intelligence and spiritual intelligence dimensions.

The Certificate in Sustainable Tourism was developed to address the fast-paced nature of the teaching and learning in this course and to

enable students to have more time for their personal reflections and consideration of future actions. The certificate provides an opportunity for students to consolidate their knowledge (thinking); then consider their role in the tourism system and how their values resonate or dampen with the concepts. The Certificate also promotes reflection, which is demonstrated by their previous behaviours and anticipatory future tourism choices. The CiST provides an opportunity for students to apply their academic learning in a range of practical settings (doing) using their personal experiences to enhance their understanding and practice of tourism business and management. To design the "knowing, thinking and doing" into the programme, the module leader worked with a member of the Green Academy (a Sustainable Development Education Advisor) at NTU to develop an online certification that students could opt to take in addition to the core tourism module. The CiST is a noncredit bearing module but is endorsed by NTU and appears in the student's Higher Education Achievement Record (HEAR). This mandatory, self-study certification seeks to deepen the students' knowledge of the practical application of sustainability principles to the tourism industry. In the seven years since its start circa 1000 students have gained the additional certification.

The Certificate in Sustainable Tourism is delivered via the University's Virtual Learning Environment. Learning material is structured into four sessions, comprised of rich multimedia content, text, and discussion-based research activity. After completing the four sessions, students complete a multiple-choice exam and short reflective narrative to demonstrate the knowledge they gained and assess their own responsible tourism practice, and intended future practice, in light of what they have learned.

Gustavson School of Business: Ecological Footprint Exercise

Calculating one's ecological footprint is an easy way to understand one's impact on the earth. Wackernagel and Rees coined the term Ecological Footprint in 1992 and in 1996 wrote the book that popularized the

footprint idea: *Our Ecological Footprint: Reducing Human Impact on the Earth*. The Global Footprint Network houses a digital tool that asks a series of questions which when answered, measures the subject's ecological footprint. The result is measured in "earths", that is, the quantity of nature it takes to support the subject's lifestyle (Global Footprint Network, 2020).

Since 2010 the Business and Sustainability faculty at the Gustavson School of Business have used the ecological footprint calculator to generate personal reflection among students and discussion in the classroom. Students report that the exercise is eye-opening, startling, and profound. Some are amazed at their score and many dread entering the final number on the footprint calculator as they know their score is likely to be high. For context, this activity is done in the Business and Sustainability course, which is a compulsory part of the Bachelor of Commerce and Master of Business Administration courses. The activity is usually done in the first third of the course after a discussion of big picture topics such as climate change, planetary boundaries, and global risks. Those topics can be very far from a business students' personal experience, and the ecological footprint helps them understand their personal part in the bigger picture.

The process for this assignment begins before class with the reading by Wackernagel and Rees (1996): *Our Ecological Footprint*, Chapter 1: Ecological Footprints for Beginners. Then they are directed to the Global Footprint Network site to calculate their footprint scores. With that homework done, students come to class and professors share slides on the science behind the footprint calculator (available from the Global Footprint Network site), and run a large group discussion on individual footprint scores, and what contributed to the student scores. Students are more than willing to share and are very curious to compare scores with their peers. Students discuss the size of their footprints, the actions they could take to change their footprints, and what support or motivation they will need to make the changes. Students need to record each other's score, because the final part of this activity is the assignment to write a one-page reflection on the topic. This one-on-one comparison is very important. There is always a wide variation in the class of how students live (from dumpster divers to around-the-world travellers) and

that directly affects the size of their footprint. Most students think that the rest of the class is just like them, and these one-on-one discussions help them see that everyone is different. Faculty then debrief with the class on some of the easy things students can do to reduce their footprints. Ideas include taking the bus or riding a bike to school, eating less meat, and bringing their own water bottles and coffee cups to school. Some of the commitments they make are much bigger than these. For example, some students commit to talking to their rental agencies about upgrading windows or moving from oil heaters to electric (electricity in our area is provided by renewable hydroelectricity) and convincing their families to fly less.

