

Sowing sprouts to engender greener universities

A qualitative study exploring the projects, challenges and strategies of sustainability student groups

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Introduction

The writing of this thesis was overshadowed by three headlines. First, on September 27th 2011, the Global Footprint Network announced the ‘Earth Overshoot Day’. From this day onwards “humanity demands more resources and produces more waste, [...] than the biosphere can regenerate and reabsorb” (Footprintnetwork, 2011b: p.1). Already 95 days before the end of the year, humanity had exhausted the planet’s carrying capacity. Secondly, on October 31st, the seventh billion human celebrated her birthday. The medium projection of the UN suggest that when this baby will be 40 years old, more than nine billion people will dwell on this planet (UN World Population Prospects, 2010). Within the next four decades, an additional number of people will be born who already live in continental Europe, North America and Africa today.¹

Thirdly, on November 3rd, the Washington Post titled that “world emissions of carbon dioxide soar higher than experts’ worst case scenario”. According to the article, CO₂ emissions rose by six percent from 2009 until 2010 – an additional amount of the total CO₂ emissions by all countries in the world, without China, India and the USA. These news further substantiate the claim that the world is becoming progressively hotter, flatter and more crowded (Friedman, 2004). Sustainable development presents one strategy to address these multiple challenges. However, what does sustainable development mean?

Many different perspectives and definitions of sustainable development exist (Hopwood, Mellor & O’Brien, 2005). As a working definition of sustainable development², this essay embraces the words of the World Conservation Union (1993):

“Sustainable development means achieving a quality of life (or standard of living) that can be maintained for many generations because it is: socially desirable (fulfilling people’s cultural, material, and spiritual

¹ Calculated based on 2010 population data about Europe, North America and Africa from <http://esa.un.org/wup2009/unup/index.asp?panel=3>

² For matters of simplicity, I use the words sustainability and sustainable development interchangeably throughout the essay.

needs in equitable ways), economically viable (paying for itself, with costs not exceeding income), and ecologically sustainable (maintaining the long-term viability of supporting ecosystems).”

This definition was chosen because it captures the multi-dimensionality of the concept by integrating concerns for social equity, economic development and environmental protection (Ratner, 2004). Comparing this definition of a sustainable world with the current state of the world, it becomes apparent that politicians, educators, citizens and business leaders need to upscale their efforts to advance a deep transformation of the way we think, feel and behave. `

Universities should contribute to this global transformation in five ways, given their role as public institutions of learning and research. (1) Universities should advance education for sustainable development to enable maturing citizens among others, to address the social challenges related to social justice or the stability of ecosystems (Blaze Corcoran & Wals, 2004). (2) Universities should strengthen research for sustainable development, such as examining critical sustainability questions related to technology, humanities and the social sciences (Wright, 2006). (3) Universities should lower the negative environmental and social impacts of operating the institution itself, by for instance reducing waste streams or increasing energy efficiency. (4) Universities can act as role models to establish participatory forms of governance to enable those who are affected by the changes to have a voice in the institution’s sustainability agenda (Macnaghten & Jacobs, 1997). (5) Given the embeddedness of universities within the wider social and economic structures, they should assist regional and local communities in their sustainability transformation (Cortese, 2003).

Based on these aspects the following working definition of a sustainable university was developed:

A sustainable university is driven by a systematic process advancing education and research for sustainable development, improving the environmental and social impact of operations as well as allowing participation from and promoting cultural change within the university

community and assisting the sustainability transformation of the regional and local community.

In theory, a systematic process is crucial to drive progress. Among others, this requires the development of an internal working definition of sustainability, a vision, mission and concrete strategies (Velazquez et. al., 2006; Kurland, 2011), as well as optimization and evaluation mechanisms to install feedback loops for continuous improvement (Lukman & Glavic, 2007). Furthermore, a systematic process also necessitates that organizational structures are created which reflect the commitment to become sustainable within the institutional framework (Carpenter & Meehan, 2002; Thomas, 2004; Moore, 2005; Velazquez et. al., 2006). These structures should provide opportunities for the participation and empowerment of staff, faculty and students.

The participation and integration of students within the sustainability efforts of a university could improve the transformation process in three ways. First, the participation of students in the process can guarantee that their unique perspective is implemented within policies and projects. This input can make these efforts more effective, as a diversity of perspectives can help to better understand and address the complex challenges of creating a sustainable university. Secondly, the participation and approval of change initiatives can generate the necessary commitment and legitimacy to implement the initiative among the student body (Levin, 2000). As such, participation generates legitimacy, which smoothes implementation. Thirdly, students can act as agents of change themselves. Students constitute the largest population at a university, which should be mobilized to implement tangible projects at the university (Allen, 2000).

This study aims to contribute to a better understanding of the role of organized students groups in the sustainability efforts of universities, which is important to improve their participation and impact. As such, this study aims to answer three questions: First, what projects do sustainability student groups implement? Secondly, what internal and external challenges do groups encounter? Thirdly, how do student groups cope with these challenges? These questions were answered through an exploratory qualitative study. The sample comprised 37 responses from individual students, representing 32 different

student groups from the Netherlands, Germany, the USA and UK, as well as Canada, South Korea, Japan and Australia.

The essay unfolds in the following way. The first section establishes the academic and practical significance of the study. The second section outlines the methodology used to collect and analyse the data. The third section discusses the different types of projects student groups implement. The results suggest that groups implement three types of projects, namely *student-to-student outreach*, *student-to-university advocacy* and *student-and-staff projects*. The fourth and fifth sections present and debate the internal and external challenges, as well as coping strategies of the groups. The results propose that groups face five internal challenges, namely a lack of people, knowledge, time, funding and difficulties with establishing an efficient internal organization. In addition to those, the respondents mentioned three external challenges associated with university bureaucracy and resistance, disinterest among the student community and competition with other student groups. Overall, groups adapted numerous strategies to address these challenges, such as outreach efforts to recruit more members or alliance building with other groups or university stakeholders.

