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Exploring the ambiguity: what faculty leaders really think of sustainability in higher education

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Abstract
Purpose – The purpose of this paper is to examine how a cohort of university faculty leaders in Canadian universities conceptualize sustainable development, sustainable universities, the role universities play in achieving a sustainable future, key issues facing the university, and the barriers to implementing sustainability initiatives on campus.
Design/methodology/approach – Research was collected through in-depth interviews with university faculty leaders from university members of the Association of Universities and Colleges of Canada. Interviews included both closed and open-ended questions and two checklists focused on sustainable development and sustainable universities. Interview transcripts are analyzed through the identification of respondent themes and using NVivo software.
Findings – The majority of participants demonstrated they had previously given thought to their own understanding of sustainable development, but less had thought about the term sustainable university. The majority of participants would like to see their institutions incorporate sustainability in the avenues of education, research and daily operations. Participants agreed that the most obvious barriers to sustainability were financial and that leadership, incentive and demand are required to move forward with improving sustainability at universities.
Originality/value – There are few studies that explore the conceptualizations of sustainability, what constitutes a “sustainable university” and what role universities should play in achieving sustainability held by major stakeholders, including faculty leaders. Higher education scholars share a reasonably common understanding of these concepts, but if universities are accountable for creating a sustainable future, all university stakeholders too must share a common understanding. This paper attempts to make a contribution to this significant gap in the literature.

Keywords Sustainable development, Higher education, Universities, Academic staff, Educational personnel, Faculty, Canada

Paper type Research paper

1. Introduction
The increased awareness of environmental degradation and environmental problems threatening human and ecosystem health has resulted in pleas from the international community to adopt the principles of sustainable development. The United Nations Conference on Environment and Development (UNCED) held in Rio 1992, was one of the first formal political endorsements of sustainable development by the political leadership of the world, and aimed to promote sustainable development through global cooperation, and gained awareness to environmental issues and the pursuit of a sustainable future. This conference, among others, has set a framework for sustainability and its implications
Sustainability has been incorporated into legal documents, international policies and national strategies and claims action-guided power (Christen and Schmidt, 2012). Sustainable development requires cooperation on all scales, by all stakeholders, and education is viewed as one area that can act as a powerful instrument of change. Education is becoming so increasingly important that the United Nations declared 2005-2014 the decade of education for sustainable development (ESD) (UNEP, 1992). ESD aims to create sustainable societies through empowered responsible citizens. ESD prepares people to deal with the complexities of environmental, societal and economical systems in order to find solutions to the problems threatening the sustainability of the planet (UNESCO, 2007).

Universities have been recognized as key institutions that can contribute to a better understanding of complex environmental and social issues, as well as create sustainable solutions for the future (Wright, 2007). Further, many scholars claim that universities have a moral obligation to be leaders in sustainability as their role in society is to educate future decision makers (Orr, 1992; Clugston and Caldar, 1999).

Sustainability in higher education (SHE) is an emerging field that has gained credibility and has increased in output following the Ubuntu Declaration of 2002 which calls for the mainstreaming of sustainable development into curricula at every level of education (Ubuntu Declaration, 2002). Yet SHE scholars have recognized a gap in the literature concerning the understanding of sustainable development and sustainability held by major university stakeholders and differing opinions on the role of the university can play in building a sustainable future (Wright, 2007). There has been a large discussion and debate in the past decade of the terms “sustainable development” and “sustainability”, it is not uncommon to find that one person will use the terms referring to different scientific, political or symbolic meanings interchangeably (Wals and Jickling, 2002). A roundtable study in Sustainability: The Journal of Record identified a prevalent lack of understanding surrounding the term of sustainability, its definition, components and implications for different disciplines, among faculty members (Rowland, 2009). This is a major concern as faculty are an influential cohort when it comes to implementing sustainability in university institutions. Further, Orr (1992) argues that universities are perpetuated by their faculty and that the university is a reflection of their thoughts and work. If universities have been recognized as key institutions in contributing to global sustainability, it is imperative that university stakeholders share a common understanding of the term and come to some consensus on role that universities can play in creating a sustainable future.

This study examines the conceptualizations of a cohort of university faculty leaders regarding sustainable development, sustainable universities, the role universities play in achieving a sustainable future, key issues facing the university over the next decade, and the barriers to implementing sustainability initiatives on campus.

2. Methods
This study is part of a larger Pan-Canadian project that investigates various Canadian university stakeholders’ (faculty leaders, administration, students and facilities management directors) understandings of sustainable development, sustainable universities and the role the university can play in creating a sustainable future. The population for this study was limited to leaders of faculty associations at English speaking universities that are members of the Association of Universities and Colleges
of Canada \((n = 62)\). In Canada, faculty members are the academic staff of the university and rank from Lecturer (most junior position) to Full Professor (most senior position). The majority of faculty members hold PhDs or the equivalent. Leaders of Faculty Associations tend to be senior-level faculty members within the university. The sampling frame was created using web searches and telephone inquiries to faculty associations at each of the member universities, in search of the presidents, directors, or other designated leaders of the faculty association. Potential participants were contacted by e-mail (with telephone follow-up when necessary) and invited to participate in the study. A total of 32 \((n = 32)\) participants gave consent for a response rate of 52 percent.

