Students as Key Stakeholders in Advancing Sustainability in Higher Education:

A Research Project

Author: James Gudjonson

Supervisor: Ann Perodeau

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Chapter 1—Introduction

“Sustainability has never been as prioritized as it has become in the 21st Century” (Rockerfeller, 2011 p.153). Onwueme and Bosari (as cited in Bezbacheenko, 2011) claim that environmentalists, scientists and policy makers have, after studying the world’s ecological systems, recognized the impossibility of limitless development on a finite earth.

The definition of sustainability broadened in the early 1990’s from its historical roots in environmental education to include issues of international development, cultural diversity, and social and environmental equity (Calder & Clungston, 1999, 2003). Robinson (2001) posits this as an important shift that enables a broader, more holistic approach to fostering well-being for future generations. Rockerfeller (2011) claims that universities, as the educators of future business leaders, managers, planners, and academics, play a crucial role in advancing sustainability.

Calder and Dautremont-Smith (2008) insist that university leaders recognize that sustainability is a growing imperative in higher education and fostering a more sustainable world is the most logical outcome of the higher education endeavour. Calder and Dautremont-Smith (2008) point out, however, that disciplinary structure and economic forces impede institutions from adopting sustainability at a broad and meaningful level. The Nathan Cumming Foundation commissioned The Class of 2000 Report: Environmental Education, Practices, and Activism on Campus which recommends the following three criteria as key in a university’s transformation towards sustainability: (1) expand environmental education at colleges and universities; (2) improve campus environmental practices; and (3) strengthen student activism (as cited in Calder & Clugston, 2003). Shriberg and Tallent (2003) suggest that universities that have had success
have acknowledged the role of students in promoting sustainability throughout all levels of the organization.

To date, students have played an integral role in the advancement of sustainability as key stakeholders and change agents in the transformative process. A recent study of sustainability related issues, sponsored by the United Nations Environmental Programme (UNEP) identified that most young people today agree that “the cultural revolution of the 21st Century is all about sustainability.” The UNEP study, one of the largest to date, found that young people today perceive the threats of climate change equal to how their grandparents perceived the threat of World War II (Green Life, 2011). This research project examined the “culture of sustainability” at Thompson Rivers University (TRU) based on students’ opinions.

The project determined whether TRU is meeting students’ expectations both in terms of relevant, contemporary curricula that match the rapidly evolving, sustainable business and workplace practices, as well as providing a socially and environmentally responsible place to study that reflects the institution’s values in its day-to-day operations.

Implications of Research Findings

Deductive Component of Research

One goal of the research project was to inform the initial research questions thus providing practical information that administration, faculty and students can collectively use to advance sustainability throughout the TRU community, both operationally and academically. Students might be interested in the number of like-minded students on campus for potential collaboration on student-led green initiatives. Research that identifies how informed (or uniformed), engaged and active the incoming students are regarding sustainability, would provide useful information for the various faculties and departments, as well as the operational and administrative staff. For
example, program directors in the School of Business and Economics would be interested to know what percentage of business students are aware of the importance of sustainability, and whether the students believe that having a solid understanding of sustainable business practices will give them a competitive advantage in the job market. Schools and faculties with minimal sustainability content in their curricula may be interested to know what percentage of students in their programs would be interested in additional sustainability-related content. The recruitment office would be interested in the percentage of students who are aware of universities’ green policies and initiatives, to what extent they are aware, and if this information factors into which university the student chooses to attend. By learning what percentage of students research the environmental track record of prospective universities, administrative staff can consider the added economic benefits of increased marketability associated with sustainable initiatives, which in turn, would provide more impetus for increasing sustainability practices at the university. In addition, the Environment and Sustainability Department would be interested in the percentage of students who may be interested in joining the students’ environmental club, and what the students’ thoughts are on current conservation attempts.

**Inductive Component of Research**

Advancing sustainability throughout the culture of a university and embedding sustainability into curricula across disciplines is a complex and challenging task. Calder and Clugston (2003) state that there are colleges and universities that are actively pursuing an authentic commitment to sustainability, yet there is little consensus on what the end goal should be. The Higher Education for Sustainable Development (HESD), a United Nations initiative, primarily involves understanding ecological, social and economic problems through an interdisciplinary lens, citing the importance and intellectual challenge of teaching integrated
thinking without watering down the disciplines (as cited in Calder & Clugston, 2003). Calder and Clugston (2003) also emphasize the importance of more research around initiatives that are underway because the information to date is mostly anecdotal with researchers not knowing how well, or why, the initiatives are working. The grounded aspect of the research project will gather student perspectives from the various faculties and schools. These perspectives will identify common themes and barriers within these disciplinary “silos” that can then be examined and discussed with the common goal of advancing sustainability, within and across all curricula.

**Site Selection**

**Thompson Rivers University**

Thompson Rivers University (TRU), the fourth largest university in the province, was created in 2005 when the University College of the Cariboo joined with the British Columbia Open Learning University. Located in Kamloops, BC, TRU has grown to into a community of over 13,000 students from across Canada and around the world that complete undergraduate and graduate degrees in addition to diplomas, apprenticeships, professional certificates, continuing studies and ESL classes. Another 10,000 students take advantage of TRU’s flexible learning options to study online or by distance through the Open Learning Division. (www.TRU.ca). Enrollment has increased five fold in the past twenty years (from 2649 students in 1981, to more than 13000 today) leading to rapid expansion of the infrastructure.

TRU provided an ideal setting for this research project as the numerous faculties and schools provided a wide cross section of students with diverse backgrounds and cultural views. The diverse backgrounds and varying educational interests of the student body offered a multitude of perspectives on sustainability.
In addition, the principal researcher is from Kamloops and employed as the Energy Manager for TRU. This not only offers obvious logistical advantages but also offers increased insight into the behavioural aspect of energy conservation and awareness on campus. Through effective educational awareness and change, a ten to twenty percent reduction in energy consumption is a realistic target (Ehrhardt-Martinez, 2007). Without effective behavioural change and the development of an ethos of conservation, changes involving technological upgrades are less effective and less likely to persist (BC Hyrdo.com).

**Sustainability at TRU**

Environmental sustainability was established as a founding principle when TRU was formed in 2005 (www.tru.ca). In 2008, TRU formed the Environment and Sustainability Department and immediately hired a director to develop a Campus Sustainability Action Plan (CSAP), Climate Neutral Action Plan (CNAR) and tools for reporting on Green House Gas (GHG) emissions to provincial authorities. The director also coordinated with BC Hydro to develop a long term energy reduction strategy that included hiring an energy manager to oversee energy audits and energy conservation measures, and to develop the Strategic Energy Management Plan (SEMP). TRU faculty has continually worked to develop and refine programs and courses to keep current with the changing workplace. TRU now has more than 50 courses directly or indirectly related to sustainability and environmental studies (Crespin-Mueller, Klohn, Hunt, Huscroft, Reid and Tsigaris, 2011). In addition, TRU’s Environmental Advisory Committee (EAC) recently initiated a Leadership in Environmental Sustainability credential, which is a non-credit, post-graduate credential that recognizes a student’s leadership in sustainability through his/her knowledge, skills, actions and extra-curricular experience.
(Crespin-Mueller et al., 2011). The EAC, which was formed by a dedicated group of faculty and staff, helped establish environmental sustainability as a guiding principle, and it continues to be instrumental in fostering the culture of sustainability throughout the TRU campus.
Chapter 2—Methodology

This research project attempted to gauge the “culture of sustainability” among students at Thompson Rivers University (TRU) and to determine whether students are key stakeholders in advancing sustainability by contributing to the ethos of conservation within the TRU community. The purpose of the project was to identify and explore potential student-student, student-faculty, and student-administration synergies to help advance sustainability inside and outside of the classroom. Watkins, Mohr and Kelly (2011) point out that collaborative, innovative and strength-based approaches emerge when people dialogue in an appreciative mode, resulting in shared vision and mutually beneficial plans for the future. Therefore, Appreciative Inquiry (AI), which focuses on the positive aspects of an organization, by locating, illuminating and understanding the distinctive strengths (Watkins & Mohr and Kelly 2011), will provide a framework for this research project. Bezbatchenko (2011), who framed her study of college students through a social capital lens, also suggests that sustainability-related research favours a positive rather than negative approach.

Multiple Method Approach

A multiple method approach including a literature review, a focus group study and an online questionnaire was employed to obtain both quantitative and qualitative data. One aim was to explore the research questions and provide pragmatic, student-based information for administrative decision makers. For example, administrators considering a green levy or green marketing campaign might be more interested in online survey results with a large sample size and mostly quantitative data. Sheppard (2004) notes that quantitative data allows for precise numbers and percentages that allow managers and administrators to plan accordingly. The other aspect of the research project was inductive and attempted to gain insight from students about the
complexities and nuances of advancing sustainability in higher education. Sheppard (2004, p.226) claims that “one of the key elements associated with qualitative methods is its capacity to see things thorough the eyes of the participants in the study”. Bezbatenko (2011) points out that there is an absence of qualitative studies, which are imperative towards understanding college students’ attitudes and behaviours related to sustainability.

This project opted for a multi-method approach with the intention the data would be complimentary to each other. Sheppard (2004, p.215) suggests that “the results are (in theory) that we have more robust research with more robust findings than we would have using one method alone”. Jick (1979) advocates the use of multiple methods, suggesting researchers can improve their accuracy by collecting different kinds of data bearing on the same phenomenon.

**Research Questions**

Does sustainability factor into students decisions when they are choosing a university or deciding on an area of study or career path?

What or who contributes to students’ awareness and understanding of sustainability-related issues?

What behaviours or initiatives that have lead to positive change can be further developed or replicated to allow students to progress as sustainability leaders, both individually and collectively, therefore advancing sustainability throughout the campus and greater community?

**Literature Review**

A comprehensive literature review preceded the primary research. The review included a brief history of sustainability in higher education, as well as obstacles and progress to date. The review then examined surveys, research papers and case studies to determine students’ current levels of awareness, activism and engagement in sustainability-related issues and initiatives. The
review also examines the barriers, attitudes and behaviours of students in the context of advancing sustainability throughout campuses. The review of existing surveys related to sustainability in higher education also helped inform and develop the online survey, as well as the focus group interview questions.