Significance

Much research on education for sustainable development focuses on students as objects of change, rather than subjects who actively promote a more sustainable university (Blaze Corcoran & Wals, 2004). Nonetheless, four studies have been identified as relevant to the present research: (1) Hongyan (2003) described the development of the student environmental associations at Chinese universities from 1990 until 2002. The author identified the core activities of the groups, their developments over time, as well as the challenges they encounter. (2) Zimmerman and Halfacre-Hitchcock (2006) investigated the barriers related to the mobilization of students through a case study about the retrofitting of a building. With the help of a literature review, the authors identified seven constraints and then generate seven new constraints through analyzing their case study, such as the historic nature of the campus or emotional problems within the group. (3) McKinne and Halfacre (2007) examined the challenges encountered by a student-driven and staff-supported native plant species garden at the College of Charleston. The

researchers presented eight challenges and proposed different solutions to address them, such as better planning to deal with the current flooding of the garden. (4) Finally, Helferty and Clarke (2009) gathered an overview about student-led climate change initiatives at Canadian universities.

Even though all of these studies contribute to the research on sustainability student groups it is necessary to supplement them. Zimmerman and Halfacre-Hitchcock (2006) and McKinne and Halfacre (2007) investigate case studies limiting the generalizability of their findings. Next, Hongyan (2003) main focus rests on the historical evolution of environmental student groups in China, rather than their present challenges or strategies. Furthermore, Helferty and Clarke (2009) focused on projects, which are classified as ‘climate change initiatives’, thus missing a broader focus on ‘sustainability initiatives’. Moreover, their analysis remains limited to Canadian campuses, whereas the present study includes a more international sample.

The present study aims to contribute both to the existing body of research and to be of practical relevance for student groups and university administrators. From an academic perspective, the qualitative design of the study allows a more in-depth and comprehensive analysis of the projects, challenges and coping strategies of student groups than previous studies. Moreover, given that it is based on a larger and international sample, it helps to identify general tendencies, rather than case specific ones. From a practical perspective, the results are informative for two audiences: Sustainability student groups who are interested in reflecting more about their activities, and university administrators who are keen on learning more about the contributions of sustainability student groups and ways to support their work.

Methodology

The study employs a qualitative research design, as this method was most helpful in establishing the different categories of projects, challenges and strategies through an inductive process. Moreover, the study presents a form of action research, as it combines academic research and advocacy (Wittig, 1996). As already stated in the introduction, the author assume that students can contribute significantly to the sustainability transformation of a university, and should thus be empowered by university

administrators. Furthermore, the present study carries out action research, as the author belongs to the population under investigation (McCutcheon & Jurg, 1990). During his studies, he has been involved as an activist and board member in the Studentworkforce for Sustainability and Development, a grass-roots sustainability student group at Maastricht University. Furthermore, he co-founded and was subsequently employed in the Maastricht University Green Office, the student-driven sustainability department of Maastricht University.

Convenience and snow-ball sampling were utilized to select participants. The target group of this study comprised individuals who are currently engaged or have been involved in groups which describe themselves as sustainability student groups. As a first step, the author searched within his personal network for people which are or were involved in sustainability student groups. Then, he asked these people to recommend further participants. Finally, an internet search was conducted in eight countries to identify sustainability student groups or networks. A lack of random sampling constitutes the largest academic shortcoming of this study. However, using convenience and snow-ball sampling was the most feasible way to contact participants, given the limited time-frame of the research. Overall, 116 individual sustainability student groups and 21 international, national and regional networks were contacted, comprising different sustainability student groups from Australia, the USA and UK, Canada, Germany, the Netherlands, South Korea, China and South Africa.

Participants were requested to answer a short questionnaire comprising three open ended questions³ or to indicate time and interest for an online or telephone interview. The identity as a researcher was revealed to the participants at all times. Finally, 37 responses from individual students were included in the data set, which originated from 32 different student groups. Out of those, 23 students responded via email and 14 interviews were conducted. New emails and reminders were sent out until a saturation point in the responses was reached. Overall, the respondents come from seven different countries: Eleven from the Netherlands, ten from Germany, six from the UK, four from both the USA and Canada, as well as one from both South Korea and Australia.

³ 1. What sustainability projects is your group working on? 2. What are the challenges your group encounters to realize these projects successfully? 3. How does your group try to address these challenges?

This distribution shows a bias towards the inclusion of student groups from industrialized and Western countries. Requests to participate in the study have been sent also to student groups in South Africa and China, but no responses were received. Furthermore, seven out of the eleven responses from the Netherlands were from students engaged in different sustainability groups at Maastricht University. Those groups are prominently represented, because they were available through the personal contacts of the researcher. Finally, a grounded theory approach was used to analyse the data in an inductive process. As a first step, participant responses were grouped into inductive categories, which were mutually exclusive. As a second step, the relationships and hierarchies between those categories were examined (Bryman, 2008).

Projects promoting change

All groups reported projects addressed to the student community or the university. Additionally, three out of the 32 groups engaged in projects focused on the local community. In these projects, groups educated teenagers about climate change and renewable energy, assisted a kindergarten to reduce its energy consumption and conducted research projects for NGOs and companies. Given the space limitations of this study and the prominence of projects focused at the student community and the university, only the latter projects will be discussed in more detail in more detail.

Student-to-student outreach: ‘Students as subject & object of change’

First, respondents mentioned several activities which were categorized as *student-to-student outreach*, as they focus at the larger student community. Student groups organized events about global sustainability issues, such as debates about human rights or a seminar series about climate change. Other events aimed at national and regional policy issues, such as campaigns promoting a more ambitious national energy policy or lobbying against the establishment of a hazardous waste site. Furthermore, groups organized events about the sustainability of companies, such as lectures about corporate social responsibility or awareness raising campaigns about green-washing.