Each participant was interviewed once via telephone. The interviews took an average of 25 min. Interviews were semi-structured with seven open-ended questions about sustainability and sustainable universities previously established by Wright (2010) in the pilot study for the Pan-Canadian project:

1. What are the key issues facing your university over the next ten years?
2. When you hear the term sustainable development, what does this mean to you?
3. What role, if any, do you feel universities should play in achieving sustainable development?
4. When you hear the term “sustainable university” what does this mean to you?
5. What, if any, barriers do you see preventing your university from engaging in sustainability initiatives?
6. Do you foresee different barriers and challenges in the future?
7. What factors do you think would make becoming a leader in sustainability the top priority for your university?

In addition, participants were asked to complete two checklists (sent just prior to the interview) during the course of the interview to determine what they believed were essential concepts of sustainability and sustainable universities. The items listed on the checklists were developed by Wright (2010) based on two separate bibliometric reviews of the academic literature and popular culture print publications (newspapers, magazines, etc.). Each checklist (sustainable development, and sustainable university) contained key phrases that represented common understandings (or misunderstandings) of the terms. The checklists were not representative of the authors’ biases or personal opinions of what constituted sustainable development or a sustainable university. In each case, participants were given the opportunity to provide their own items if they felt something were missing from the list.

Interviews were recorded using a Sony digital voice recorder and transcribed with the permission of the participant given through consent forms. Each participant was given a respondent number to ensure confidentiality and was ensured their name and institution would not be used in the publication of the results. This allowed participants to be candid about their perceptions without fear of being judged.

Data coding and analysis took place after the completion of all interviews. Data were analyzed using open coding which allowed for the identification of themes to emerge. The data was then grouped based on these themes. The analytical computer software NVivo, 2009 was used to analyze the emerging themes into codes and aggregate statistics.
3. Results and discussion

The following sections are organized in order of question asked during the interview process and reports on the analysis of data and responses of participants. Frequency of responses are reported out of the total of participants ($n = 32$).

3.1 Question 1: what are the key issues facing your university over the next ten years?

The first question asked participants to identify key issues facing their university during the next ten years. Table I provides the most common responses and demonstrates that financial concerns were most prominent amongst the participants. This included securing government funding and balancing tuition costs. Government funding was seen as a limiting factor and inspired responses such as following:

Ultimately it’s affected by government grants, in Ontario the provincial government provides the bulk of the funds and also controls tuition so the net money available to an institution per student is really set by the provincial government for the most part, so it affects everything no matter what you do (Respondent 16).

The issue of finances was closely tied to enrollment. Although enrollment was mentioned by respondents from both public and private institutions, enrollment was seen as an especially difficult challenge for all of the participants employed at private universities ($n = 3$). As one respondent from a private university stated:

In general, finances, most of our money comes from student tuition so finances are wrapped up with trying to have retention of students and recruitment of students, so that’s a big challenge (Respondent 7).

Enrollment was also identified as a key issue in public institutions, ($n = 29$) one which lead to other issues. This is explained by one respondent:

Enrollment and recruitment problems are leading to financial issues and government funding issues are related as well and we have serious cutbacks for about 6 years in a row, resulting in a whole host of other things, with no money for programs, no money for new hires, no money to replace people who are retiring, and the fallout from that just seeps into every area of the university (Respondent 25).

Following the issues of funding and enrollment, education and curriculum was the next most mentioned key issue. Responses under this category included topics such as quality of education, interdisciplinary education, and attracting students through curriculum

<table>
<thead>
<tr>
<th>Key issue</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial issues</td>
<td>17</td>
</tr>
<tr>
<td>Enrollment</td>
<td>11</td>
</tr>
<tr>
<td>Curriculum and education</td>
<td>8</td>
</tr>
<tr>
<td>Facilities/infrastructure</td>
<td>7</td>
</tr>
<tr>
<td>Faculty and staff</td>
<td>7</td>
</tr>
<tr>
<td>Corporatization</td>
<td>4</td>
</tr>
<tr>
<td>Growth and development</td>
<td>4</td>
</tr>
<tr>
<td>University structure</td>
<td>3</td>
</tr>
<tr>
<td>Sustainability</td>
<td>3</td>
</tr>
<tr>
<td>Internationalization</td>
<td>3</td>
</tr>
</tbody>
</table>

Table I.

Key issues facing universities over the next ten years.
development as a method to increase enrollment, which can be connected to financial issues. Three respondents identified sustainability as a key issue, but with much less emphasis than the other identified issues. These remarks included discussions of environmentally friendly practices such as the following, outlined by one respondent:

[...] they’re trying to discourage people from driving to the university, so they’re really looking at trying to be more environmentally responsible, recycling programs and doing a lot more initiatives in that way (Respondent 21).

These results are consistent with the pilot study by Wright (2010) where enrollment was considered a major issue by university presidents and vice-presidents, as were financial issues. In addition, the Association of Universities and Colleges in Canada (AUCC), 2011 report on trends in higher education states that enrollment has grown tremendously over the past 30 years; however, in an increasingly globalized world, international competition is increasing and Canada’s attainment value is at risk of falling behind competitor countries (AUCC, 2011). Issues surrounding faculty and staff held more importance with faculty leaders (n = 7) in this study than it did with university presidents and vice-presidents in the pilot study (n = 3) (Wright, 2010). This result is likely because the participants were faculty association presidents and would be well aware of the issues facing faculty members, while administration may not be familiar with these concerns.