Survey and Questionnaire

The initial data collection was an online questionnaire (See Appendix A) conducted with students from TRU. The survey included demographic information relevant to the research project. Demographic information obtained included: age, sex, place of residence, the students’ programs, types of programs (certificate, diploma, undergraduate degree, masters degree, other) and the year of their program. This allowed for comparison of the research subjects in the context of their understanding and knowledge about the topic of sustainability.

The survey questions were finalized after the literature review, and tested on a small sample to allow for survey refinement prior to conducting the survey on the larger sample size. The pilot test and literature review also examined definitions and the rapidly evolving “lexicon of sustainability” to ensure appropriate language was used in both the online survey and the focus group study.

The questionnaire, consisting of mostly closed-ended questions, utilized a Likert rating scale (1 to 5), and was conducted on-line to keep research costs down while obtaining data from a large number of participants. A number of questions did allow participants to provide additional comments which provided initial qualitative data. The quantitative data provided an assessment of students’ awareness and engagement related to sustainability whereas the qualitative component identified themes and factors that influence their level of awareness and engagement.
This initial qualitative data also pointed to the gap between attitude and behaviour. This allowed the researcher an opportunity to refine the focus group questions and delve deeply into why this gap exists.

**Research Conduct- Online Survey**

The students received an e-mail invitation from the Institutional Planning and Analysis Department (See Appendix B). It was indicated that their consent would be given when they continued on to complete the survey. Students with cultural preferences, language barriers or any special needs were given an opportunity to participate by coordinating with the relevant departments at TRU. The respondents’ names were not recorded, and they were advised that they could choose at any stage of the survey to withdraw without prejudice. Incentives of up to 100 dollar gift certificates at the campus book store were offered. According to Guyll, Spoth and Redmond (as cited in Bezbatchenko, 2011), incentives can help to increase participation as well as reduce sampling bias by attracting students who would otherwise be less likely to participate.

The survey was sent out by the Institutional Planning and Analysis (IPA) Department at TRU using secure software. The IPA Department randomly selected 600 students proportionately from the following faculties and schools at TRU:

- Faculty of Arts
- School of Business & Economics
- Faculty of Human, Social and Educational Development
- Faculty of Law
- School of Nursing
- Faculty of Science
- School of Tourism
Data were then recorded in graphs and charts to identify mean averages and trends (See Appendix D) to be categorized with results from the focus group study.

**Research Conduct – Students’ Focus Group Study**

The focus group study was comprised of a purposeful sample of eight students attending TRU’s various schools and faculties including some students with a high level of sustainability-related awareness and engagement. The students were invited to participate by phone, during which time the purpose of the study was explained to them. Students interested in participating were then sent a written invitation and consent form that gave them details about their involvement. These forms included options for students with special needs, cultural preferences or language barriers to participate by asking the researcher to arrange support if needed. Students in the focus group study were offered a small incentive of ten dollars for participating and a further incentive of 100 dollars was offered to a randomly chosen member of the focus group. The focus group study was audio recorded and each participant was also encouraged to write down notes during the interview. The audio recordings were transcribed and complied with the written notes of each participant. The focus group study was conducted on December 5th, 2011 in the Materials Handling Building meeting room.

**Data Analysis**

The purposeful sampling method provided a wide range of variation between students on either end of the sustainability awareness and engagement continuum. The focus group interviews incorporated a semi-standardized interview, starting with pre-determined questions that allowed themes to emerge out of the interview process, and further probing questions to explore these themes in-depth. Lather and Robottom (as cited in Baxter & Jack, 2008) claim that through stories, participants are able to describe their views of reality and this enables the
researcher to better understand the participants’ reasoning. The questions encouraged discussion and debate among members of the group hopefully allowing for openness and honesty among peers. The participants were informed that any comments would remain strictly confidential in an attempt to further encourage open and critical comments.

The data were analyzed using the constant comparison method. Patton (as cited in Dye, Schatz, Rosenberg and Coleman, 2000) suggests that content analysis, or analyzing the content of interviews and observations, is the process of identifying, coding, and categorizing the primary patterns in the data. Dye at al. (2000) state that the related categories must be rooted in relevant empirical evidence requiring the analyst to move back and forth between the logical construction and the actual data for meaningful patterns.

Initial survey questions allowed students to comment on the definition of sustainability and which of the three pillars of sustainability, (social, environmental and economic) (if any) they thought were more important. Other questions (See Appendix C) allowed students to identify what factors or influences had increased their knowledge and awareness of sustainability, such as, school programs, teacher or parental influences, and educational background. The questions aimed to identify student awareness, knowledge and commitment to sustainability. The answers to these questions and additional comments from the students would help to inform faculty and administrators intent on advancing sustainability. The student focus group study allowed for the interviewer and the interviewees to elaborate on ideas and themes as they presented themselves throughout the study (Gillham, 2000). Patton adds (as cited in Dye et al., 2000 p.1) that “the qualitative analyst’s effort at uncovering patterns, themes, and categories is a creative one that requires making carefully considered judgements about what is really significant and meaningful in the data.”
The focus group study was intended to last one to one and a half hours but lasted more than two hours due to the engaging, and rich, discussions.

Sample Population

Ideally, the sample size of the online survey would have been larger; however, due to the survey conflicting with fall examination schedules, students had limited time to complete a survey. Students had also been exposed to numerous other surveys which can lead to survey “burn out” for many students.

The sample size was relatively small, with only 37 out of 600 students completing the online survey. The sample population does, however, represent students from each of the faculties and schools at TRU. When asked if they participate in green activism or green initiatives on campus, only 8.1 percent of online respondents strongly agreed while 16.2 percent agreed (32.4 percent were neutral, 29.7 percent disagreed and 13.5 percent strongly disagreed). This indicates a good cross section of students with varying attitudes and levels of commitment towards sustainability. None of the respondents indicated he/she was a member of the student environmental club, while one respondent indicated he/she was a member of Students in Free Enterprise (SIFE). The focus group also displayed a full range of awareness and knowledge regarding sustainability-related concepts: from those with limited understanding to those with a comprehensive understanding and high levels of engagement. The wide range of knowledge, attitudes and levels of commitment towards sustainability displayed by both the online survey respondents, and the focus group participants, minimized bias results.
Limitations of Research

The research project is a partial requirement (12 of 36 credits) towards a Masters Degree in Interdisciplinary Studies (MAIS) and intended to take 440 hours to complete. This time constraint dictated that each aspect of the research project was designed to be succinct in nature. Given more time, the researcher would have considered focus groups and individual interviews with faculty members and administrators. Action research methodology, which according to Deemer (2009, p.1), is a research process that is typically viewed as a tool for in-service teachers to understand and respond to particular problems within their classrooms, seems ideally suited to frame sustainability-related research in the academy. More time would also allow for longitudinal study, which may gain valuable insights by studying a students’ changing levels of awareness and engagement throughout their entire university experience.

Initially the researcher was concerned that students in the focus group study would feel obliged to answer in politically correct ways. However, during the study the students were open and honest and seemed at ease, even while making critical comments.
Chapter 3—Literature Review

The History of Sustainability in Higher Education

Calder and Clungston (2003) claim the relationship between sustainability and education was not recognized until 1972 at the Stockholm Conference on the Human Environment, and the term “education for sustainable development” emerged primarily out of the Rio Earth Summit in 1992. In 1990, representatives from many universities met in Talloires, France to discuss the role of universities in shaping a sustainable future and for providing input for the Earth Summit. A shortage of specialists in environmental management and related fields as well as a lack of understanding by all professionals regarding sustainability was acknowledged by all 22 leaders present, and they agreed on the following:

Universities educate people that develop and manage society’s institutions, and as such bear a profound responsibility to not only increase the awareness, knowledge, technologies and tools to create an environmentally sustainable future, but to model environmentally responsible behaviour in their daily operations. (www.usfl.org, 1990)

The Talloires Declaration is a ten point action plan for incorporating sustainability and environmental literacy in teaching, research, operations and outreach at colleges and universities and now has 429 universities from 40 countries signed on (www.usfl.org, 1990). Increasingly, universities are recognizing their role in the advancement of sustainability throughout society.

On the whole, Bezbichenko (2011, p.9) notes that, “higher education recognizes it must play a role and in fact the sustainability movement is well underway in a many institutions.” The American College and University Presidents Climate Commitment (ACUPCC) Report (2011) recognizes that higher education has begun to address their impacts on the environment but must
also update curricula across a wide range of disciplines to ensure professionals understand the impacts of climate change and best practices for responding to them.

The United Nations (UN) Decade of Education for Sustainable Development, 2005-2014, has further outlined the importance of embedding sustainability into teaching, learning and training at all levels (Calder, 2005). The Association for the Advancement of Sustainability in Higher Education (ASHEE) was created in 2005, and has become widely recognized as the leading organization in advancing sustainability, inside and outside the classroom. The following list of AASHE initiatives and partnerships not only identifies AASHE’s significance as a key organization, but also reflects the recent ground swell of the sustainability movement in higher education (www.AASHEE.org; www.Climatechangeaction.ca):

**University and College Presidents’ Climate Change Statement of Action for Canada**

On March 13, 2008, six university presidents from British Columbia came together to sign a Climate Change Statement of Action for Canada signifying their commitment, and the commitment of their institutions, to provide leadership and make the changes necessary to address this challenging issue. Since then, other post-secondary presidents across Canada have added their support to meeting the climate change challenge.

**American College & University Presidents Climate Commitment (ACUPCC)**
The ACUPCC is a high visibility effort by college and university presidents to address global warming. Signatories commit to neutralize their institution's greenhouse gas emissions as soon as possible, and accelerate their sustainability research and educational efforts. AASHE is one of three organizations providing support for the ACUPCC.

**Campaign for Environmental Literacy (CEL)**

CEL seeks to secure and increase the amount of federal funding dedicated to environmental literacy, including funding for environmental education in NOAA and EPA. AASHE supports CEL’s efforts by signing letters to Congress and informing our members.