A majority of the events directed at the larger student community promote sustainable consumerism. For example, groups developed a student sustainability guide

or organized tours to show first-year students organic and fair-trade shops. To further promote sustainable consumerism, groups also sold products directly to students. For instance, one group compiled a booklet using paper already printed on one side. Within the category of sustainable consumption, organic and fair-trade food inspired multiple events: For example, groups taught organic and vegetarian cooking classes, organized a farmer's market, sold local vegetable baskets or ran a campus vegetable garden.

Four aspects of these projects on sustainable consumerism could explain their prominence. (1) These projects relate more easily to the daily experiences of students, compared to discussions about energy policy or justice, which require more abstract representations of reality. (2) In addition to this tangibility, cooking dinners or running a student vegetable garden have a high social and fun aspect. More students might be inclined to participate in sustainability activities which are fun and allow them to meet new people. (3) Compared to primarily awareness-raising events, it might be easier to measure the positive impact of these projects. For example, the group could calculate the CO₂ emissions saved from the students they convinced to switch to a green electricity provider. In return, the measurability of the results might more easily motivate action. (4) Finally, student groups can also generate some revenue in addition to doing something good, by selling for example notebooks made from recycled paper or organic vegetable baskets. This could help student groups in addressing their lack of money and to conduct events which fund themselves.

Student-to-university advocacy & student-and-staff projects: 'Creating pressures from inside and outside the system'

Next, groups implemented several activities which were categorized as *student-to-university advocacy*, because groups pressure for organizational change through grass-roots activities. Most of these projects tried to instigate change in education and operations. For instance, to promote changes within the educational portfolio, one group lobbied for the integration of Corporate Social Responsibility modules in economics programs. Moreover, to decrease the negative social and environmental footprint of the university, groups publicly endorsed the purchase of recycled paper or demanded the university to buy electricity from a 'green energy' provider. Sales of more organic food in the cafeteria and more sustainable snacks and drinks, featured as another topic of

concern. Then, one US-American group organized a socially responsible investment campaign to convince the university to divest its funds from companies with poor track records of ethical and environmental issues.

As a third category, projects in which students together with staff or faculty members implemented tangible projects on campus were categorized as *student-and-staff projects*. For instance, to advance education for sustainable development, students and staff members developed a voluntary sustainability curriculum and an undergraduate research project. Several projects were performed to limit the footprint of operations, such as programs to reduce the electricity consumption of computers. Moreover, students worked together with the athletics department on improving on-site and game day recycling and composting facilities or calculated the university's carbon footprint. Finally, students collaborated with a coalition of faculty, staff, and alumni to develop a strategic sustainability plan for the university.

The findings of the project section help to clarify three main contributions of these groups to the sustainability transformation of universities. First, student groups act as important change agents to educate and influence their peers. Dahle and Neumayer (2001) suggest that especially through their peer status, students might be more successful in raising awareness and promoting behavior change among other students, compared to staff and faculty members. With reference to the introduction of this study, the promotion of awareness and behavior change within the university community has been defined as one element of a sustainable university. Consequently, universities that want to advance cultural change within the student community should investigate ways to collaborate with these student groups.

Secondly, student groups assist in holding the university accountable. Student advocacy projects are important to further remind administrators to improve the sustainability performance of the university. Student advocacy work has successfully pressured the administration of several universities to pay more attention to sustainability issues (Dahle & Neumayer, 2001; Lozano, 2006; Brinkhurst, Rose, Maurice & Ackerman, 2011). For example, interest and engagement of students was mentioned as the third most important driving force for sustainability in a survey of Swedish universities in 1999 (Sammalisto & Arvidsson, 2005). In this sense, student groups can

function as an important pressure group to urge a university to start or accelerate a process for change, which is essential to achieve a sustainable university.

Thirdly, student groups conduct important work to implement tangible projects to improve the university's social or environmental footprint (Keen & Baldwin, 2004). In this regard, students oftentimes volunteer their time and energy, by working together with staff and faculty members. Given the fact that students represent the largest population at a university, administrators might be interested in findings ways to empower this energy and dynamic. This could be achieved by further engaging students through “student praxis projects” in sustainability research or project work (Bacon et. al., 2011). For example, at the Technical University of Catalonia in Spain, engineering students analyzed a campus building together with technical staff and developed concrete proposals on how to improve energy efficiency for their final thesis (Ferrer-Balas, Cruz & Segalas, 2006).

Five internal challenges with numerous creative solutions

This section presents the results of the data analysis about the internal challenges and strategies utilized by groups to address those. The section only presents the general challenges and strategies groups experienced independent of specific projects. Project-specific challenges – such as bad weather in gardening projects, finding speakers for lecture series or a cinema for a movie screening – are additional challenges which occur beyond the general challenges mentioned below.

People: ‘Finding members and engaging leaders’

Groups experienced four challenges related to the recruitment, commitment, continuity of members, as well as their leadership qualities. (1) Almost all groups reported miss “enough people to realize all the projects we have”. One student expressed this problem as “identifying enough students with interest in sustainability to create the critical mass we need.” The student reported that the group was 20 members strong, but that they needed at least 50 to “start developing and delivering meaningful projects.” In this sense, the missing number of helping hands was considered a key barrier to creating change. The groups developed several strategies to address the lack of members: Some tried to raise awareness among the student population and recruit members by partaking “in

outreach efforts, usually by movie nights, stalls and presence at key events at university.” Other groups engaged in “a lot of tabling at student events as well as in various locations across campus for special events such as World Rivers Day.”