3.2 Question 2: when you hear the term sustainable development, what does this mean to you?

Each respondent was asked to provide their own understanding of the term “sustainable development”. The results show that each respondent had heard of sustainable development before the interview, yet there were many different conceptualizations of the term (responses summarized in Table II). The most common aspects of respondents’ understandings of sustainable development were around the use of resources, although definitions vacillated from economic, environmental and social perspectives. One respondent’s definition included all three of these aspects and explained sustainable development as the following:

I think of it in environmental terms and I think of it in terms of an attempt to try and create space for continued economic activity and growth, while at the same time avoiding depletion of finite natural resources and finding more efficient ways of using those resources and exploiting non-renewable or I should renewable resources in ways that are not foreclosing options for future generations in terms of their ability to sustain growth and minimizing the impact on the environment (Respondent 10).

<table>
<thead>
<tr>
<th>Item</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issues surrounding resource use</td>
<td>15</td>
</tr>
<tr>
<td>Continued growth/development but with some caveats</td>
<td>13</td>
</tr>
<tr>
<td>Issues surrounding the natural environment</td>
<td>11</td>
</tr>
<tr>
<td>Issues surrounding the economy</td>
<td>5</td>
</tr>
<tr>
<td>Issues surrounding society</td>
<td>5</td>
</tr>
<tr>
<td>Believed it was a vague or overused term</td>
<td>4</td>
</tr>
<tr>
<td>Believed it held negative connotations</td>
<td>3</td>
</tr>
</tbody>
</table>

Table II. What does the term “sustainable development” mean to you?
Following this understanding of sustainable development, the second most frequent definition included continued growth or development but with some caveats. Most of the respondents who provided these definitions described the traditional sustainable development, or “Brundtland” definition: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987). One respondent’s definition very clearly outlined this:

Development that respects the need to allow future generations to also develop [...] development that also respects the environment (Respondent 20).

Much literature surrounding sustainability suggests there are three or four pillars of sustainability: environment, economy, society and culture (Giddings et al., 2002; Waas et al., 2011). It is interesting to note that the environment was the most predominant, followed by the economy and society. Culture was only mentioned by two respondents when discussing the combination of art and the environment. For example:

There’s a group of artists here who work in the space of environmental art, so making art about the environment and with the environment, some of which is to raise awareness around those issues (Respondent 27).

It is noteworthy to mention that a few respondents found the term vague or overused, while three even believed that the term held negative connotations such as the following two respondents:

Sustainable development means that we can continue as we have in the past, to rape, pillage and plunder the environment, we just call it something nice so that we can feel good about what we’re doing (Respondent 12).

Yes I feel that it’s been used by capitalism and by the elites in this country in order to show why it is people don’t really have and should not get the control over their lives that they seek [...] It’s more rhetoric and it’s window dressing (Respondent 4).

The idea that the term sustainability is vague or overused is consistent with literature surrounding the term (Gibson, 1991; Robinson, 2004; Waas et al., 2011). Several attempts have been made to resolve the ambiguity and misconceptions surrounding the term such as the framework for strategic sustainable development put forward by The Natural Step (www.naturalstepusa.org). While some scholars claim that the ambiguity of the term can be both a weakness and strength (Robinson, 2004), Christen and Schmidt (2012) caution that the ambiguity of the term allows researchers and practitioners to claim their conceptualizations under the umbrella of sustainability, without having to validate their work against well-defined affirmations of sustainable development. Further, while it is possible to have various conceptualizations of sustainable development co-exist, there are clear interpretation limits and fundamental principles that must be respected (Waas et al., 2011). The ambiguity surrounding sustainability and the resulting problems within a university context are yet another reason that university stakeholders, including faculty leaders, must have a comprehensive and common understanding of the term in order to further to attempts to achieve sustainability.

Following this second question, participants were asked to complete a checklist of potential concepts associated with sustainable development. Participants were asked to identify which concepts they felt were essential components of sustainable development. The checklist did not necessarily represent the researchers’ understandings
of sustainability, included a multitude of concepts often associated with the term, and attempted to represent a variety of worldviews as well as common misconceptions of sustainable development. Table III shows the concepts most frequently selected by participants. For the most part the components selected in the checklist were mirrored in the respondents' previous discussions. For example, the majority of respondents \( (n = 27) \) chose the concept conservation and enhancement of the resource base; however, there were components which respondents considered to be essential and were not included in their definitions. For instance, cultural sustainability was not mentioned by any participants save two discussions of art, and yet many \( (n = 20) \) of respondents selected maintaining and enhancing cultural diversity as an essential component of sustainable development. Other social components such as gender equality were not mentioned by respondents’ but in their interviews, but many \( (n = 23) \) selected this component as essential to sustainable development when it was presented on a checklist. This trend may suggest that participants have a wider conceptualization of sustainability but would not think to include those concepts until they are presented to them. Perhaps making a comparison between concepts present in their discussions and those chosen on the checklist would reveal which concepts dominate their thinking of sustainability, or those which are the present in popular culture. Respondents were given the opportunity to add their own concepts if they felt anything were missing from the checklist. A total of eight concepts were added. These additions ranged from holistic recommendations for looking at collectives rather than individuals, to including health and wellness, or economic theories for sustainability, to institution-specific priorities. Overall, these additions were not new ideas regarding the term, but more of a repetition or rephrasing of ideas mentioned in the interviews.

3.3 Question: what role, if any, do you feel universities in general should play in achieving sustainability?

Each respondent was asked to outline what they believed was the role of universities in achieving sustainability. When asked this question, all of the respondents felt that universities had some role to play. Table IV summarizes the responses of the respondents, and shows that the majority agreed there were three major areas where universities were influential in achieving sustainability: education, research, and modeling sustainability.