**Disciplinary Associations Network for Sustainability (DANS)**

DANS is an informal network of professional associations working on professional development around sustainability, and on changing curriculum, standards, and tenure
requirements. Goals include educating the public and promoting sustainability-related legislation. AASHE hosts the DANS website and supports its efforts.

**Energy Action Coalition (EAC)**
We promote the coalition's Campus Climate Challenge - a long term initiative to reduce global warming pollution from campuses - and provide resources and technical information to coalition partners.

**Higher Education Associations' Sustainability Consortium (HEASC)**
HEASC was formed in 2006 to leverage the efforts of higher education associations to advance sustainability in their operations, programs, and professional development. AASHE is an active HEASC member and serves as the administrative home and coordinator for HEASC activities in addition to hosting its website.

**US Partnership for Education for Sustainable Development (USPESD)**
The US Partnership is a voluntary partnership of individuals, organizations, and institutions dedicated to fulfilling the goals of the U.N. Decade of Education for Sustainable Development (2005-2014). AASHE is an active partner.

**Obstacles**

Although most colleges and universities are aware of the importance of adopting sustainability into their curricula and operations, the literature suggests that progress has been slow and successes isolated. Shriberg and Tallent (2003) claim institutions have reached a stage in the campus environmental movement where agreement about the broad goal of sustainable campuses is widespread. However, Shriberg and Tallent (2003) point out there is little guidance to move beyond the often vague notions of sustainability into implementation practices that are applicable across organizational and cultural boundaries. Clugston, Calder, and Corcoran (2002) indicate that a growing number of colleges and universities are attempting to teach about sustainability, but the obstacles are considerable; educators struggle with the meaning of sustainability due to politically-charged, vague and conflicting definitions.

Another obstacle, suggest Calder, Clungston and Corcoran (2002), is that the traditional disciplinary paradigm, still prevalent in many institutions, is not ideal for sustainable
development and they stress that a paradigm shift towards an interdisciplinary approach, integrating thinkers and decision makers is needed to forge a sustainable future. Calder and Clungston (1999) note that:

The modern university is the embodiment of the mechanistic, utilitarian worldview that shaped the scientific and industrial revolutions. Cartesian dualism (separating pure from applied, objective from subjective); Baconian method (emphasizing manipulation, control, and quantitative measurement); and utilitarian philosophy shape academic functioning. The academy is also deeply involved in providing expertise for an unsustainable world economy. (p. 3)

Hearn adds that the modern corporate university is a social site that reproduces without question the values and tenets of capitalism (2003).

Robinson (2008) suggests that sustainability is an emotive and increasingly mainstream subject which creates societal and institutional barriers that impede effective sustainability-related education. Robinson (2008) adds that one of the growing barriers to effective climate change and sustainability education in higher education results from the ever increasing and often poorly represented coverage by the media of climate change and sustainability issues. According to Boykoff and Boykoff and Antilla (as cited in Robinson, 2008, p.38) this has several affects:

- Learners can become bored by repetitive coverage of the same topic.
- Learners develop misconceptions while feeling that they are well informed.
- Learners have developed strongly emotive viewpoints on the subject of climate change and sustainability.
Learners are likely to have been influenced by the stronger representations of climate change controversy in the media than accurately reflects the scientific community as a result of journalistic bias present in climate change reporting. Robinson (2008, p.3) asserts that “effective climate change and sustainability education requires both the construction of new knowledge as well as understanding learners’ existing, well-established and deeply rooted personal frameworks of existing beliefs, incomplete knowledge and understanding”. Bandura, Gredler and Shunksaid (as cited in Waring & Prigge, 2011, p.26) contest that “learning is constructed through the interaction of an individual’s needs, his/her environment, and the behaviours he/she observes”. Bloom (1956) posited that changes in values and behaviour are possible through education, but Waring and Prigge (2011) add that subsequent researchers have not come to any consensus on how to effectively assess the phenomenon. In the context of increasing the sustainability and environmental stewardship values within students, Waring and Prigge (2011) claim that true effective learning or behavioural change does not happen unless the desired behaviours are modelled during the learning process.

Case Studies

Moore and Elverum (2009) suggest there are examples of change and glimmers of hope as some institutions open sustainability centers and others incorporate environmental studies, interdisciplinary studies and innovative research. The Environment, Sustainability and Society (ESS) Program at Dalhousie University offers interdisciplinary studies with the common goal of developing sustainable solutions for future generations (www.www.dal.ca). This innovative program, the first of its kind in Canada, has been well received by students, and subsequently, has a high enrollment rate (Steven Mannel, personal communication, May 20, 2011). The American College and University Presidents Climate Commitment (ACUPCC) Report (2011)
indicates that program heads and faculty are increasingly shaping their courses to involve their students in local climate mitigation and adaptation projects. Crawford suggests ”sustainability is a topic that fits into discussions of biological systems, energy usage, business practices, political and economic strategies, social practices, creative expressions and more” (2010 p.1). In addition, increased environmental awareness and knowledge throughout the various programs can help foster the “culture of sustainability” throughout the campus.

Recent successful case studies all point to the need for a holistic approach that supports collaboration between disciplines, involves the surrounding community and business stakeholders, and engages students as the much-needed “horsepower” to get the work done. Stovall (as cited in Crawford, 2010) claims that students in his business communication class can choose sustainability for their final project, and these projects can, for example, lead to energy reductions or solving parking problems on campus. Stovall adds that when students’ suggestions were implemented, they felt they had a real impact on decisions and were an integral part of the campus. Robinson (2008) adds that active and discursive approaches can have a positive transformative experience on students with the added benefit of encouraging a deeper understanding and engagement with the subject. Mero (2011, p.170-171) provides the following examples of universities working with various community stakeholders to push forward sustainability efforts:

**University of Michigan-Flint** teamed up with a local solar company, a wind turbine company and local utility company to develop renewable energy projects that will supply power for the region and offer economic growth to the depressed Flint area. The project will train the next generation of engineering students while engaging them in solving local issues. Mazumder (as cited in Mero, 2011 p. 2) is hopeful that “students may have more of
a relationship with local companies and may stay in the community and contribute to the community.”

**Drury University** opened the Ozarks Center for Sustainable Solutions (OCSS) which includes a portal where students can connect directly with local businesses for internships and course-based civic engagement opportunities to promote sustainable practices in the region. Since 2008, the OCSS has forged a strong relationship with the surrounding community while creating rich learning experiences for students across the academic spectrum.

**Allegheny College** created the Center for Environmental Development (CEED) that initially pushed an interdisciplinary focus creating opportunities for students to engage in sustainability practices within the local community. More recently CEED added an Arts and environmental initiative which blends aesthetics and functionality. The university has teamed up with the Pennsylvania Department of Transportation to create sculptures and a mural from recycled road signs and storm water filters from old bridge decking. People are now coming from around the country to view the art work [adding a new tourism angle and economic opportunity].

**North Carolina A&T University** is teaming up with other state universities and the community to provide outreach services to engage low income, minority, rural, youth and immigrant organizations in discussions around sustainability. The project will not only engage these typically ignored groups in the larger planning process but also give them practical advice on saving money on energy costs and the benefits of healthier food choices.
Royal Roads University offers a Graduate Certificate in Sustainable Community Development that allows students to apply their learning directly to a community of interest (www.royalroads.ca). TRU has recently teamed up with the Canadian Mortgage and Housing Corporation (CMHC) to design and help build a ‘net zero’ house that was raffled off with the proceeds going to the local Young Men’s Christian Association (YMCA). Students from TRU designed the Equilibrium House and now use the house as a laboratory to test and monitor various energy-saving products and equipment. The house creates enough energy to be self-reliant and has garnered much attention from engineers and utility companies intent on reducing residential energy demands. Mero (2011) claims there are an increasing number of ‘town and gown’ initiatives in Canada and the United States as progressive institutions tout the benefits and other institutions follow suit.

Noguera, Stanton-Salazar, Teranishi and Briscoe (as cited in Bezbatchenko, 2011) claim that institutions that model sustainability through their programs as well as in their daily operations can also create institutional trust, which some theorists include as part of the social capital framework. Bezbatchenko (2011) suggests that if students hold a high level of trust that the university will model sustainability, then in turn the students will hold attitudes and behave in ways that support the initiatives and policies of the institution. Evans; Ostrom; Woolcock and Narayan, (as cited in Bezbatchenko, 2001) claim that the degree of institutional trust may be foundational to the other components of social capital (social trust, social networks and social norms).

**Students and the Environmental and Sustainability Movement**

Researchers agree that national governments have shown little interest in pursuing the sustainability agenda and for the most part, pressure on universities to embrace sustainable
development has come from within. Highly motivated presidents, faculty, staff and students have affected change in very significant ways. Calder and Clungston (2003) suggest that students can in fact take credit for planting the seed of the environmental movement with initiatives such as the student-based Earth Day in 1970. They also defend that it will be student demand that will ultimately bring greater commitment to sustainability within higher education. Calder and Dautremont-Smith (2007) claim that student activism has risen dramatically since 2002, with students often being the major drivers of sustainability on campuses. Jennings (2011, p183) states that “students play a key role in the sustainability paradigm as the recipients of its education programs as well as the future professionals in this field,” Bezbachcko (2011) points out that it will be students who will one day tackle the critical issues facing society, including sustainability. Bezbachcko adds (2011) that therefore the study of students’ attitudes and behaviours related to sustainability makes sense.

**Student Activism and Engagement**

Lewington (2008) points to green as the color of today’s campus activism, but instead of a march on the president’s office, student leaders are sitting with administrators as equals to map out a more sustainable future. Axworthy, president of the University of Winnipeg, declares that green activism has changed the face of the university and the outlook of the university, and that students are very much the catalyst (as cited in Lewington, 2008).