However, simple efforts through flyers or tabling might not be enough to attract new members. Edwards and Oskamp (1992) found in their qualitative study of activist groups in the anti-nuclear war movement that among others issue salience and perceived personal and group efficacy represented two important predictors of activism. This could mean for student groups that they should make the issue of sustainability more salient for different target groups. This could be achieved by broadening the project portfolio to include different projects on the social, economic and environmental dimensions of sustainability which appeal to a wider audience. One group followed this objective, describing it as an attempt “to be more mainstream.” Moreover, Clary & Snyder (1999) identified six motivations for people to become volunteers: People volunteered, because it allowed them to develop social relationships, to express values they support, to acquire new skills and knowledge, to gain career related experiences, to reduce guilt or other negative feelings or to grow psychologically. Consequently, groups could tailor recruitment messages to appeal to one of these motivators, to illustrate the benefits people can have from joining the group. Thus, these recruitment messages could outline the new friendships people can form or ways members could develop personally when joining the group,

(2) As a second challenge related to people, groups struggled to commit members. Several respondents mentioned that two or three members represented “the core of the group” on whose initiative most activities would depend. These “very dedicated students” would coordinate the activities, inspire other members and keep an overview about what was happening. Edwards and Oskamp (1992) also observed in their study of anti-nuclear war activists that only “a relatively small proportion of the membership carries on the organization’s principal activities” (p. 217). One respondent to the present study attributed this commitment problem to “non-existing economic incentives or legal obligations”, which do not provide enough ‘carrots or sticks’ for people to volunteer. Other explanations for this lack of commitment could be the impulsive behaviour of

students to pursue different activities offered at a university, or the group's inability to make people comfortable to commit.

One group tried to increase the commitment of members, by strengthening the internal cohesion of the group through social activities to not only make people "active in the project, but [to create] a community". With the help of weekly drinks, cooking evenings or excursions, the group tried to not only make people "active in the project, but [to create] a community." Research supports that this could be indeed a successful strategy. Bettencourt, Dillman and Wollman (1996) found that group identification is an important motivator for activists to join and stay within a group. This 'we-feeling' caters to people's need to develop positive group affiliations. Social activities could facilitate the interaction among group members to increase member's bonds with each other and identification with the group itself. Groups used other strategies to increase group identification such as membership cards, email addresses or the distribution of sweaters with the group's logo on the back.

(3) Then, participants mentioned the "fast turnover of students" as a third concern. One respondent expressed that due to the constant fluctuation of students, his group would be "lacking 'new blood'". This would lead to a situation in which "you're constantly recruiting in a way." Whereas lack of commitment was attributed to missing incentives or obligations, the difficulty to retain people within the group for a longer period of time appears to be evoked by the study system. One participant explained that a major reason for this lack of continuity would be "the Ba/Ma System with an international focus and thus an obligatory exchange semester during Bachelor and Master", which leads students to frequently change universities.

(4) Finally, groups encountered problems with recruiting leaders, such as finding students "who like to be project leaders, take responsibility and are enthusiastic about their project." Through the study of different activist groups, Perlman (1976) found that the leadership quality of individuals represented an important success factor for the functioning of the group, because leaders would help to motivate people and acquire resources. Despite this importance of student leaders, one participant reported that this type of students was especially difficult to recruit, as his group kept looking for "not only leaders, but entrepreneurs who want to go into the university to change something." He

was trying to find members for his group which would commit a lot of time and energy to improve the energy efficiency of the computer system. However, he mainly encountered students who were interested in global sustainability issues and less in the hands-on work of creating tangible change at the university.

Nonetheless, one participant underlined the importance of collective leadership, rather than leadership through one or two individuals. Collective leadership describes “the selective and dynamic emergence of individuals whose skills and expertise are most appropriate to a given situation” (Friedrich et. al. 2011, p. 1). This definition suggests that in complex and dynamic situations an individual leader might not possess all the necessary information to act appropriately, so that it would be beneficial for the group as a whole, if more knowledgeable individuals could bring in their expertise. The primary motivation for the participant organizing the student garden to inspire collective leadership was her association between sustainability and values of participation and democracy. She emphasized that “sustainability is supposed to be democratic and involve everybody.” She wanted the group as a whole to make important decisions and feel responsible for the project, but she critically admits that she did not succeed in doing so. The student described her situation as a “dilemma”: She “want[ed] to be really democratic”, but throughout the projects she had to realize that “if people don’t give interesting input, then you’re a leader.”

Knowledge: ‘Knowledge is power’

Next, respondents stressed the continuous loss of knowledge between student generations and the missing sustainability-related knowledge within the group as two challenges. Concerning the former, one student mentioned that their team has “a high turnover - meaning most students leave after a year.” As a consequence, “each new team has to learn everything from the start.” At least for one group, the “transfer of knowledge to the next generation of students”, appeared as the “most urgent problem” limiting the group’s effectiveness. The constraints emerging from knowledge loss appear to be pronounced in small groups: One group encountered the problem that “the people which are longer involved than one semester, consists of two people only.” The continuous fluctuation of students does not only lead to a loss of knowledge, but also a loss of contacts to other

student groups or the university. Despite the fact that none of the respondents mentioned this problem specifically, it appears as a consequence that also social relationships require constant renewal. One of the main strategies to transfer knowledge from one student generation to the next one occurred through a knowledge library, meaning that online software to store documents was used to create a “virtual memory”. Other strategies included overlapping transition periods between board members.

However, despite the fact that the loss of knowledge might be undesirable for the group as such, it still has benefits for the individual students involved. As one participant mentioned, student groups also assist the skill and knowledge development of students. Consequently, by allowing each student generation to make the same mistakes as the previous ones, those students also learn similar lessons. Nonetheless, the systematic inability to build up a skilled and knowledgeable team presents a crucial barrier to the ability of student groups to instigate meaningful change.

As a second problem, groups mentioned a lack of sustainability-specific knowledge. One participant complained that the lack of sustainability-specific knowledge led to a “persistent ignorance” within the group and “uncoordinated approaches of behaviour change, which are for example not based on behavioural psychological theories.” This problem increases if groups try to instigate change in knowledge-intensive areas, such as designing courses for sustainable development or developing an Environmental Management System. In this regard, a lack of knowledge functions as an important barrier inhibiting ambitious groups who want instigate positive change.