Respondents felt that educating students about sustainability was both a way of raising awareness and preparing the future generation of leaders to confront the issues surrounding sustainability:

<table>
<thead>
<tr>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation of biodiversity</td>
</tr>
<tr>
<td>Conservation of species diversity</td>
</tr>
<tr>
<td>Halting the depletion of the non-renewable resource base at a manageable level</td>
</tr>
<tr>
<td>Conservation and enhancement of the resource base</td>
</tr>
<tr>
<td>Integration of environment, social concerns, and economics into decision-making</td>
</tr>
<tr>
<td>Equitable provision of basic needs</td>
</tr>
<tr>
<td>Conservation of genetic diversity within species</td>
</tr>
<tr>
<td>Equity among those of future generations</td>
</tr>
<tr>
<td>Inherent valuing of the nonhuman world</td>
</tr>
<tr>
<td>Gender equality</td>
</tr>
</tbody>
</table>

Table III. Checklist of sustainable development concepts
Well I think our fundamental role is always one of education. Bringing awareness of the issues and understanding and critical thinking to students, so hopefully they go out into the world a little more informed, a little more able to make decisions that are reasonable and thought out rather than simply reactive (Respondent 14).

Many of the respondents felt that an education in sustainability was interdisciplinary in nature and should be included in many disciplines and encompass multiple fields of study:

[... ] providing education around the main matters that bear on sustainability. So including economic factors, social factors, biological factors and the like, and I suppose the underlying models of sustainability that have been developed (Respondent 29).

Research is considered a primary contribution of universities to society, and many respondents felt that research was an area universities should be contributing towards sustainability:

I guess certainly with the research capacity they have and I guess with that being their main or one of their primary missions apart from teaching, I guess just engaging in research in the kinds of things that would help society to do sustainable development (Respondent 17).

One is in terms of the contribution to research, and that is that most academics, well not most, a lot of academic environments have the potential to be writing and publishing in the area that has an impact in the debate (Respondent 6).

However, it should be noted that some respondents ($n = 4$) felt that Canadian universities were not successful at disseminating their research to the public, and suggested this role should be improved, and in addition, that more cooperation with the larger community should also be incorporated:

I think we have a valuable role to play in terms of research that we, the faculty, students, university as a whole, is responsible for, which I think we don’t necessarily do particularly good job in Canada of conveying that to the public (Respondent 25).

They would have to become more collegial, more consultative, that they wouldn’t start imposing policies; they would see that the university has a place within the community, and not for their exaggerated gaps between town and gown. I mean the only time universities, at least mine, thinks about the greater community is when it’s trying to partner with some sort of private corporation that’s trying to make money from it for faculty that are doing a project and the university gets an overheard (Respondent 23).

Another prevalent conceptualization of respondents was the idea that universities should not only present education and research, but that they should be role models in sustainability:

![Table IV.](image)

<table>
<thead>
<tr>
<th>Role</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>19</td>
</tr>
<tr>
<td>Research</td>
<td>16</td>
</tr>
<tr>
<td>Modeling sustainability</td>
<td>15</td>
</tr>
<tr>
<td>Providing a place for critical thinking</td>
<td>4</td>
</tr>
<tr>
<td>Influence policy</td>
<td>2</td>
</tr>
<tr>
<td>Interact with the community</td>
<td>2</td>
</tr>
<tr>
<td>Instilling an ethic in graduates</td>
<td>2</td>
</tr>
</tbody>
</table>
So not just teaching and research but also when we are doing renewal of buildings for example, to try to make them energy efficient and replacing trees that are lost so that we continue that kind of carbon footprint and in fact that’s what we’re doing with our energy program and we have students that have launched anti-bottled water campaigns and we’ve banned bottled water from the campus, so all those kinds of things is something that universities can and should be doing (Respondent 24).

In addition to the idea of a sustainable operation, it was also suggested that universities model sustainability in the dialogue initiated at universities:

I think universities can be contributing just by serving as role models for the kind of dialogue that we hope to have and the understanding that we hope to have in society (Respondent 25).

These results echo those of Wright’s pilot study in that university presidents also felt that academic programming, or education, as well as modeling sustainability were paramount roles of a university towards achieving sustainability (Wright, 2010). Wright found it surprising that research was not mentioned by more respondents in her study; however, faculty leaders valued the potential of research in achieving sustainability to a greater degree than university presidents (Wright, 2010). A faculty leader’s two main priorities are education and research, and therefore it is fitting that this cohort would accentuate these roles. It is evident that faculty leaders were not familiar with the critical dimensions of SHE reported by Clugston and Caldwell (1999). This pioneering report outlines a university which includes sustainability in their written statements, includes sustainability in their curriculum, incorporates the campus as a teaching tool, establishes policies for granting tenure, hiring and promotion, models sustainability, provides support services and is engaged in outreach (Clugston and Caldwell, 1999). These concepts are included in the second checklist and may have been chosen at that stage, but were not part of respondents’ personal views of the roles a university should play, besides modeling sustainability, education and research.

3.4 Question: when you hear the term “sustainable university” what does this mean to you?

Participants were asked to discuss what the term sustainable university meant to them, their responses are summarized in Table V. Only two of the respondents noted that the term meant nothing to them, while an overwhelming number of respondents ($n = 20$) felt the term implied a university that models sustainability:

Well I think I sort of defined it earlier, I think it means that you try as much as possible to manage your resources to the best of your ability, to do the things that would be considered environmentally, socially, all the things that are appropriate sustainability issues and to be a leader in not only teaching about it but doing it themselves (Respondent 21).