Students are also willing to contribute financially in order to create sustainable places to study. Calder and Dautremont-Smith (2007) cite 50 examples across the United States of student-initiated increases in student fees (green fees) that went directly towards sustainable initiatives, receiving wide approval in student elections. Michael Duncan, president of the University of British Columbia’s (UBC) Alma Mater Society, reports sustainability was the
number one issue raised by students regarding construction of a new building and students voted in favour of a fee that would elevate the new building’s design to the highest environmental standard (Lewington, 2008). The president at the University of Guelph also claims that students were driving change and the administration was “being pushed” when students voted 63 percent in favour of a ten dollar increase per semester that will lead to 4.3 million dollars in energy conservation measures over a 12-year period (as cited in Lewington, 2008).

Shriberg and Tallent (2003) surveyed 249 individuals from 59 institutions and found that student commitment was the least formidable barrier in promoting sustainability within the organization. Shriberg and Tallent (2003) also indicate that the most surprising result of their survey was that enthusiastic change agents, including students, were a major factor in sustainability gaining traction within universities. After surveying 9000 American college students, Levine (as cited in Bezbatchenko, 2011 p.3) reported that 88 percent of them are hopeful about their future, with one student asserting “our generation will be able to fix this problem.”

**Increased Marketability of Sustainability**

The literature has indicated how committed students are towards sustainability, leading to some university administrators realizing the marketing advantages of a greener campus. Lewington (2008) states observers are seeing signs of a ripple effect on recruitment. Diamond (as cited in Lewington, 2008) suggests administrators are embracing the idea of presenting themselves as green to appeal to the new generation of learners, and it is unlikely future recruitment books will not include a message on “how green a school is.” Shriberg and Tallent cite an example of one survey that found that perception of image and reputation can be a key “hook” for attracting change agents. Davis alleges that “students want to go to school where they
will learn something pertinent and where they will see at lot of activism on campus” (as cited in Lewington, 2008 p.3). Bezbatchenko (2011) found that while surveying students on how much they care about sustainability, all of the respondents scored at least 5 out of 10 [1 being low, 10 being high] indicating, on the whole, students seemed to care.

**Barriers**

Moore and Elverum (2009) point out that students are hopeful, creative, innovative and thoughtful, but most are bored with their lectures, seminars and studies, seeing the things they are learning as disconnected from the increasingly urgent and dire warnings they hear and talk about everyday. Calder and Dautremont-Smith (2007) note that widespread student support for sustainable campuses is far from universal, with few students receiving extracurricular exposure. Bezbatchenko (2011) insists that although most students agree that sustainability is a national priority, there is an intriguing gap between young peoples’ perceptions and their actual level of engagement. A recent study at Wright State University found that roughly 25 percent of students are not interested or concerned about sustainability-related issues (Ramey, personal communication, October 10, 2011). The UNEP study revealed that young adults agree on the need to live a more sustainable lifestyle (Greenlife, 2011). The UNEP study also showed a striking lack of information among participants regarding policies and management that affect the social, cultural, environmental and economic issues where they live (Greenlife, 2011). Blake (1999, p.262) reasons that “individuals must accept responsibility for the future, but conditions, institutions, and their own day-to-day responsibilities constrain their actions.”

Blake (as cited in Bezbatchenko, 2011) identifies individuality, responsibility and practicality as the three significant barriers to acting in pro-environmental ways. Bezbatchenko (2011) adds that this is an important consideration in the college context where peer groups are
highly influential, and individuals, who study together, play together, work together and eat
together, behave in similar ways.

**Student Attitudes and Behaviour**

Bezbachenco (2011, p.5) states that given that undergraduate college and university
students comprise a large share of the population of young people, as well as make up our future
citizens and leaders, unpacking the complexities behind their attitudes and behaviours is
essential. Bezbachenco (2011) adds that research that aims to examine the subtleties of student
attitudes and behaviours can help to educate the entire higher education community and policy
makers, therefore cultivating a setting that most effectively advances sustainability throughout
the institution. She also points out that most of the research to date has focused on institutional-
based, top-down methods for change and stresses the need for a more comprehensive, holistic
approach that encourages and enables all members of the campus community to contribute
towards the culture of sustainability.

One of Bezbachenco’s major findings is that students view sustainability through a
human-centric lens, caring for their peers and social issues more than environmental issues
(2011). This is important information, suggests Bezbachenco (2011), because understanding
students’ anthropocentric perspectives on sustainability allows us to comprehend leverage points
by illuminating how environmental sustainability is intertwined with social sustainability (and
economic sustainability). She adds that the development of students’ attitudes and behaviours
related to sustainability are influenced by their peers. In Bezbachenco’s opinion, universities
underutilize this potentially very powerful tool:

If student leaders, whom the other students respect, can be trained as
sustainability advocates, imagine the potential influence they could have on the
behaviours of their fellow club members and social networks. (Bezbatchenko, 2011)

Astin (1993) also underscores the importance of peer group experience, suggesting it is the single most important environmental influence on student development. Astin’s research (1993) found that one of the largest positive changes in undergraduate students’ attitudes during their post secondary education was a commitment to cleaning up the environment.

Friedman (2008) insists that creating a culture of sustainability requires a mass of students exhibiting an ethic of conservation, which is an ingrained habit of behaving in ways that minimize impact on the environment. Bezbatchenko (2008) adds that an institutional culture that demonstrates an ethic of conservation does not prescribe the type of behaviour, but determines the likelihood that people will behave in certain ways.

Putnam, Grootsaert and Bastelaer (as cited in Bezbatchenko, 2011) all point to the importance of understanding social norms, trusts and networks in order to increase social capital within an organization. Communities with great trust, deep social networks and social norms are more inclined to behave in pro-environmental ways that contribute to the public good as well as protect natural resources (Pretty; Jones; as cited in Bezbatchenko 2011).
Chapter 4—Findings

General Questions

The age of the online survey respondents ranged from 18-44 years with an average age of 22. The sample population was comprised of 70 percent females and 30 percent males. The following table illustrates what percentage of students from each of TRU’s faculties and schools completed the online survey.

<table>
<thead>
<tr>
<th>School or Faculty</th>
<th>Percentage of Population Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty of Arts</td>
<td>24.3</td>
</tr>
<tr>
<td>School of Business and Economics</td>
<td>21.6</td>
</tr>
<tr>
<td>Faculty of Human, Social and Education Sciences</td>
<td>2.7</td>
</tr>
<tr>
<td>Faculty of Law</td>
<td>8.1</td>
</tr>
<tr>
<td>School of Nursing</td>
<td>2.7</td>
</tr>
<tr>
<td>Faculty of Science</td>
<td>16.2</td>
</tr>
<tr>
<td>School of Tourism</td>
<td>13.5</td>
</tr>
<tr>
<td>School of Trades and Technology</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>10.8</td>
</tr>
</tbody>
</table>
The majority of students were not employed (67.6 percent); 29.7 percent were employed part time, and 2.7 percent were employed full time.

**Student Perceptions, Attitudes and Behaviours Related to Sustainability**

In order to engage students in discussion on sustainability, understanding students’ conceptions and attitudes were considered key components of this research project. Initial questions in the online survey asked students to rank the three elements of sustainability (social, environmental and economic) with the option to rank two or more as equally important. All survey respondents completed the ranking and none of the students indicated (in the additional comments box) that they were unfamiliar with the general concept or definition of sustainability. The focus group participants also ranked the three elements, and showed a great deal of awareness and knowledge on the topic of sustainability.

The results of the online survey indicated that students rank (on a scale of one to three) the environment as the most important element of sustainability (mean = 1.61), with the social element second (mean = 1.75), and the economic element third (mean = 1.89). These findings support recent discourse that social and economic systems rely, ultimately, on the carrying capacity of the earth’s natural systems (Bosselmann, 2001). Parris and Kates (2003, p.560) add that beyond utilitarian purposes, a significant amount of literature values nature for its intrinsic qualities and biodiversity. One focus group participant stated, “the world cannot support life if we destroy it; therefore protecting the environment comes first.” Adding to this sentiment, three of the focus group participants also viewed sustainability through an environmental lens. One participant stressed the importance of “dealing with the threats of climate change, due to the potential for greater negative impacts on developing, poor nations, leading to more social

Five out of the eight focus group participants, however, viewed sustainability through a social lens, maintaining that the protection of the environment can only come about after social changes at individual and societal levels. The following comments reflect their attitudes:

“I view sustainability through a social lens. Short-comings in our social structure have allowed environmental problems to continue to manifest.”

“I think you have to have a societal change first that will lead to a different way of thinking about the environment. It all starts with teaching and a change of attitude.”

“The level of intrinsic value one has for his/her self manifests itself first in interpersonal relationships and second in the manner they treat the environment; to improve environmental health and sustainability, the individuals’ emotional, physical, mental health must first be addressed.”

The majority of focus group participants, whether they placed social or environmental concerns first, also commented on the interconnectedness of the two elements, and, in fact, the end goal or ideal vision of a sustainable future was very similar. The economic element of sustainability was not ignored by the focus group study, although it was viewed more as means to an end. One participant cited the importance that “have nations” share resources and wealth with the “have-not nations” to allow the poorer nations to address social issues and manage their own natural resources. Online survey participants also ranked the economic element third with
only 13 percent of respondents listing the economic element of sustainability as the most important of the three pillars, while 19% of students viewed all three as equally important. The discussions indicated that even the students with a limited understanding of sustainability were aware of the basic concepts and definitions.

**Sustainability as a Priority**

All of the students in the focus group study agreed that sustainability is a priority for society in the 21st century (on a scale of 0-5, mean = 4.3). Seven out of the eight focus group participants and 84 percent of survey respondents indicated that sustainability is a priority in their daily lives. Only ten percent of students do not conserve water as much as possible (while showering, brushing teeth etc.). Over 60 percent of students buy locally grown food when possible, while only 16.7 percent do not.

Although the findings clearly indicate that the majority of students view sustainability as a growing imperative for society and a priority in their daily lives, many students admit that their behaviour does not reflect their attitudes towards sustainability. The following comments allude to the gap between attitude and behaviour:

“I care but my life does not reflect that.”

“It should be a huge priority. If we do nothing what will we have left—I am guilty of not always doing what I should.”

“It should be huge priority. The planet cannot take much more. However it is easy to live in your bubble.”
“Not like I should,” “Not as much as I could,” “not really” (referring to their actions regarding water conservation).