This reflective assignment forces students to **think** about what they want to **be** and plan what they need to **do** to achieve that goal. Feedback is used to help students set themselves up for a successful change in behaviour.

Discussion

At the centre of the sustainability mindset model is "innovative and collaborative action" (Kassel et al., 2018). It calls for not only acquiring content knowledge, but also engaging with material on a personal, emotional, and spiritual level thus integrating knowledge and awareness into being which in turn motivates action. Active and experiential learning have similar goals in that knowledge and understanding are developed through more active engagement with material. Each of the assignments described in this chapter requires students to engage with content by assessing their own behaviour (carbon footprint or tourist behaviour), reflect on that behaviour (journaling and/or reflection), and take action to change behaviour (set goals and/or practice behaviour). Each of the assignments fits within the emotional intelligence quadrant of Kassel et al.' s (2018) sustainable mindset model, but each also touches on other aspects of the model as well. For example, each assignment is part of a larger course or module that presents content on environmental science, which falls under the ecological worldview quadrant.

The assignment at SPU is in a course that has students examine their own values and beliefs systems and reflect on how those beliefs influence their understanding of sustainability, which falls under the spiritual intelligence quadrant. Further, even though the model creates distinct quadrants there is some overlap between the quadrants. For example, developing ecoliteracy in general (ecological worldview) and becoming more self-aware of your own impact on environment (emotional intelligence) are closely related. Individuals need to become more ecoliterate before they can develop a better understanding of their own environmental impact. Similarly, developing an understanding of your own moods and emotions (emotional intelligence) and getting in touch with your own purpose and values (spiritual intelligence) may also feel related. What we feel and what we believe may be very interrelated and, at times, indistinguishable. The point here is that assignments may very well address multiple quadrants of the sustainability mindset model and not always fit neatly into just one quadrant.

Student comments indicated the student's level of connection with the material and their own experiences. Student comments from the SPU Individual Carbon Footprint Assessment and Journal Reflection indicate that they felt the exercise was well worthwhile, that they learned a lot about themselves and how they personally contributed to a carbon footprint, that there were actions that they could take and they liked having to practise the actions. Further, students reported that the exercise impacted how they felt, impacted emotions, and changed how they thought as well as how they wanted to act in the future. Finally, it gave them an idea of how they personally can make changes that have positive outcomes. See below several excerpts from student reflections.[1]

> *I really enjoyed the process of forming these new habits and documenting my journey. I feel that I have established some great habits into my routine – all things that are actually super easy, just require intentionality.*

[1] Excerpts from student reflections are anonymous and the students gave the instructor permission to share.

Since taking this course and making adjustments in my life the past 3 weeks, this has definitely been a change of routine but overall, I feel good about my choices. I feel I am making a difference in my life on a personal and emotional level, but also making a difference for our environment. I have been feeling good about all the necessary changes that it is being a routine I plan on doing for the rest of my life.

I believe this assignment was both challenging and rewarding. Nonetheless, there remains many lurking variables and obstacles to be considered and noted. I definitely should have thought through quite a bit more when considering what goals to choose. I learned quite a bit about myself and the way I operate through the course of this assignment. I was also able to gain insight into really how much it is going to take to reduce my own carbon footprints.

One concept I've been learning about in my social psychology class that relates to this action plan is the foot in the door theory. This theory basically states that if you pursue one small action towards a certain cause – there is a more likely chance that you will be willing to pursue bigger actions in the future that support that cause. This was the approach I took towards finding small action steps such as turning off the lights and electronic appliances when not in usage.