<table>
<thead>
<tr>
<th>Item</th>
<th>Number of institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Models sustainability</td>
<td>20</td>
</tr>
<tr>
<td>Structure of the university</td>
<td>6</td>
</tr>
<tr>
<td>Financial sustainability</td>
<td>4</td>
</tr>
<tr>
<td>Resource use</td>
<td>4</td>
</tr>
</tbody>
</table>

Table V. When you hear the term “sustainable university” what does this mean to you?
I would assume that a sustainable university most of the time has just referred to the university practices, its own attempt to reduce waste, to recycle, to all of those kinds of things. And I suppose it should also include a university that makes a point of offering programs that incorporate ideas of sustainability (Respondent 26).

Although there was such consistency among respondents’ regarding their definition of a sustainable university, they did not touch on all of the concepts generally regarded as essential elements of a sustainable university as outlined in international SHE declarations such as the Stockholm Declaration and the Talloires Declaration. A study by Wright (2002) outlines the main principles of these SHE Declarations. A moral obligation to include SHE was cited by every declaration, which is in accordance with the views of the respondents, as many of them mentioned moral obligations to being a sustainable university, such as the following respondents:

I see this as a highly ethical issues, so I guess just developing an ethical consciousness in their students, because our graduates will be the ones, for example people coming out of MBA programs and so on, and not just MBA but whatever work they teach to be not be conscious of the bottom line or the immediate consequences but to consider always the broader impacts on society and not just the economically best thing to do, but in terms of responsibility in our coexisting with the natural world and so on (Respondent 17).

Universities are also training the next generation who are going to continue to care for the earth, so in that respect they play a key role in educating the next generation to be aware of taking care of the earth and respecting it (Respondent 20).

Some important elements that were not discussed by respondents included partnerships with government, industry and NGOs, and public outreach (Wright, 2002). Overall, the respondents’ conceptualizations of a sustainable university were fairly consistent with current understandings of what a sustainable university is, as outlined by these international SHE Declarations.

Multiple respondents felt that sustainability of a university was dependent on the structure of the university (hierarchies, roles and responsibilities, decision making, etc.) itself and the sustainability of the university as an institution, including the current trend of Western universities to adopt a corporatized structure, or what Orr (1995) calls “the business of education”:

A sustainable university is building a university that sustains itself into the future and to a certain degree that’s always ongoing or always thinking what we will look like in ten fifteen twenty years (Respondent 18).

Sustainable university could also be one that sort of has enough students and enough means of income that aren’t strictly tuition or government grant based that allows it to continue, so as an organism itself (Respondent 14).

If I thought about it a little bit more, I would then start to think about how university is structured, how a university operates in terms of decision making, how it incorporates students and faculty into decision making, etc. (Respondent 23).

For these respondents, a sustainable university has little do with the concept of sustainable development traditionally held by SHE scholars, but rather a sustainable university is one that functions efficiently, is collegial, and is financially viable. Many of these respondents who were concerned with the structure of their universities,
their fundamental function, also mentioned corporatization and the changing role of the institution as a means to produce labourers for the workforce.

In addition to these ideas of a sustainable university, some respondents also mentioned resource use and financial sustainability as essential aspects of a sustainable university. These definitions could be expected based on the respondent’s views of key issues as well as their definitions of sustainable development, which were heavily concerned with resource use. Resource use referred to university resources, rather than those typically defined as “natural resources”:

There is a level growth and acceptableness for student growth for resources and so on. So seeing that resources are maintained for universities it means that understanding what role they play and then working to fulfill it with adequate resources (Respondent 5).

Respondents concerned with financial sustainability of their institution used terms such as “appropriately funded” (Respondent 11) or “managing […] the storms of funding problems” (Respondent 29).

After answering this question, participants were given a second checklist about sustainable universities and asked to select only the concepts they felt were essential for an institutions to be a sustainable university. The most frequently selected concepts are displayed in Table VI. Again the majority of frequently selected concepts echo the concepts discussed during the previous two questions and revolve around the ideas of education and physical operations of the campus. For example, almost all of respondents \( n = 30 \) agreed that the university should make sustainability issues a top priority in campus land-use. Another majority, \( n = 30 \) agreed the university should encourage critical thinking about sustainability issues. These were both prominently represented by respondents during their interviews. There were some concepts selected that were not included in the majority of discussions such as socially responsible purchasing practices, although a small group of respondents did discuss things like fair trade coffee, many of respondents \( n = 28 \) selected this concept on the checklist. The checklist presented the majority of concepts which were outlined in the major SHE declarations, as condensed by Wright (2002). Given the opportunity to choose these concepts, a large

<table>
<thead>
<tr>
<th>Concept</th>
<th>Percentage in agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>The university makes sustainability issues a top priority in campus land-use</td>
<td>30</td>
</tr>
<tr>
<td>Encourages critical thinking about sustainability issues</td>
<td>30</td>
</tr>
<tr>
<td>Reduces the ecological footprint of the university</td>
<td>30</td>
</tr>
<tr>
<td>The university makes sustainability issues a top priority in campus building planning</td>
<td>28</td>
</tr>
<tr>
<td>Establishes environmentally and socially responsible purchasing practices</td>
<td>28</td>
</tr>
<tr>
<td>Uses renewable and safe energy sources</td>
<td>27</td>
</tr>
<tr>
<td>Performs regular sustainability audits on campus</td>
<td>26</td>
</tr>
<tr>
<td>Arranges opportunities for students to study campus and local sustainability issues</td>
<td>25</td>
</tr>
<tr>
<td>Reuses campus waste</td>
<td>25</td>
</tr>
<tr>
<td>Consults students on their opinions of sustainability</td>
<td>75</td>
</tr>
<tr>
<td>Creates partnerships with government, NGOs and industry working toward sustainability</td>
<td>24</td>
</tr>
<tr>
<td>The university makes sustainability issues a top priority in campus transportation</td>
<td>24</td>
</tr>
<tr>
<td>Provides incentives for students to participate in environmentally friendly activities</td>
<td>23</td>
</tr>
</tbody>
</table>