The online survey and the focus group study asked a series of questions to determine to what extent students’ behaviours reflect their concerns and attitudes regarding sustainability. The focus group study discussed some of the reasons that explain the gap between attitudes and behaviours. The online survey concluded that over 93 percent of students actively recycle, while 100 percent of the focus group participants indicated that they recycle. The one person in the focus group study that did not indicate that sustainability was a priority in their daily life still recycled due to it being easy and “the right thing to do.” He did point out, however, that he could be more diligent about separating some recyclable materials from the garbage. The online survey and focus group study, however, uncovered that only 56 percent and 50 percent, respectively, of students compost regularly. This supports the literature that suggests removing barriers (making recycling convenient) and creating social norms to support pro-environmental behaviour are important. Focus group participants pointed to a lack of composting containers on campus (and in some cases, where they live) as a primary reason for not composting. Many students admonished TRU for lagging in this area. According to Tom Owen, the Director of Environment and Sustainability at TRU, yard waste and a high percentage of preparation food waste from the Culinary Arts Program and various cafeterias are composted. The focus group participants, however, verbalized a keen interest on behalf of the student body to expand the composting program across the campus. One participant, who recently transferred from another university, expressed his disbelief that there was no composting at TRU. The same participant also claimed that the culture of sustainability at his past university was well established and as a student there “you couldn’t get away with anything—everyone was encouraged, almost demanded, to act in
pro-environmental ways.” The student referred to “a culture of intolerance” throughout all levels of the institution, inside and outside of the classroom, even in the surrounding community.

The majority of students also consider the environment when commuting to the campus (65 percent of survey respondents do versus 19 percent that do not). The focus group participants (7 of 8) also consider their environmental impact while commuting, but point to a number of barriers and factors that lead to their actions contradicting their attitudes. The demographic results of the survey indicate that 56.8 percent of students live in areas close enough to walk to campus, but only 40 percent of students do so regularly. Of students that walk to school, 28 percent walk more than five times a week (between classes). Of the 56.8 percent that live in adjacent neighbourhoods, only 6.8 percent of students regularly bicycle to TRU. Over half of students intermittently car pool, while 15 percent of students regularly carpool. While 86.5 percent of students live in areas that have public transportation services, only 37.6 regularly use public transportation (four or more days a week), with 34 percent not using public transportation at all. Over 60 percent of students surveyed use gas or diesel automobiles to commute to school (without carpooling) at least once a week. A relatively small number of students use vehicles with relatively low environmental impact (scooters = 3.4 percent, electric or hybrid vehicle = 3.4 percent).

Students in the focus group study described TRU as a “commuter college” with 33 percent of survey respondents pointing out that they live too far from the campus to walk or bike, and their neighbourhood does not have any, or infrequent, bus service. Many students who do not car pool indicated that they would if they could connect with other students in their area. There are many barriers that deter students from walking and cycling: weather, other errands to
run, time constraints, no cycle lanes, no trails, and a lack of pedestrian overpasses. Students in the focus group study also pointed to a lack of space on campus to study between classes. One participant suggested “over-crowded common areas cause students to go home between classes and the infrequent bus service, in addition to other factors such as being in a rush, or laziness, results in students using their car to do so.” Roughly half of the survey respondents commented that the public transportation system does not provide adequate services for their needs: “too few buses in my area”; “no buses in my area”; “no space on buses during peaks times”; “no buses at night”; “no buses on Sundays”; “too many transfers to my area”; “takes too long to get home”; “the system is unreliable”; “the bus is really full in the morning, so I just take my car.”

Parking Fees

The majority of students (65 percent) would not support a parking increase even if the money was allocated for sustainable and environmental initiatives on campus. Of those students, 43 percent indicated financial constraints as the reason they would not support an increase, 40.5 percent think parking fees are already too high, 8 percent would rather see the money spent elsewhere, and 13.5 percent do not use the parking lots (but were still against the increase.) Of the 16 percent of students that listed other reasons: one student suggested that fundraisers would be a better way to generate revenue; and the majority indicated that students are already facing increased tuition and living expenses and another increase would put too much financial pressure on students.

Of the 35 percent that would support a parking increase, 31 percent agreed on a 25 to 50 cent hike, and 46 percent agreed on a 50 cents to 1 dollar increase. Since only eight percent of students indicated that they would rather see the revenue from an increase go to supporting other
causes; the majority of students would then seem to support sustainable and environmental initiatives—as long as the money comes from other, or existing, fees. The focus group study was divided on the issue with half supporting the increase if there was full transparency (what projects the money was supporting) and student involvement. Most students against the fee increase thought the idea of a green levy was good, but would rather see a portion of existing fees allocated to green initiatives rather than another fee. Students on both sides expressed a lack of trust that the administration, during times of financial constraint, would instead put the money into general revenue. One student summed up the general sentiment of the group with, “I would prefer a relocation of funds, but appreciate the idea of a green levy if kept reasonable, transparent and within the context of building student identity and ownership.”

Factors and Influences that have Increased Students’ Awareness and Understanding of Sustainability

Students completing the online survey pointed to a variety of factors and influences that have increased their awareness and understanding of sustainability. Instructors had the greatest influence on students’ awareness, while the media, peer groups, and parents and family also contributed significantly. Initiatives around the TRU campus (Earth Hour, Trash Bash etc.), student activism and course content factored in, although to a lesser extent. Students in the focus group study alluded to a variety of experiences while growing up that made them aware of sustainability-related issues such as climate change, poverty, homelessness and environmental degradation. Most students, however, expressed that sustainability issues did not resonate with them until they matured and started attending university. The majority of respondents claimed that their awareness and understanding of sustainability-related issues had increased since
attending TRU. One of the focus group students reflected on how his awareness and knowledge increased while attending university, citing “at some point I realized that sustainability was much more than just recycling.” This student went on to claim that there are a lot of misconceptions around the concepts of sustainability within his peer groups.

The entire focus group agreed there is a disconnect between the media and what they are learning in the classroom, with the exception of those that have no sustainability-related content in their program. Those students then suggested they rely heavily on the media for information. The group also pointed out the different types and quality of media. One student gave the example of the “Canadian Broadcasting Corporation versus. Entertainment Tonight,” and the need to filter out “good from bad” information. The focus group also highlighted the influence of instructors on increasing students’ awareness and understanding of sustainability. Students suggested that what they learn about sustainability in the classroom is more a reflection of each instructor’s personal attitude towards sustainability than it being part of the curriculum.

The Extent that Students Research Sustainability Prior to Attending University

Approximately one in ten students research the environmental and sustainability track record of universities that they are considering attending (which at TRU, based on 11 percent is 1200 students), and 70 percent of them chose TRU as a result. Students highlighted cost, convenience (proximity to their home and parents), and program availability as higher priorities. The majority of focus group participants (seven out of eight) did, however, emphasize that “all things being equal,” that is, if they had the option of attending two universities, both offering their desired program and with similar logistics and costs, that they would choose the university with a better sustainability track record and relevant course content. Students in the focus group
study also pointed out that although other priorities trumped sustainability when deciding on which university to attend, sustainability does now factor into which courses they take.

Of the 19 percent of students that researched the level of sustainability-related content in their various courses, 18 percent of students are attending TRU based on that research. The level of sustainability-related content varies from virtually none in some courses to programs that are directly related to sustainability and environmental studies. The majority of students throughout all of the faculties and programs did, however, indicate that they would prefer more sustainability-related content (only 11 percent did not).

An equal number of students (39 percent) considered sustainability a priority when deciding on a career path versus those that indicated higher priorities (such as income or supporting a family). The majority of focus group participants (six out of eight) hope that their careers will have direct, positive impacts on society and sustainability-related issues. For half of those 6 focus group participants, their increased awareness and knowledge of sustainability-related issues while attending university has changed the focus of their studies and career goals.

All of the students in the online survey, as well as the focus group study, agree that universities should be sustainability role models in their daily operations. Students in the focus group study articulated that “universities should be hubs of innovation, advanced education and creativity”; “it is critical that universities are leaders on this front.” The majority of online respondents (81 percent) agreed that TRU is doing a good job of modeling sustainability in its daily operations. The focus group, however, was evenly divided with four of the eight participants suggesting TRU could do more, with two of those four completely unaware of any
of TRU’s initiatives. Some students that agreed that TRU is doing a good job did, however, suggest that TRU lags far behind other universities.

Numerous discussions during the focus group study pointed to one of the major issues impeding sustainability gaining traction at TRU: the “absence of community” amongst the student body. While one participant suggested that the lack of space on campus led to students commuting more often than they should, the student also felt that this was part of a much larger issue, that is, the majority of students “go to class, then go home”—no one is interested in becoming involved in “what community there is.” Another participant suggested that community-based clubs, such as the student-lead environmental club (TRU ECO) have a small membership and meetings are often under-attended. The student went on to claim that the general apathy on campus has led to frustration for many, and in fact, was the reason she quit TRU ECO. The focus group emphasized that the current successes on campus (and at other universities) are due to collaborative efforts incorporating course content and involving students, faculty and staff.
Chapter 5—Recommendations

Participants in the focus group study do feel students are important stakeholders in advancing sustainability in higher education. The majority of students also feel that they would not have any impact as individuals, but, by working in peer groups, they could make meaningful contributions. The findings indicate that there are multiple opportunities to advance sustainability throughout the TRU campus. This section expands on the findings to provide key recommendations to promote pro-environmental behaviour, to incorporate TRU’s green track record into recruitment strategies, and to incorporate more sustainability-related content into curricula. Key recommendations include: (1) promote pro-environmental behaviour utilizing established frameworks; (2) build institutional trust through modeling and policies; (3) encourage student group collaborations to build social norms and trust; (4) develop a “Talk the Walk” marketing campaign; (5) engage students through course content; (6) increase instructors’ awareness and understanding of sustainability theory and practices; (7) create more opportunities for students to become civically engaged.