Similarly, student comments from the NBS Certificate in Sustainable Tourism indicate that, in practice, students taking the certificate display a greater awareness and understanding of the practical application of sustainability principles and practice of sustainability within the tourism industry. They appear to have the ability to draw upon relevant examples of projects and initiatives, which display best practices in balancing the three pillars of sustainability. Their knowledge of systems thinking, and critical evaluation skills of sustainable tourism projects, have been greatly improved and anecdotally employers recognize these as students transfer into the workplace. Findings suggest that students taking the Certificate in Sustainable Tourism appreciate the opportunity for the

"value added" learning opportunity and that engagement in the certificate helps to develop a reflexive approach to learning. Last year, 2019/20 138 students completed out of 168 students on the module.

Some extracts[2] from the student assignments demonstrating their reflective practice and future anticipatory behaviours based on their tourism knowledge:

I tend to buy souvenirs in every country I visit even if they come from animals e.g. Kangaroo skin items or Koala. Realising how unethical this is, I pledge to stay away from this, encourage others to do so too and increase other people's knowledge on animal cruelty.

I think from now on I will definitely try to focus on getting my product and services from local sources, and if possible, sources that claims to be sustainable and environment friendly. I already have a distaste in western style enclave hotels that cuts tourists from the local experience. So I'm sure I will from now on only go (at least 90% of the time) to local hotels, because I think they offer a truer experience, that they will benefit a lot more to the local population and also because there is a greater chance that their ecological footprint could be lesser than the big chains hotels.

I consider myself already to be quite a responsible tourist, but of course one can always improve. From this point onwards my mission is to become more of 'temporary local' than a tourist. This encompasses adhering to local dress codes, asking permission before taking photos and before I travel to educate myself about the culture possibly learning a couple words or phrases of the local language.

In Peru I purchased a lot of products with plastic packaging and they didn't have recycling bins so I would have to throw them in regular bin. I will carry with me a reusable water bottle so that I avoid buying plastic water bottles.

[2] Excerpts from student reflections are anonymous and the students gave the instructor permission to share.

This will ensure sustainable initiatives to be more effective if I incorporate the actions on a more day-to-day basis.

Students at the Gustavson School of Business used to complete the Ecological Footprint Reflection activity on their own. In recent years, an additional component, where students compare their scores to that of a classmate was added. This classroom discussion and analysis (doing and thinking) enriched the activity immensely. The reflection part of the assignment forces them to reflect on their own personal values and while their minds consider alternate ways of being and doing. Students complete the assignment with greater awareness of their own values and how their actions impact the planet. They also demonstrate through their personal commitments, a way to act (doing) with less impact going forward. Reflections in the final week of the course demonstrate how the assignment supported student growth:

In week one I quickly gained insight into my personal impact on the planet. Learning that as per the Global Footprint Network, humans use as much ecological resources as if we lived on 1.75 Earths, disappointingly, my results after taking the online test suggest I am living well beyond those means, scoring 3.6 Earths. As a result, I set out a personal goal to eat less meat, which I think has been going fairly well, simply by reducing the volume of meat eaten and encouraging that at home within my family.

The Personal Carbon Footprint exercise was very eye opening and the Life Cycle analysis really helped me understand why. I always knew there was a pull on our natural resources, but these really came to light through these summaries.

This exercise put the sustainability into a personal context for me, not just something that organizations work on. Although we only have one car and it's electric, I was driving to the office (25 mins) every single day pre-COVID. In addition, my meat consumption was drastically increasing my carbon footprint. COVID has helped eliminate travel and I've consciously worked to reduce my meat consumption to twice per week.

The quotes we collected from students at all three universities indicate that the assignments in their courses led to new understanding and different behaviour. This aligns with Merizow's (1991) transformative theory of learning where critical reflection leads to a transformation of thinking and new beliefs replacing old understanding.