Groups utilized four strategies, to either mobilize knowledge from the outside or to safeguard internal knowledge. (1) Groups compensated for the internal lack of knowledge, by “trying to find experts who are willing to be our advisors.” (2) Then, student groups mentioned a quest to acquire the necessary knowledge through their own research efforts: Knowledge was acquired by running “trainings and skill shares ourselves”, by drawing on books or other online training resources. (3) Groups developed skills and knowledge through feedback or reflection rounds after meetings or events. With the help of these feedback rounds, groups tried to critically analyze their performance or events and learn lessons about what needs to be improved. (4) Finally, one participant described that “we literally went on the internet to google for stuff, e.g.

how to set up an agenda for a meeting.” Given the vast amount of – more or less qualitatively good – information online and accessibility of this information, it is relatively surprising that only two students mentioned this strategy to acquire external knowledge.

The role of knowledge to promote or restrain activism has also been established by other researchers. In her qualitative study on breast cancer and life-form activists, Parthasarathy (2010) found that the language and knowledge of a particular discourse presented a barrier to the participation of activists. The researcher found that activists had to confront an “expertise barrier created by the shared knowledge” (p. 356) of researchers and companies. Parathasarathy emphasizes that this ‘expertise barrier’ was used as a shield by companies, to limit the participation of people in the debate. To supplement already existing strategies by student groups to address these knowledge problems, groups could also draw on the insights developed by Parathasarathy’s (2010) research. Parathasarathy (2010) found that activist groups employed four strategies to overcome the ‘expertise barrier’: They acquired the necessary knowledge themselves, introduced new or previously ignored knowledge to the debate, suggested new logics to interpret existing knowledge or questioned the way the established knowledge was produced within the bureaucracy.

The present study illustrates how students already try to acquire knowledge themselves. However, in addition groups could supplement their strategies by trying to change the logic of the game: For instance, groups could argue that learning and teaching should not only occur within the classroom, but that the university as a whole should serve as a ‘sandbox’ to teach students sustainability related skills and knowledge. Subsequently, the group’s lack of knowledge should not be considered a problem of the students, but rather a responsibility of the university to help students overcome this knowledge gap.

Parathasarathy’s work on the ‘expertise barrier’ supplements Foucault’s (1981) investigations on the interconnection between power and knowledge. Foucault suggests that ‘power’ provides its holder with the ability to define ‘knowledge’. In reverse, ‘knowledge’ provides power over others, in the sense that ‘knowledge’ defines what is right and what is wrong. Due to this intrinsic relationship, Foucault speaks of

'power/knowledge'. With reference to Foucault (1981), student groups could also use their knowledge as a source of power, by altering or expanding the definition of sustainability the university employs. The university administration might define sustainability in more narrow and technical terms and with a strong link to environmental efficiency. Social aspects or democratization of university structures might not be one of their primary interests and only be at the periphery of the knowledge on sustainability. In this sense, students should not only acquire new knowledge to gain power, but also exercise power by trying to change the existing canon of knowledge on sustainability, for instance by emphasizing the social aspects of the concept.

Time: 'Students are always busy'

Next, participants raised concerns that their group could not dedicate enough time to their projects. This lack of time was attributed to the previously mentioned lack of commitment, as "people regard this project as something which runs parallel and see university as the main thing." Instead of seeing the lack of time as a commitment problem, another participant referred to the pressures of the education system as the source of trouble which would not leave students enough time for volunteer work.

Groups applied different strategies to address the lack of time. One respondent mentioned that his group has "been mainly concentrating on getting the most important projects done." This prioritization helps the group to focus their available time, instead of diffusing available resources over many different projects. Another strategy was to "get more members active within the board." An increase of the board size is expected to activate more helping hands, so that each board member has fewer obligations. Nonetheless, a potential downside of this strategy could be that more people in the board require more communication and coordination. Finally, one participant mentioned that he continually tried to personally develop himself by "trying to work around the workload, learn what I can do, can't do and when I need to take time off."

Snyder and Omoto (1992) argue that time represents one of the most significant costs for people to engage in volunteering work. In case that membership does not evoke any significant monetary contributions time is seen as a central opportunity cost for volunteers. Given the fact that time is a very intangible resource, many student groups

might overlook its importance. It could be helpful for groups to recognize the value of time for their team. This could lead them towards a careful balancing act, between open deliberation on the one side, and a bias towards action on the other. It is certainly difficult to manage the tradeoffs between efficiency and democracy. A bias towards the efficiency can have negative impacts, as voices of members can be overruled too quickly, whereas a bias towards deliberation can curtail motivation and impact, as the group engages in lengthy and detailed discussions.

Nevertheless, the perceived lack of time is not only linked to the commitments of the members, but also the ambitions of the group itself. While further questioning interviewees about the time problem, one respondent self-critically explained that “we're planning too many or too big things, which we then can only realize with difficulties or not at all.” In this sense, he regards the problem not as a lack of time, but as un-realistic project plans. This over-ambition can emerge from spotting and wanting to realize too many goals at once. For example, one responded stated that “we see so many chances.” But, “there is no more time available” so that the group can't handle it. It's so much.” As a consequence the student stated that “we need to grow, grow rapidly”. Another strategy to address this situation could be to critically examine the available time of the student group first, and then to match these resources to more realistic project ideas. Another strategy could be to store additional options and ideas in a list, which emerge while executing an on-going project. This strategy can help to focus the energy of a group, while simultaneously recording ideas for future projects. Once the current project approaches its end, the group could fall back to their list of project ideas and pick the next one (Belsky, 2010).

Funding: 'Money is always scarce'

Then respondents reported a lack of money preventing them from scaling projects. The main sources of funding for groups appear to be membership fees or project-specific funding from the university. The main barriers to apply for funding represent a missing legal entity, as well as knowledge about where and how to apply for external sources of funding: For example, in Germany or the Netherlands student groups mentioned that they need to acquire the status of a non-profit association to apply for external funds.