Recommendation 1: Promote Pro-Environmental Behaviour

There are a multitude of opportunities to engage students in pro-environmental behaviour. In particular, the focus group participants suggested a campus-wide composting program would be well-received and should be a top priority. In addition, students would benefit from the following: increased networks to organize car pooling, additional High Occupancy Vehicle (HOV) parking spaces, increased cycling lanes, improved walking paths and a pedestrian overpass. Perhaps more importantly, students should have a seat at the table with TRU administrators, city and transportation authorities to discuss public transportation issues.
Although TRU is currently conducting a transportation demand study and considering the comments from online respondents, more student feedback is warranted. Other initiatives around community gardens and a campus community market were discussed and seem ideal for creating awareness and behaviour change.

**Frameworks to Guide Initiatives**

McKenzie-Mohr’s (2000) community-based social marketing strategies, coupled with Appreciative Inquiry (AI), seem ideally suited to frame behaviour change initiatives on campus. McKenzie-Mohr (2000) identifies four steps to an effective social marketing campaign: identifying barriers and behaviours; selecting which behaviours to promote; designing a program to overcome the barriers to the selected behaviours; piloting the program; and then evaluating it once it is broadly implemented. McKenzie-Mohr (2000) emphasizes that traditional information campaigns are not designed to overcome the diversity of barriers that exist for any sustainable activity, and therefore will rarely bring about behavioural change. He adds that social marketing merges knowledge from psychology with social marketing expertise to better understand the barriers people perceive to engaging in sustainable activities.

Appreciative Inquiry, by focusing on the strengths of individuals and the organization, provides a positive perspective to guide sustainable initiatives (Watkins, Mohr & Kelly, 2011). Nordhaus and Shellenberger (as cited in Bezbatchenko, 2011) suggest a positive framework that focuses on the good rather than the bad is vital when addressing sustainability. Too many environmentalists, they add, have used “doomsday discourse,” consistently using blockage verbs such as “stop,” “restrict” and “prevent” to talk about sustainability (as cited in Bezbatchenko, 2011). Furthermore, emphasizes Bezbatchenko, if students are expected to feel guilty when they
do not act in pro-environmental ways all of the time, why would students then strive to reach a new level of commitment to sustainability (2011). Students in the focus group study did allude to this sense of guilt when they could not, or chose not to, act in pro-environmental ways. Framing campaigns through an AI lens will help to eliminate this feeling of guilt, which left unchecked, can undermine social trust and the development of social capital (Bezbatchenko, 2011). It should also be pointed out that social marketing frameworks, Appreciative Inquiry and social capital are complimentary to each other; what they all share is community ownership, through a positive lens.

**Recommendation 2: Build Institutional Trust through Modelling and Policies**

Noguera, Stanton-Salazar, Teranishi and Briscoe all agree that sustainable initiatives will continue to build institutional trust, indicating that the university is “doing the right thing,” thus prompting pro-environmental behaviour from the student body (as cited in Bezbatchenko, 2011). Students in the focus group study admitted that they felt “powerless and frustrated” as individuals, if they perceived the university (or the greater community) was not also making an effort. Numerous students felt that taking a longer shower “didn’t matter” compared to the amount of water wasted on campus landscaping (or on city landscaping, mining etc), leading to a “why bother” attitude among some students. Conversely, when the focus group discussed the Culinary Arts Program and their sustainable initiatives, the conversation took on a decidedly positive tone. The Culinary Arts Program, which provides training while supplying the campus with reasonably-priced food, also uses locally supplied, healthy food (and comports some kitchen waste). The program has led students across the campus to discuss, and become more aware of, good food choices while creating a sense of pride and attachment to their institution.
As indicated in the online survey, the majority of financially-constrained students still prefer locally-grown food choices. Other initiatives around campus such as residence energy challenges, Earth Hour and sustainability month also contribute to institutional trust and, according to focus group participants, “nudge” students to do more.

Institutional policy, another element of institutional trust, is defined as structural social capital. Opposite to its cognitive counterpart, structural social capital is tangible and observable (Groothaert & Bastelaer, 2002; Bezbatchesko, 2011). The focus group study pointed to the negative impacts of no policies as well as the potential for institutional policies to contribute to social capital. Students used negative descriptors when discussing the various corporate entities on campus. Members of the focus group were scornful of vendors that used wasteful packaging and too much plastic, did not facilitate recycling and did not compost. The following examples are institutional policies that would align with students’ values and serve to build institutional trust: a procurement policy that requires vendors to use a percentage of locally grown food; use recyclable cups and containers; and facilitate composting. These types of relatively simple institutional policies should not incur any extra costs for TRU, as contractors and vendors will want to stay competitive. The results of these policies should then be included in the “talk the walk” campaign and promoted to current and prospective students.

**Students Responsibilities**

Students agreed that together they can make a difference, but busy course schedules and other priorities often prevent them from joining sustainability-related clubs or initiatives. Admittedly, though students are sometimes lazy; Bezbatchesko (2011) reminds us that whether or not students’ attitudes are consistent with their behaviours is largely influenced by
convenience. The focus group concurred, highlighting that students are busy, and any initiatives on campus to promote pro-environmental behaviour should start by making it easy for students to participate.

**Recommendation 3: Encourage Student Group Collaborations to build Social Norms and Trust**

Students must also work at building social networks and creating social norms. Students in the focus group study stressed the need for “a space” to collectively discuss sustainability and community-related issues. Astin (1993) found that the single most important environmental influence on student development was peer influence. Over 85 percent of students in this study claimed that peers did have some influence, with 43 percent of students indicating that peers had a significant influence on their awareness and understanding of sustainability. The Thompson Rivers University Student Union Environmental Club (TRU ECO) attracts students who want to create awareness and discuss solutions for environmental issues. What TRU ECO shares with numerous other clubs (i.e. the Developing World Connections Club, Fair Trade Kamloops Club, Fresh Club- Healthy Living and the Humanitarian Club) is sustainability as a common theme. One recommendation would be for the TRU ECO club to consider networking with other likeminded clubs, allowing for an exchange of ideas and increased awareness of their interconnectedness. The findings indicate that students view sustainability through different lens, and therefore, gatherings that provide ‘a space’ for all may attract a stronger membership. It is these students, the ones engaged and informed, who will then inspire their friends and smaller peer groups, the students whom Bezbatchenko (2011) refers to as being ‘in the middle’, the ones that just need a nudge.
Green Marketing and Recruitment

When asked what universities they would rank the highest in terms of their green track record, students ranked the University of Northern British Columbia (UNBC) the highest. Respondents cited UNBC’s energy use (district energy that uses bio-mass fuel) and the fact that UNBC (which has the registered trademark for ‘Canada’s Green University’) actively promotes and advertises their green initiatives. Some focus group participants suggested that unless a student is really interested in TRU’s Environment and Sustainability initiatives, information about past and planned initiatives is difficult to ascertain. The student articulated that TRU is “doing a lot” in terms of initiatives, and felt that TRU is “walking the talk,” but TRU should also think about “talking the walk”; that is, it should more actively promote the number of successful initiatives to date.

Recommendation 4: Develop a “Talk the Walk” Marketing Campaign

The recruitment office should consider collaborating with the Environment and Sustainability Department to add a sustainability-awareness component to their recruitment campaigns to fully inform prospective students with a keen interest in sustainability. The students from outlying communities who have regional options, as well as those students who have short listed TRU, should be fully informed about TRU’s expanding sustainability initiatives and track record. A “Talk the Walk” campaign will also inform students currently attending TRU about sustainability initiatives, and serve to increase TRU’s standing in the annual National Survey of Student Engagement (NSSE) report; this, in turn, could be used by prospective students to research (and rank) the sustainability track record of Canadian institutions.
Another recommendation is for the recruitment office to collaborate with various faculty departments to promote sustainability-related content in the various programs at TRU. Faculties should also “talk the walk” to fully inform the 20 percent of prospective students that are researching the amount of sustainability-related content in their intended program. Beyond the relevant content, prospective students may be interested in and enticed by the opportunity for experiential learning while contributing to their community. The focus group cited positive examples (besides the Culinary Arts Program) in the Nursing Program, Horticulture Program and Trades Program that combine learning with providing a benefit to the community. The increasing numbers of ‘town and gown’ initiatives that provide a richer post secondary experience have been well-received, but have they been well-marketed?

**Recommendation 5: Engage Students through Course Content**

Faculty members need to consider the growing number of students interested in sustainability-related content in their areas of study, and that as instructors, they have had the most significant influence on students’ awareness and understanding of sustainability. Faculty may also be interested in what elements of sustainability resonate the most with students and how best to engage them. For example, the majority of tourism students who completed the online survey ranked the environment as the most important element of sustainability. This key leverage point can be used to create awareness about the links to the cultural, social and economic elements of tourism that will serve to protect the natural areas (and the people living within these areas). Harmon (2007) suggests that those that tend to care about nature care a great deal, but adds that the rift between the natural and social sciences has impeded effective management of natural or cultural and social resources. West and Brockington (as cited in
Harmon, 2007) offer the critique that natural scientists and conservationists are too often indifferent to, or ignorant of, the social context in which conservation takes place. In another paper, Harmon (2004) suggests that the economic values associated with protecting natural areas (through tourism) can help to preserve the areas for those that prioritize the intangible values of nature, and for those that link nature to the spiritual, cultural, intellectual, emotional and creative aspects of human existence. This is not to suggest the Tourism Department is not addressing sustainability, but to remind us that different issues resonate with students based on their values. In order to engage students in the larger sustainability debate, inside and outside of the classroom, instructors need to be aware of what values to tap into.

Conversely, none of the students in the School of Business and Economics ranked the economic element of sustainability as the priority. This reinforces the online survey results that point out students care deeply about social and environmental issues. This is also a reflection of an increasing number of students that equate healthy social and environmental systems with long term economic stability. Nearly 40 percent of students considered sustainability when deciding on a career path, and 75 percent of focus group participants wanted to positively affect society. This, coupled with the fact that virtually all students would like more sustainability-related content in their courses, should not be ignored. Bezbatchenko (2011) found similar results, and underscored the responsibility of higher education and knowledge-based change in advancing society. Bosselmann (2001) argues that the case for implementing sustainability throughout the university curriculum is a strong one. Again, through an Appreciative Inquiry lens, this project highlights that, according to students, there is an opportunity to provide a richer learning experience and, thus, a richer learning experience for the teacher.
**Recommendation 6: Increase Instructors’ Awareness and Understanding of Sustainability**

Another recommendation, with respect to instructors’ influence on students, is to consider where each instructor is on his/her own continuum of sustainability awareness. Bosselmann (2001) claims that sustainability-environmental awareness, similar to gender or ethical and racial awareness, is a state of mind or attitude. If faculties are intent on delivering sustainability-content, increasing instructor awareness will perhaps allow for more overall content, as well as continuity between instructors. Bosselmann (2001, p.184) asserts “that as champions of good communication educators must insist that the idea of sustainability is compelling and simple.”