Table VI. Concepts of a sustainable university
amount of respondents did, for example most \((n = 24)\) agreed that partnerships with government, NGOs, and industry was an essential aspect of sustainability. In addition, many of respondents \((n = 22)\) now agreed that public outreach was an essential aspect of a sustainable university, consistent with major SHE declarations. Again, respondents were able to add any concepts they felt were missing from the checklist, and three \((n = 3)\) participants chose to include additional concepts, totaling four added concepts. This may mean that participants had more agreement concerning sustainable university, and less unique responses. Additions included rejecting an unlimited growth philosophy (Respondent 5), providing a spotlight on faculty research in sustainability (Respondent 6), adopting an ideological model (Respondent 5) and providing forums for community discussion (Respondent 26). Overall, these additions were specific recommendations for universities to incorporate.

3.5 Question: what barriers, if any, do you see preventing your university from engaging in sustainability initiatives?

The greatest perceived barrier to university sustainability that the respondents identified was the financial costs associated with new initiatives. This is consistent with Wright (2010) as well as the result from question 1. Barriers identified by respondents are summarized in Table VII. Respondents often cited the upfront financial costs of these initiatives as a barrier, even when they recognized long term pay-offs:

Well I guess one might be in the short term, financial and I mean that in the sense that we may have to invest in new equipment or newer things like whether it’s heating systems or windows or whatever, that pay back in the longer term (Respondent 10).

Some of them would be financial, for example if you wanted to install solar panels on all the campus buildings, or if you wanted to make sustainability a top priority in building planning, I know we tried to do this recently on a building project on campus and we were told it was just too expensive, so I know that it is a barrier (Respondent 14).

Another common financial issue was the lack of government funding for new projects. This was not a surprise as Canadian universities have seen a steady decline in government funding (primarily provincial) per student, since the 1980s (AUCC, 2008) making investing in new initiatives difficult. This barrier was echoed by many \((n = 22)\) of the respondents:

Well I think the main barrier that’s really been set up is the funding cut backs from the government, it really put the university administration in a position of trying to cut costs, and that actually ends up a lot of times making decisions that may not be the best for program sustainability. I suppose even environmental sustainability, like sometimes if there are

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial cost</td>
<td>22</td>
</tr>
<tr>
<td>Administration</td>
<td>6</td>
</tr>
<tr>
<td>University structure/corporatization</td>
<td>5</td>
</tr>
<tr>
<td>Lack of will</td>
<td>5</td>
</tr>
<tr>
<td>Other priorities</td>
<td>5</td>
</tr>
<tr>
<td>None</td>
<td>3</td>
</tr>
<tr>
<td>Lack of legislation</td>
<td>3</td>
</tr>
</tbody>
</table>

Table VII. What barriers, if any, do you see preventing your university from engaging in sustainability initiatives?
cutbacks they can’t make renovations and basic environmental things; they can’t make
renovations that may actually benefit the environment (Respondent 28).

Well at my university it really is the dependence for most of its programs on the provincial
government and the provincial government priority. So it’s difficult sometimes – well, all the
time – to align local initiatives around sustainability with funding the government provides,
almost impossible (Respondent 29).

It is fitting that financial cost is seen as the paramount barrier to sustainability as this is
also the number one issue facing universities, as seen by faculty leaders. If universities
are already under financial constraints, they are less likely to invest in new initiatives,
even if they save the university money in the future, such as investing in energy efficient
windows, lighting, etc. A longer-term financial outlook would be required to see the
benefit of investing in sustainable initiatives, coupled with available capital to afford the
upfront costs of the investments.

Administration was another common topic throughout the interviews and was
mentioned by over half of the respondents (n = 20) in other areas such as key issues,
and recommendations. Multiple respondents (n = 6) identified administration
members as a direct barrier to sustainability initiatives:

[…] in particular the university administration in other areas and the priorities [that] are in
terms of reconstituting the institution in a way that is more like a corporate enterprise that
narrow the focus of peoples’ research activities and so forth (Respondent 12).

I actually think probably more important [than finances] is the mindset because I think with
the altered mindset I think you could tackle some of the financial issues from a better
position. So I guess certainly a mindset of both administrative leaders but also faculty leaders
(Respondent 25).

While some respondents blamed the lack of sustainability initiatives on administration,
others criticized the very structure of the university, recognizing the trend towards
corporatization; others yet called for an increase in government legislation.

There is an ample amount of research surrounding barriers universities encounter
on their path to sustainability (Ferrer-Balas et al., 2008; Moore, 2005; Wright and Filho,
2002). The barriers identified by respondents are consistent with those of Wright and
Filho (2002) who outlined barriers to sustainability in universities as governance issues,
issues of advocacy and leadership, communication issues, economic challenges, and
policy issues. All of these barriers were present in respondents’ answers, but many of
them were only mentioned by one or two respondents. Many of the barriers were
described in different terms but could fall under one of the defined themes. For example,
one respondent claimed a barrier was “alternative things that people are focusing on”
(Respondent 19) and this could be considered a communication issue, more specifically
an issue regarding a lack of consensus among university stakeholders. Similarly,
administration as a barrier would be recognized as an issue of leadership.