To address the lack of funding, groups tried to increase their budget or spend the money more carefully. One group tried “to make a magazine and then to run advertisements of companies in it.” Other groups wrote funding proposals to the university or created a list of sponsors and then contacted them.. With regards to external funding, one group mentioned that it acquired the legal status of a non-profit organization to “also in the legal sense [have] the opportunity to get better funding.” Still, one respondent mentioned that her group got too frustrated looking or applying for external funding so that they just “learned to work with little to no funding at all.”

Most non-profit organizations depend on funding agencies which support their activities. In order to attract funding, non-profit organizations need to show the social value and progress they create through their activities (Andreasen & Kotler, 2007). However, this dependency on external funds increases the dependency of organizations and restrains their decision-making flexibility. Especially groups which are engaged in *student-to-student outreach* could benefit from framing the mission of their group along the objectives of a social enterprise. Social enterprises are primarily social or environmentally purpose-maximizing organizations, which nonetheless offer products or services which generate a certain income (Bornstein, 2007). This would mean that groups would primarily engage in projects which are scalable and generate their own funding and further guarantee the group’s independency. The previously reviewed projects to promote sustainable consumerism – such as barbeques, ‘green parties’, sales of study material, film screenings, etc. – could be one option to implement self-funding projects and also to generate some additional income for the group.

Internal organization: ‘How to create an efficient structure?’

As a last internal challenge, participants mentioned the problem of how to efficiently coordinate people, time, money and knowledge. Coordination and communication problems appeared as the main challenges related to internal organization. One interviewee confessed that she “just did not know how to coordinate” a group. She described how her “lack of coordination know-how” resulted in too little planning of the project, as well as too little ownership of specific tasks, so that people did not feel responsible. Insufficient communication within the group appeared as the second problem

related to internal organization. One group leader mentioned that they “didn’t have good means for communication”. For example, the group mainly utilized facebook and email to arrange meeting times. However, those appeared to be inefficient, as a constant back and forth between different meeting times occurred.

The two ways to improve internal organization comprised ways to improve the internal communication and delegation of tasks. One respondent mentioned that communication problems augmented when the communication between the project leaders and the board dried out. As a solution for this problem, this participant explained that the board “tried to communicate with project leaders better, tried to ask them: ‘What are your problems, how can we help you’.” Another group split-up projects into smaller tasks so that task ownership could be established more easily. As an advantage, more students could do smaller tasks which required less commitment. In this sense, improved delegation and communication can decrease time pressures for the group, as less energy is spend on administrative issues and can be fully dedicated to the success of projects.

In addition to internal coordination and communication, Bettencourt, Dillmann and Wollman (1996) emphasized step-wise planning as an important aspect of effective groups. Realistic goals can have a motivating function for members and focus the energy of the group. Ideally, groups should engage in meetings for long-term and short-term plans. Those meetings should be inclusive and encourage the participation of all members. However, especially the development of long-term plans is difficult for student groups, given the rapid turnover of members. Consequently, student groups can mainly develop short-term goals, which might lack the gravitational pull of a long-term vision.

In conclusion, this section found that student groups experience five internal challenges, namely a lack of people, time, money, knowledge and ability to create an efficient structure. Groups implemented multiple strategies to address these challenges, either by trying to mobilize external resources or by handling internal resources more efficiently. This section also employed insights gained by other researchers, to supplement these strategies, for example improving the group’s planning process or framing recruitment messages to appeal to the six motivations for volunteering.

Due to the absence of organizational structures which guarantee the presence of resources over time – such as a legal entity, employment and hiring policies, guaranteed

funding or an office infrastructure - the project success of student groups falls and rises with the people involved. In this sense, one student mentioned that “most student groups are projects and not organizations.” Due to their central importance to the group, the amount and kind of members act as mediating factors for the other challenges. Group members provide knowledge through their personal experience or academic background. They maintain personal contacts to organizations which could sponsor projects. The more committed members the group recruits for the same projects, the more the time pressure are likely to decrease for all members. The lack of commitment and continuity emerged as the two most important factors influencing the amount and kind of people engaged in the group. These two problems appear to be integral aspects of groups which rely on volunteer work and whose members just stay at one place for a short amount of time. Nonetheless, groups which want to leverage their impact should develop strategies which specifically address this underlying commitment and continuity problem.

Organizational resistance, inter-group competition & student disinterest

In addition to these five internal challenges, groups mentioned three external challenges, related to the bureaucracy or resistance from the side of the university, competition with other student groups or difficulties to engage the wider student community. Groups employed numerous strategies to address these challenges. The most prominent one was alliance building with other actors. Nonetheless, this section also critically discusses the attributions groups make about ways to engage the student community, suggesting that groups make incomprehensive claims about the reasons why the wider student community does not engage in more sustainable behaviours.

University: ‘Building alliances to alter the status quo’

Related to the university, groups mentioned challenges to identify support channels, to work their way through the institution’s bureaucracy and to deal with organizational resistance towards change. First, groups encountered problems with the “lack of transparency of support channels”, to find out “who can help the project, how and in what competence.” This means that the group lacked knowledge about how the university functions and who would be the people to contact for their projects. Respondents

attributed this problem mainly to the fact that they had “no reference person” who they “could ask for advice”. This finding is supported by Brinkhurst, Rose, Maurice and Ackerman (2011) who also found that the success of student-led projects remains constrained, as students often “lack familiarity with the functioning of a university” (p. 343).

Secondly, bureaucracy was perceived as “an issue in terms of all of the hoops one must jump through prior to having projects gain approval.” This “hierarchy of institutions and organizations” and “established pattern” made it “hard to get change moving with any kind of speed.” Problems associated with lack of transparency and bureaucracy do not necessarily originate from the intention to hamper the work of the sustainability student group as such, but are associated with modern bureaucracies in general. In this sense, students encountered problems with two characteristics of Weber’s ‘ideal bureaucracy’, namely ‘hierarchy of authority’ and ‘written rules of conduct’ (Camic, Gorski & Trubek, 2005). Those two aspects help bureaucracies to achieve a division of labour, which is organized in a hierarchy and governed through explicit rules. As the main decision making powers to change the rules and hierarchy rest within the bureaucracy, it is difficult for outsider groups to influence those.