Conclusion

This chapter provides an illustration of assignments that act as catalysts in developing a sustainability mindset in students, with an emphasis on *doing*. The assignments help students build an understanding of their personal contributions *knowing*, how they personally feel about those contributions *being*, which leads to action *doing* using reflective learning activities. The student comments from each university show that reflective learning can be transformational and provide a relevant platform to change and inform the learner's knowledge, attitudes, values, and future actions. Further, these learning activities fit well with the goals of developing a sustainability mindset. While the assignments in this chapter focused on the emotional intelligence quadrant of the sustainability mindset model, reflective learning activities could also be utilized in the other quadrants as well. For example, reflective learning techniques would be excellent tools to help students explore their own sense of purpose, values, and meaning *spiritual intelligence* as well as creating action plans for environmental restorative action *ecological worldview*. We end the chapter with a list of questions for educators that might spark some creative ideas that fit within their own context.

Questions for Reflection and Discussion

How might reflective learning be incorporated in your sessions to help participants personally interact with the material on an emotional level? Which of these might promote participants to reflect on how they feel about the topic covered?

What kind of activities will help one explore personal beliefs, values, and purpose? How would you help them explore their sense of connectedness to others and to the environment?
How might you help participants explore their "oneness with all that is"? Help them explore the connections in their daily lives?
How might you incorporate mindfulness and reflective practices in your assignments? How might taking time to ponder also be incorporated in assignments that help develop a systems thinking approach?

Appendix A: Assignments

Seattle Pacific University

Individual Carbon Footprint Assessment and Journal Reflection

Step 1: Calculate your own carbon footprint using one of the tools below.

- http://carbonfootprint.com/calculator.aspx
- https://footprint.wwf.org.uk/#/
- http://resurgence.org/resources/carbon-calculator.html

Step 2: Pick 2–3 actions that you will personally undertake to reduce your carbon footprint.
Step 3: Keep a journal.
Over a three-week period record your efforts to implement your action items above. What are you going to do and how? How is it going? How does it feel? Is it becoming routine over time? Are you experiencing any resistance from those you live with or are they joining in. What is your overall attitude to the process? There must be at least three entries per week.
Step 4: Reflection.
At the end of the three-week period write a reflection that summarizes your journey. Include in your reflection an assessment of what might

have been different if we were not in our current "stay-at-home" environment. Would your carbon footprint have been different? If so, how? Would you have picked different action items? Would it have been easier or harder to implement your action items? What will you do when we are no longer in this environment?
Turn-In.

- Results of carbon footprint calculation
- Action items chosen
- Journal entries
- Reflection.

Nottingham Business School

Assessment

1. Create a list, containing **4 specific examples** of you demonstrating **responsible tourist behaviour** and **4 specific examples** of you demonstrating **irresponsible tourist behaviour**, from your travel experience so far.
2. Please make a **250 word statement** of the **changes you might now make** to your **tourist behaviour** from this point onwards, in order to contribute to a greater extent, towards the goals of sustainability.

Gustavson School of Business

Personal Footprint Calculation

Objectives:

- To document your current consumption and compare it to that of others;

- To analyze the results of the documentation to understand why your consumption numbers are what they are; and
- To reflect on changes that are possible.

You will use an *Ecological Footprint Calculator* to assess your own, personal footprint, and then reflect on one or more aspects related to your ecological footprint calculation in a memo. Go to either of these two websites—http://myfootprint.org/ or http://footprintnetwork.org/—and follow their instructions to calculate your own personal ecological footprint. Both calculators have benefits and disadvantages, so choose your preferred one (or compare both). Reflect on the result of your personal footprint calculation, and articulate your thoughts and reactions in a memo of 500 words or less (no more than 1 page).

You may want to address one or more aspects related to your ecological footprint calculation. This might include personal reflections on what you discovered as a result of this assignment, considerations about how footprints might be affected by your product choices, how living in different countries or regions may affect your footprint, or how the footprint calculation itself might be improved. In addition to your personal reflections, you might also include your thoughts of what the implications might be for business generally (e.g. do you note opportunities for new or different products or for other innovations?).

The topic is complex and can be approached from many different perspectives, so feel free to examine it from a perspective that is meaningful *to you*. Regardless of what perspective you chose, your considerations and reflections on the topic should be *thoughtful* and *well articulated*.

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