Moore (2005) approaches the barriers to sustainability in a case study of the University
of British Columbia (UBC), and her results determine that disciplinary environment,
competitive environment, misdirected criteria for evaluation, and unclear priorities,
decision-making and power, are the main barriers to sustainability at UBC. This provides
further insight into the barriers encountered by universities; however, the only barrier
mentioned by faculty members was unclear priorities, decision-making and power.
3.6 Question: do you foresee different barriers and challenges in the future?

There was much less consensus among participants in terms of what challenges they predicted the future would hold, how current challenges would change, diminish or grow. Some of the most common results are summarized in Table VIII.

Just under one third of the participants felt that as awareness around issues of sustainability and the environment increased people would become more compelled to implement sustainability initiatives:

The other thing I think may play a role is overall increased awareness, media attention, disasters, you know which get people thinking about the long term global costs of things like climate change, and that may reduce the barriers in terms of people not taking it as a serious priority (Respondent 10).

However, it is interesting to note that many of the respondents, who believe awareness will be increased, did not believe awareness would be gradual or come from positive action, that in fact it would come from an increase in disasters (as was stated above) or from reaching a crisis point where humanity would have to act:

To be frank I feel like if we don’t change we’re not going to be here 10 years from now, so I’m quite hopeful we’ll be here. So I think we’re at a point where we do have to do something (Respondent 25).

I think they’ll change in the future because I think as we become more informed or people inform themselves greater, I hope there’s a rise in quiet desperation (Respondent 22).

I think that the concepts are emerging so strongly that the fear will be a big driver in making people take this seriously whether they want to or not (Respondent 26).

I do think it’s going to change if people become more aware if we’re going to continue as a society we’re going to have to address some of these issues of sustainability (Respondent 23).

Comparatively, some respondents felt that finances would continue to be stressed in the future, and that sustainability initiatives would be seen as too expensive or even frivolous:

Well I think there’s no doubt that as the financial constraints are more and more felt that if initiatives cost money that they’ll tend to be scrutinized and so the predicament is that sustainability is certainly something that people take up when everything is growing in part because then environmental problems increase but it may be an area that has a political tendency to cut back on when the economy is shrinking, or there are fewer resources available (Respondent 19).

Once more respondents felt the trend of universities to move towards a corporate model would negatively affect sustainability:

<table>
<thead>
<tr>
<th>Future barriers</th>
<th>Number of respondents</th>
</tr>
</thead>
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<tr>
<td>There will be an increase in awareness</td>
<td>10</td>
</tr>
<tr>
<td>Increase in financial barriers</td>
<td>4</td>
</tr>
<tr>
<td>University structure will continue to negatively affect sustainability</td>
<td>3</td>
</tr>
<tr>
<td>There will be no barriers</td>
<td>3</td>
</tr>
<tr>
<td>No change</td>
<td>3</td>
</tr>
<tr>
<td>Government priorities will influence change</td>
<td>3</td>
</tr>
</tbody>
</table>

Table VIII.
Do you foresee different barriers and challenges in the future?
I think there will always be that challenge that is the corporate world not always fully understanding the grass roots meaning of sustainability. So, as we want to build more buildings, create more residences, create a new facility for recreation, just to build and create that infrastructure here, as enrollment increases, I think we will always be struggling to get the message out about how we protect and preserve the land and do it in a way that’s environmentally responsible (Respondent 9).

Others felt future barriers and challenges would remain the same, or that in the future there would be no barriers.

The barriers mentioned in question 6, as well as those suspected in the future, must be addressed in order to pursue a path to a sustainable future. Wright and Filho (2002) recommend changes in governance, policy, and awareness in order to promote university sustainability. This includes a better understanding of the term sustainability and its implications for universities. Wright and Filho (2002) maintain that the path to sustainability will not be easily achieved; however, the majority of respondents held a positive outlook for the future of sustainability, whether or not it would be achieved by positive means or as a response to crisis was undecided.

3.7 Question: what factors do you think would drive your university to become a leader in sustainability, and make that a top priority for your university?

The results to this question are summarized in Table IX. The majority of respondents (n = 20) felt that incentives for change would come directly from one cohort or another, including administration, government, and students. Many respondents sought the leadership of senior administration to inspire change:

I think the first thing to have to change would be the values and orientation of senior administrators (Respondent 23).

So I think all it takes is just a few leaders that particularly at an administrative level that agree this is a worthwhile initiative to push for (Respondent 21).

I think it’s a matter of senior administration recognizing the importance and the value. Those of us in the faculty can make all the noise we want but if the senior administration doesn’t have the will to do something it’s not going to happen (Respondent 6).

Other respondents felt that government funding and legislation was required for universities to implement sustainability initiatives:

Well I suppose if the government put some type of value to it in terms of funding programs or initiatives that they will have to go in that direction to follow that (Respondent 32).