Thirdly, groups also encountered actions by the university management or administrators which were perceived as intentional actions “to throw stones on our way.” For example, groups reported resistance to introduce recycled paper or to establish a student garden. One group planned a discussion evening with a Japanese activist who campaigns against nuclear energy. However, this event was so much opposed by the university and other students that the group did not implement it. Arguably, a fine line persists between bureaucracy and resistance. At the end, they are two sides of the same coin, namely that groups experienced difficulties in changing the organization, which then either relate to the fact that a university functions as a bureaucracy or that individuals within the institutions actively oppose change.

Overall, external challenges related to the university can be mainly accounted for by the outsider position of most student groups. Respondents mentioned that their group had only “limited influence on the head of the university and decision makers.” This “limited influence” was mainly attributed to the fact that “no institutionalized channels

for student engagement and participation." Also Sharp (2002) emphasized that apart from a generally constrained understanding about the way the university functions, students lack "immediate access to decision-making processes" (p. 137). This lack of power restricts the operating range of groups. For example, one group mentioned that they tried to conduct projects inside the residence halls. However, since the group had "no legitimate voice in halls of residence", they needed to negotiate with green officers who had the final decision whether or not a project obtained approval. Hence, the participant responded that "if the priorities of green officers are different from ours, we lose."

Collaborating with actors within the university or creating alliances with other student groups represented the most common strategies to overcome those challenges. One participant described this strategy, as the "the creation of alliances with institutionalized actors that attract like-minded people." Hence, the collaboration with the university actors allowed the group to gain a greater basis of approval and support, which then further attracted people who thought about sustainability in a similar way. Sustainability coordinators or offices were most commonly mentioned as collaborators within the university. Other student groups tried to involve professors or appeal to the senior management of the university.

In addition, two student initiatives managed to receive support from their university. One student initiative from the German university in Duisburg/Essen wrote a proposal to the head of the university and received funding for five people to work on sustainability issues over the next two years. The student group then started different projects, such as an audit or extra-curricular sustainability curriculum. At Maastricht University, a sustainability student initiative established the student-driven sustainability department of the university. A team of seven students and the environmental advisor coordinates and implements different sustainability project and is responsible for the sustainability policy (Maastricht University Green Office, 2011). Incorporating a sustainability student initiative into the university can help the group to overcome some of its challenges: The allocation of a budget enables the group to implement larger projects. Then, the incorporation enables direct contact to university stakeholders, thus easing problems associated with a lack of support channels or bureaucracy. Moreover, paid jobs increase commitment and continuity of students.

However, groups should be aware of the strategic tradeoffs associated with becoming part of the university's formal structure, or remaining outside the system. Mitra's (2006) research on student initiatives suggests that it is easier for student groups who operate mainly within the institution to establish the necessary legitimacy as accepted partners and to obtain the support of inside actors. However, the groups investigated by Mitra still did not succeed in being accepted as equal partners, because they oftentimes did not succeed in breaking through the student-staff dichotomy. This finding has been replicated within the present study: A student employee at the Maastricht University Green Office claims that "we're neither students, nor staff members." The interviewee mentioned that the students working in the office should be put into a third category, namely student employees. Still, the team had a hard time to gain acceptance for this new category: "By some staff and faculty members, we're still approached as students."

Moreover, Mitra's (2006) analysis suggested that groups working inside the system appeared to be effective in advocating incremental changes, as their insider status gave them access to knowledge of and support from the institution. Nonetheless, these groups also engaged less in open criticism of the institution and in advocating for more systemic changes. Becoming part of the formal decision making process limited the scope of the group, as they became accountable for their actions, and also distracted their attention due to an increased focus on administrative tasks. Furthermore, the increased need of resources – such as money or knowledge – which were provided through the institution, increased the dependency of the group on the organization. As one effect, this dependency then limited the perceived ability to engage in open criticism of the institution. Within the present study, one student group that moved from student-to-university advocacy towards *student-and-staff projects* voiced similar experiences, as their increasing dependency resulted in less openness to criticize the institution.

On the contrary, Mitra (2006) found that the independency of groups working more outside the institutional boundaries provides them with the strategic advantage of advocating for more systemic change. Being free from the bureaucratic work of the institution and direct accountability offered them the chance to fully concentrate on their advocacy work. Nonetheless, these student groups faced a challenge of building a support

system inside the institution and oftentimes struggled to obtain funding or gain access to the institution.

Sustainability student groups should be aware of these tradeoffs when deciding if they should collaborate closely with the institution to create a process of change or to mainly work outside of it. A hybrid strategy could be one way to address this issue: Groups could implement tangible projects to instigate incremental changes at the university, while at the same time demanding more systemic policy interventions. This more functionalist approach could guarantee an increasing buy-in from the university, to slowly recognize the value of sustainability and support change initiatives.

Student groups: ‘Moving beyond competition’

Moreover, one student group experienced difficulties due to the competition for members and resources with another student group. The respondent claimed that “for a reason I don’t understand they are ‘cooler’ than we.” According to the participant, this better image led to the fact that “many people [are] engaged in that group.” Despite this rivalry, the participant voiced the intention to “try to work together with them in the future.” In addition to this problem of competition, the Australian respondent mentioned that “we have some issues connecting with other student groups across the country.” This problem was not attributed to competition between the groups, but due a geographical barrier as the groups “have such distances to travel.”