**Recommendation 7: Create more Opportunities’ for Students to Become Civically Engaged**

In addition, faculty departments should provide multi-disciplinary opportunities for students to learn while engaging community and business stakeholders. Astin (1998), after surveying 3450 students, concluded that participating in service during the undergraduate years substantially enhances the student’s academic development, life skills development and sense of civic responsibility. Putnam (1995) cites a wide range of empirical evidence indicating that the quality of public life and the strength of social institutions are influenced by social norms and networks of civic engagement. Putnam (1995) adds, “dense networks of interaction and civic engagement broaden the participants sense of self, developing the “I” into the “WE” or (in the language of rational-choice theorists) enhancing the participants “taste” for collective benefits” (1995, p.3). Considering the diversity of schools and faculties, in combination with the range of TRU’s industry and community partners, opportunities for rich, experiential learning for TRU students seem endless.
Conclusion

This research project aimed to give voice to TRU students, to learn how TRU can better serve them during their time here, and to better equip them to face the challenges of their generation. What the students have said is that they are concerned about social, environmental and economic issues, both at the community and global level; sustainability is ‘their’ cultural revolution. The underlying messages from the students include the following: remove barriers that will make it inconvenient to act in pro-environmental ways; build institutional trust through actions, initiatives and policies; continue to build more sustainable-related content into curricula across a wide range of programs. These measures will encourage and enable students to develop social norms and social trust, and foster the ethos of conservation within the student community. Hamilton (2008) defends that “community is a process of being in a relationship that helps us to adapt, change and become who we are, through co-emergent meaning-making, discovery and inquiry.” Putnam (1995) suggests that for a variety of reasons, life is easier in a community blessed with a substantial stock of social capital.

Brown (2005, p.3) reminds administrators that “sustainability has at its core a need to understand, think and act differently, which is also seen as an expanded sense of leadership.” Universities that take a pro-active approach to sustainability will not only best serve the advancement of society; they will also be well positioned to overcome some of the current challenges facing university administrators. The key challenges, cites Bosselmann (2001), are technological innovation, external funding, accountability and competition. This project has shown that by taking a leadership role in advancing sustainability, TRU can also help to overcome some of these challenges.
References


Moore, J., & Elverum, D. (2009). How can our education system create change for the outside world, when there is no sense of urgency inside the universities? Retrieved from http://go-beyond.ca/resources


Appendix A

Letter of Invitation

Online Survey

Title: Students as Key Stakeholders in Advancing Sustainability in Higher Education

The principle researcher: James Gudjonson [telephone] - [e-mail]

Royal Roads supervisor: Ann Perodeau [telephone] - [e-mail]

TRU Research Ethics Chair: Michael Woloszyn [telephone] - [e-mail]

If you are currently enrolled as a student at Thompson Rivers University (TRU), and 18 years of age or older, you are invited to participate in an online survey. After completion of the survey you can enter to win 1 of three gift certificates (of up $100) at the campus book store (Bookies).

This message is on behalf of James Gudjonson; his research project is part of a Master of Arts, Interdisciplinary Studies (MAIS) degree at Royal Roads University (RRU). James is conducting a survey of Thompson River University students as part of his thesis and his credentials with RRU can be established by telephoning Dr. Wendy Schissel, Program Head, MAIS Department at Royal Roads University [telephone] - [e-mail].

The survey will take approximately 15-20 minutes to finish. The questions will identify and assess your interest and knowledge regarding the topic of sustainability and how important sustainability is from your perspective as a university student. In addition to submitting my final report to Royal Roads University in partial fulfillment for the MAIS program, I will also be sharing my research findings in summary form with administration, faculty and students from Thompson Rivers University. The Summary will be posted on the TRU sustainability web site http://www.tru.ca/sustain.html in the spring/summer of 2012.

The information you provide will be summarized, in the body of the final report. You are not compelled to participate. You may skip any question or at any time withdraw from the survey by closing your web browser.

Your unique perspective as a TRU student will make a valuable contribution to this research project and your time to participate is greatly appreciated. Your perspective as a student will allow for administrators and curricula developers to better understand, and meet, your expectations regarding the advancement of sustainability.

Once you have completed the survey you will be able to enter a draw for one of three prizes (of up to $100 in value). If you have any questions regarding this research project please direct to James Gudjonson at [telephone] - [e-mail]

If you have a disability, a language barrier or any cultural preferences that prevents you from completing this survey, please contact the researcher and the required services will be provided.
Appendix B

Letter of Invitation (Focus group Study)

Title: Students as Key Stakeholder in Advancing Sustainability in Higher Education

The principle researcher: James Gudjonson [telephone] - [e-mail]

Royal Roads supervisor: Ann Perodeau [telephone] - [e-mail]

TRU Research Ethics Chair: Michael Woloszyn [telephone] - [e-mail]

I would like to invite you to be part of a research project that I am conducting. This research project is part of the requirements for a Master of Arts, Interdisciplinary Studies (MAIS) degree at Royal Roads University. My name is James Gudjonson, and my credentials with Royal Roads University can be established by telephoning Dr. Wendy Schissel, Program Head, MAIS Department at Royal Roads University [telephone] - [e-mail].

If you are currently enrolled as a student at Thompson Rivers University (TRU), and 18 years of age or older, you are invited to participate in the focus Group study. The foreseen questions will identify and assess your interest and knowledge regarding the topic of sustainability and how important sustainability is from your perspective as a university student. The focus group study, expected to take 60 minutes, will allow for open discussions to explore each questions in-depth. By signing the consent form you agree to keep the comments of others strictly confidential and if at any time you choose not to answer any questions, you may do so.

In addition to submitting my final report to Royal Roads University in partial fulfillment for the MAIS program, I will also be sharing my research findings in summary form with administration, faculty and students from Thompson Rivers University. The summary will be posted on the TRU sustainability web site http://www.tru.ca/sustain.html in the spring/summer of 2012.

The information you provide will be summarized, in anonymous format, in the body of the final report. At no time will any specific comments be attributed to any individual. You are not compelled to participate. If you do choose to participate, you are free to withdraw at any time without prejudice. Similarly, if you choose not to participate in this research project, this information will also be maintained in confidence.

Your unique perspective as a TRU student will make a valuable contribution to this research project and your time to participate is greatly appreciated. Your perspective as a student will allow for administrators and curricula developers to better understand, and meet, your expectations regarding the advancement of sustainability.

You will receive $10 for participating and refreshments will be provided. You will be able to enter a draw to win a gift certificate of up to $100 at the campus book store (Bookies). If you have any questions regarding this research project please direct to James Gudjonson at [telephone] - [e-mail].

If you have a disability, a language barrier or any cultural preferences that prevents you from completing this survey, please contact the researcher and the required services will be provided.
Appendix C

Research Consent Form (Focus Groups)

Title: Students as Key Stakeholders in Advancing Sustainability in Higher Education

The principle researcher James Gudjonson: [telephone] - [e-mail]

Royal Roads supervisor: Ann Perodeau [telephone] - [e-mail]

TRU Research Ethics Chair: Michael Woloszyn [telephone] - [e-mail]

Thank you for taking the time to participate in this focus group. After completion of the survey you can enter to win 1 of three gift certificates (of up $100) at the campus book store (Bookies). This research project is part of the requirements for a Master of Arts, Interdisciplinary Studies (MAIS) degree at Royal Roads University. My name is James Gudjonson, and my credentials with RRU can be established by telephoning Dr. Wendy Schissel, Program Head, MAIS Department at Royal Roads University [telephone] - [e-mail].

This document constitutes an agreement to participate in my research project, the objective of which is to identify and assess your interest and knowledge regarding the topic of sustainability and how important sustainability is from your perspective as a university student.

The focus group study, expected to take 60 minutes, will allow for open discussions to explore each of the questions in-depth. This research project will attempt to gauge the “culture of sustainability” among university students to determine whether universities are meeting students expectations; both in terms of relevant, contemporary content matching curriculums with rapidly evolving business/workplace practices as well as providing a socially and environmentally responsible place to complete their post secondary education.

In addition to submitting my final report to Royal Roads University in partial fulfillment for the MAIS program, I will also be sharing my research findings, in summary form, with administration, faculty and students from Thompson Rivers University. The summary will be posted on the TRU sustainability web site http://www.tru.ca/sustain.html in the spring/summer of 2012.

The information you provide will be summarized, in anonymous format, in the body of the final report. At no time will any specific comments be attributed to any individual. By signing the consent form you agree to keep the comments of others strictly confidential and if at any time you choose not to answer any questions, you may do so.

You are not compelled to participate. If you do choose to participate, you are free to withdraw at any time without prejudice. Similarly, if you choose not to participate in this research project, this information will also be maintained in confidence. If you have any questions regarding this research project please direct them to James Gudjonson at [telephone] - [e-mail].

By signing this letter, you give free and informed consent to participate in this project. If you have a disability, a language barrier or any cultural preferences that prevents you from completing this survey, please contact the researcher and the required services will be provided.
Name: (Please Print): __________________________________________________

Signed: ____________________________________________________________

Date: _____________________________________________________________
Appendix D

Focus Group Interviews

Preamble

The objective of this research project is to explore TRU students' interest and knowledge regarding the topic of sustainability. The focus group study will start with pre-determined questions but allow for open discussions in order to explore each of the questions in-depth. The questions will identify to what extent students expect sustainability to be embedded in curricula across a wide range of disciplines, to what extent sustainability has been embedded in participants' programs and courses to date, if sustainability factored into deciding on which university to attend and what students expect of TRU in terms of sustainable operations (campus recycling, composting, transportation, energy efficiency, water conservation etc.).