Finally, there was a call for the demand for sustainability to come from the student body. Some respondents felt that if students were to demand change and possibly be

<table>
<thead>
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<th>Factors</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>7</td>
</tr>
<tr>
<td>Government funding or legislation</td>
<td>7</td>
</tr>
<tr>
<td>Student body</td>
<td>6</td>
</tr>
<tr>
<td>University structure</td>
<td>5</td>
</tr>
<tr>
<td>Incorporating sustainability into mission</td>
<td>5</td>
</tr>
<tr>
<td>Not necessary</td>
<td>2</td>
</tr>
</tbody>
</table>
willing to take on some of the extra costs, that administration would implement some of these sustainability initiatives:

I think the strongest push would probably come from students, because students, again we’re very vulnerable to student enrollment, and if the case was made over a multi-year period that they were willing to pay a little bit more, or that they were willing to go elsewhere if their concerns weren’t met then I think that would work (Respondent 7).

University structure has been a prevalent theme throughout the questions and again multiple respondents felt that it would take a change in the structure of the university in order to bring about change and become a leader in sustainability:

Well, we would have to restructure the decision making process of the university to reduce and eliminate the amounts of centralized decision making and have decision-making more diffuse over the members of the university community so that they can, because they’re more amenable to this, incorporate directly sustainability considerations into decisions (Respondent 12).

Only two participants ($n = 2$) felt that their institutions did not need to strive to become leaders in sustainability. The first respondent stated it was not the purpose of the institution:

Well because to me sustainability is a philosophy, a value set if you like, and we’re an academic institution and our priorities should be academic excellence and that shouldn’t be incompatible with living and being sustainable, but becoming sustainable can’t become our purpose, it can become what we are but I don’t believe we’ll be very much of a university if we lead in sustainability (Respondent 1).

The second respondent felt change was not required and cited financial reasons:

I’m not sure that things need to change it make it a high priority other than that we simply do not have the funds to make some of the kind, you know we’re in an old, or at least part of our campus is an old heritage building, so to deal with the extreme costs in totally retrofitting it are not necessarily the best even environmentally responsible decisions in terms. And nor is tearing down old buildings and just building new ones. So those kinds of questions and finding healthy ways forward with that question of old buildings and infrastructure and just basic finance (Respondent 13).

It is interesting to note that very few respondents felt that faculty members held an influential role in transforming their universities into leaders of sustainability, they seem to mostly feel that their role begins once leadership, incentive and demand has been realized.

These results are consistent with the findings from (Wright, 2010), where it was concluded that more than half of respondents felt they could see sustainability becoming a priority, but with stipulations such as finances, political will and government support (Wright, 2010). It is these stipulations that are consistent, as most faculty leader respondents felt that sustainability could become a priority if administrative, government, and student stakeholders became committed and took action. These beliefs reflected their perceived barriers. Respondents felt that barriers could not be influenced by faculty, but instead were at the fault of other stakeholders and required their determination and influence, just as they feel other stakeholders are responsible for inspiring change in becoming a leader of sustainability.
4. Conclusions
This study provides insight into the key issues facing several Canadian universities as seen by faculty leaders: their understandings and conceptualizations of sustainability, the role universities can play in achieving a sustainable future, the barriers their institutions face in implementing sustainability initiatives, and what they believe would drive their institutions to become models of sustainability. The findings of this study reveal that university faculty leaders agree on the key issues threatening their institutions. Financial concerns and enrollment issues were at the forefront of this discussion. It reveals that faculty leaders have varied opinions on the term sustainable development, and although there was little uncertainty amongst individual responses, it is clear that a consistent understanding is not present among this cohort.

There was some consensus about the major roles universities should be playing in achieving a sustainable future. Faculty leaders have presented that universities should be educating on sustainability, completing research, and acting as models of sustainability as institutions. Faculty leaders did not suggest a restructuring of their curriculum but suggested sustainability is included on an issue basis where relevant, or that introductory ethics classes were taken.

In addition, the majority of participants felt that the term “sustainable university” implied a university that modeled sustainability in education, research and as role models, with the most emphasis on their operations. It is evident that the majority of faculty leaders believe financial barriers are the primary reason universities are not implementing sustainability initiatives and they see this trend continuing into the future, but with the impression that through increased awareness, financial barriers may be overcome.

Finally, it is revealed that faculty leaders rely heavily on administration, government and the student body to transform universities into leaders of sustainability. Faculty leaders suggest that leadership must come from administration; as well, incentives in forms of funding or legislation must be directed from the government; and, that demand should rise from the study body.

While the analysis of the interview data provide an understanding of faculty leaders’ conceptualizations of sustainability, a resulting and related benefit to the study was the ability to engage and inspire further dialogue amongst faculty members on the subject of SHE. Most participants claimed they had either never considered the subject, or had never been given the opportunity to reflect or discuss sustainability and the university before. Public outreach, through environmental communication is a vector in social change (Oepen, 2000). According to Ornetzeder and Rohracher (2005), people exposed to discussions of sustainability are an important though often neglected factor in the change processes. As such, it is believed that this study resulted in increased awareness and analysis of SHE amongst the cohort of participants.

Finally, this study reveals some of the gaps in understanding sustainability of faculty leaders and the barriers they face in implementing sustainability initiatives. This information can be used to contribute to the understanding of SHE scholars but, also provides universities with insight and information that can be used to reflect on the state of their own institutions. Offering the results of this study to the participants and the academic community will provide an avenue for increased communication amongst faculty members and collaboration with other stakeholders. Further research should include similar studies with other university stakeholders within Canada,
as well as studies in other countries that can allow for a global understanding of sustainability and the role university stakeholders feel higher education can play in creating a sustainable future.

References


**Further reading**


**About the authors**

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