Questions

- Define sustainability
- Do you view sustainability through social or environmental lens (do social injustices, poverty, homelessness or impoverished nations resonate more than climate change related issues)?
- When did you first become aware of sustainability related issues? Was it an issue related to social, environmental or economic concerns? How much have peer groups/ student activism/course content or the media influenced your awareness and understanding?
- Did your awareness and understanding of sustainability increase once you started attending TRU? (causes, influences)
- Should sustainability be a priority for society in the 21 century? Why? What are the implications; economically, environmentally and socially? On a scale of 0-5 how much do you care? (0= you don’t care at all, 5 = you care a great deal)
- Do you consider sustainability and environmental stewardship a priority in your daily life? (Do your actions reflect your concerns - if not, why not? Identify barriers)
  If yes, then please provide examples;
  Do you recycle?
Do you try to minimize the environmental impact when commuting to school?

Do you compost?

Do you turn out the lights when you leave a room at home?

Do you conserve water at home?

- Do you think there is a disconnect between what you hear in the media and what you are learning in your classrooms regarding sustainability-related issues (social injustices or climate change etc.)?

- Are you involved with green activism on the TRU campus (or in the greater community), or are you a member of any environmental groups/clubs on campus? If yes, please list all, If no, why not? Identify motivations and barriers.

- Do you feel as a student you are an important stakeholder and can make a meaningful contribution to advancing sustainability? In what ways?

- Did you consider sustainability and environmental stewardship a priority when deciding on a career path? If yes, please describe why? If no, please describe why not?

- Did you research to what extent the topics of sustainability, corporate social responsibility, or environmental stewardship were incorporated in the various courses in your area of study? If Yes did it factor in to your decision on attending TRU?

- Is sustainability addressed in any of your courses? Do you think it is relevant?

  Engage the group in discussion on the amount of sustainability-related content and if their program and courses are meeting their expectations, is the content matching what they perceive as important for the work or business place?

- Do you agree that universities should be exemplary sustainable role models in their daily operations? For example: promoting energy, water and paper conservation; green waste management, recycling and green purchasing policies)

  Does TRU walk the walk (or even talk the talk)? Are you aware of TRU’s sustainability or environmental track record?

  What other universities come to mind when they think of green universities? Why?
Would you pay a ‘green levy’ in addition to tuition fees if the money was put towards sustainability and environmental initiatives on campus?

Discuss student levy versus increased parking fees (parking fees relate to those who drive and therefore contribute to GHG emissions, also cost is spread across campus community) Discuss local food options in cafeteria. Would they pay more for supporting local food growers? How much?

Any further ideas or points you would like to share?
Appendix E

Students as Key Stakeholders in Advancing Sustainability in Higher Education

Student Online Survey

Title: Students as Key Stakeholders in Advancing Sustainability in Higher education

The principle researcher James Gudjonson: [telephone] - [e-mail]

Royal Roads supervisor: Ann Perodeau [telephone] - [e-mail]

Thank you for taking the time to complete this online survey. This research project will attempt to gauge the “culture of sustainability” among students to determine whether Thompson Rivers University is meeting students expectations; both in terms of relevant, contemporary content matching curriculums with rapidly evolving business and workplace practices as well as providing a socially and environmentally responsible place to complete their post secondary education.

This survey is part of the requirement for a Master of Arts Interdisciplinary Studies (MAIS) degree at Royal Roads University and my credentials with Royal Roads University can be confirmed by telephoning Wendy Schissel, Program Head, MAIS Department at Royal Roads University [telephone] - [e-mail]

The research will consist of this survey and is estimated to take no more than 15-20 minutes to complete. The questions will explore your interest and understanding of sustainability and how important sustainability is from your perspective as a university student. In addition to submitting my final report to Royal Roads University in partial fulfillment for the MAIS program, I will also be sharing my research findings in summary form with administration, faculty and students from Thompson Rivers University. The summary will be posted on the TRU sustainability web site http://www.tru.ca/sustain.html in the spring/summer of 2012.

The information you provide will be summarized, in the body of the final report. At no time will any specific comments be attributed to you unless your specific agreement has been obtained beforehand. All documentation will be kept strictly confidential. You are not compelled to participate in this research project. If you do choose to participate, you are free to withdraw at any time without prejudice. Similarly, if you choose not to participate in this research project, this information will also be maintained in confidence. If you have any questions regarding this research project please direct to James Gudjonson at [telephone] - [e-mail].

Your completion of this survey will constitute your informed consent. A comment line is offered for a number of the questions, in case you would like to offer more information or your thoughts and ideas. If you have a disability, a language barrier or any cultural preferences that prevents you from completing this survey, please contact the researcher and the required services will be provided.
1) While no single definition of sustainability exists, most definitions contain social, environmental and economic elements. Please rank the three elements from the most important (1) to the least important (3). Two or more elements can receive the same rank, for example; a score of one, one, one means you view all three elements equally important).

Social ____________________________________________
Environmental ____________________________________________
Economic ____________________________________________

2) I consider sustainability a priority in my daily life.

☐ Strongly Agree
☐ Agree
☐ Neutral
☐ Disagree
☐ Strongly Disagree

3) I conserve water as much as possible (by taking short showers, using minimal water while brushing teeth etc.).

☐ Strongly Agree
☐ Agree
☐ Neutral
☐ Disagree
☐ Strongly Disagree

4) I compost regularly.

☐ Strongly Agree
☐ Agree
☐ Neutral
☐ Disagree
☐ Strongly Disagree

5) I recycle regularly.

☐ Strongly Agree
6) I buy locally grown food when possible (buy at farmers market, support shops/restaurants that support local growers etc.).

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

7) I consider minimizing my environmental impact when commuting to school? (carpool, walk, bicycle, or take public transportation as often as possible).

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

8) How many days a week do you use the following modes of transportation to get to TRU?

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9) Please comment on any barriers that impede you from carpooling, taking public transport, walking or bicycling to campus (no public transport, lack of time, safety concerns and other tasks such as taking kids to day care or running errands etc).

____________________________________________________________________________________
____________________________________________________________________________________
_______________________________________________________

10) I participate in sustainable initiatives or green activism on campus (or in Kamloops).

○ Strongly Agree
○ Agree
○ Neutral
○ Disagree
○ Strongly Disagree

11) Please list any sustainability related clubs or initiatives that you are (or have been) involved with.

_______________________________________________________

12) My understanding and awareness of sustainability related issues has increased since I have become a student at TRU.

○ Strongly Agree
○ Agree
○ Neutral
○ Disagree
○ Strongly Disagree

13) From the following list please indicate what or who has influenced your awareness and understanding of sustainability (0 = no influence) (4 = a great deal of influence).

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14) I would support an increase in parking fees if the money was put towards sustainability and environmental initiatives on campus.

- Yes
- No

15) How much of an increase per day would you support? (Daily rate is currently $3)

- 0 - 25 cents
- 25 - 50 cents
- 50 cents - $1
- $1 - $1.50
- More than $1.50

16) Please select why you would not support in increase in parking fees.

- Financial constraints
- I think parking fees are already too high
- Would rather see money spent elsewhere
- I use other means of transport
- Other (please specify)
If you selected other, please specify
______________________________________________________________________

17) While choosing a university, I researched the sustainability and environmental track record of the various institutions I was considering attending.

☐ Strongly Agree
☐ Agree
☐ Neutral
☐ Disagree
☐ Strongly Disagree

Additional comments
______________________________________________________________________

18) If you did research the environment and sustainability track record of the various institutions, did this factor into your decision to attend TRU?

☐ Yes
☐ No
☐ Not sure

19) I considered sustainability a priority when deciding on an area of study/career path.

☐ Strongly Agree
☐ Agree
☐ Neutral
☐ Disagree
☐ Strongly Disagree

Additional comments
______________________________________________________________________

20) I researched to what extent the topic of sustainability was addressed in the various courses in my area of study/career path.

☐ Strongly Agree
☐ Agree
☐ Neutral
☐ Disagree
21) If you did research the extent of sustainability related content in the courses in your area of study/career path, did this factor into your decision to attend TRU?

☐ Yes
☐ No
☐ Not Sure

22) Please indicate to what extent the topic of sustainability is addressed in your courses this semester (0 = no sustainability related content) (4 = a course that is directly related to sustainability/environmental studies).

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23) I would prefer more sustainability-related content in my courses.

☐ Strongly Agree
☐ Agree
☐ Neutral
☐ Disagree
☐ Strongly Disagree

24) I think that universities should be sustainability role models in their daily operations (for example, water and energy conservation, exemplary recycling program, environmental and social issues awareness).

☐ Strongly Agree
☐ Agree
☐ Neutral
☐ Disagree
25) I feel that TRU is doing a good job of modeling sustainability in its daily operations (for example, water and energy conservation, exemplary recycling program, environmental and social related issues awareness).

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

26) When you think of Canada’s greenest universities, which ones come to mind? Why? (please rank up to 3)

_____________________________________________________________________________________

_____________________________________________________________________________________

_____________________________________________________________________________________

27) What is your age?


_____________________________________________________________________________________

28) What is your sex?

- Male
- Female

29) From where in Kamloops or the surrounding area do you live and commute?

- Valleyview/Barnhartvale
- Aberdeen/Sahali
- North Kamloops
- South Kamloops
- Westsyde
- Other (please specify)

If you selected other, please specify

_____________________________________________________________________________________


30) In what school or faculty are you enrolled?

- Faculty of Arts
- School of Business & Economics
- Faculty of Human, Social & Educational Development
- Faculty of Law
- School of Nursing
- Faculty of Science
- School of Tourism
- School of Trades & Technology
- Other (please specify)

If you selected other, please specify
______________________________________________________________________

31) In what type of program are you enrolled?

- Diploma
- Certificate
- Undergrad Degree
- Graduate Degree
- Other (please specify)

If you selected other, please specify
______________________________________________________________________

32) Please list your major.

______________________________________________________________________

33) Are you currently employed?

- No
- Part time
- Full time

Thank You