Despite one open concern about competition between the groups, most groups mentioned that they were or tried to cooperate with other sustainability groups. Groups interested in improving inter-group cooperation should take several factors into consideration: Di Giacomo (1980) suggested that common cultural and ideological identities are two necessary conditions for inter-group cooperation, because similarity facilitates interaction. This favourable condition could be created through open discussions about the different identities of the groups. Moreover, Gaertner et. al. (1999) emphasized that continuous interaction between the group members is important, because it helps to reduce negative biases and the creation of a common fate. For instance, networking events or common social activities could be one opportunity to allow interaction between the members of different groups. Finally, Dovidio, Saguy and

Shnabel (2009) pointed out that perception of an equal group status represented another necessary condition for inter-group cooperation. An equal playing field could be created by inviting everybody's input into the project and a decision making process which invites members from both groups.

In addition, to inter-group alliances at a university level, students have established inter-university networks of sustainability student groups in some countries. These networks aim to facilitate the flow of ideas and best practices between student groups. For example, one Dutch respondent mentioned that their membership in a network has “helped a lot”, by exchanging ideas and best practices. Those networks also influence the type of projects groups implemented at their university: For instance, two Canadian groups conducted projects run through a national network of student sustainability groups.

Student community: ‘Establishing legitimacy & overcoming disinterest’

As final external challenges, respondents emphasized two problems related to the student community, namely a lack of legitimacy and student disinterest in sustainability issues. First, one respondent described the negative connotations students associated with their group: “Because we’re a sustainability student group, people saw us as hippies, as an alternative crowd.” In this sense, students associated negative stereotypes with sustainability which were projected onto the activist group. This limited the ability of the student community to take the projects of the group seriously and to be receptive to their messages. The group nonetheless tried to build up a better reputation, “by doing our job as well as we can.”

Secondly, groups struggled to overcome barriers that prevent the student community to adapt more sustainable thinking and behaviours. Several respondents framed the barrier in terms of a lack of understanding or awareness about sustainability issues. For example, one respondent mentioned that it would be very difficult to reach the wider student community with their campaigns, because the “disinterest of people or groups in the topic of sustainability” functions as an effective barrier. Other respondents explained that “the users of the buildings we are auditing do not understand the importance of reducing energy consumption” or that “cleaning staff are often not given

enough advice on good environmental practice.” Another student saw the lack of awareness related to the general “apathy that seems so endemic in [...] society.” He attributed this apathy to false reporting in the media and industry lobby groups which for example fund ads against a carbon tax.

Also within the academic literature on sustainable universities, a lack of awareness about sustainability issues features as a prominent explanation for difficulties to create personal change towards sustainability (Velazquez, Munguia & Sanchez, 2005). This line of reasoning suggests that a lack of information or knowledge about sustainability issues – such as the dangers of climate change or the scope of global poverty – accounts for the un-sustainable thinking and behaviour of students. Haines and Donald (2002) refer to this line of argumentation as the ‘information-deficit model’, which assumes that behaviour change mainly fails due to a lack of information. With reference to this problem analysis, educating students about sustainability issues would be the most effective solution. However, to what extent does a lack of interest or understanding constitute the most significant barrier to promote sustainable thinking and behaviour within the student community?

Doppelt’s (2010) “5-D staged approach to change” suggests that behaviour change runs through five stages: Disinterest, deliberation, design, doing and defending. According to this model, disinterest is only the first barrier that needs to be overcome. After having acknowledged that a problem exists, people commence thinking in ways to change their thinking and behaviour. Then, people develop concrete plans and implement first steps. In the doing stage, the change process leaves the cognitive realm and becomes more apparent in new behaviours. In the final stage, people behave and think in more sustainable ways, but still have to defend their new way of life in light of the unsustainable thinking and behaviour modes endemic within society. Doppelt’s model is very useful, because it breaks up any simplistic dichotomy between unsustainable behaviour on the one side, and sustainable behaviour on the other side. On the contrary, the model illustrates the many steps involved in the process of moving from awareness towards action, as well as the possible oscillations that can occur between the steps.

To help people move along these stages to develop more sustainable forms of thinking, Doppelt (2010) mentions three important success criteria. First, it is important

to know the stage of change in order to apply appropriate strategies, which are different for each stage. This insight could be applied to the problem of engaging the student community. For instance, the model suggests that groups which experience that their projects mainly ‘preach to the choir’ should rethink their approach. This phenomenon occurs when projects aim to overcome disinterest – e.g. by showing a movie about the dangers of climate change -, but mainly attract people who are already in the deliberation or design stage. For this audience, it would be more helpful to conduct events which help people reflect about their personal attempts to change their behaviour, to help them design an action plan or make a public commitment (Doppelt, 2010).

Secondly, Doppelt’s model suggests that students would need to experience a tension between their current way of life and a vision of how they want to live. However, despite this tension people still need to feel able to bridge this gap between the current reality and their vision. The tension should not be too overwhelming, so that people feel incapable of overcoming the gap. For instance, Norgaard’s (2006) research illustrates that creating a tension between the current reality and the future, while still maintaining a feeling of self-efficacy is a balancing act. In her ethnographic study in a Norwegian village, Norgaard (2006) describes that thinking about climate change raised “emotions of helplessness”, because people felt incapable faced with the immense task of aligning governments on a global scale to reach an agreement. Hence, campaigns playing with gloom and doom scenarios of climate change or environmental disruption would be exactly the wrong message to send out to this audience. This implies also for sustainability student groups that they should investigate alternative ways to create this tensions, such as experiment with positive visions about how a sustainable future could look like. In this way, groups could capitalize on the gravitational pull of a positive vision to strive towards, rather than a negative scenario to escape from.

As a third success factor to move along the change gradient, Doppelt (2010) accentuates that at the initial stages people need to perceive two benefits for every disadvantage they experience when changing their behaviour. Changing one’s thinking and behaviour takes energy and time, and involves risks. Consequently, student groups should strongly advocate the benefits students might obtain when living a more sustainable life, in order to justify the efforts they have to make. Nonetheless, students

might overlook the importance of emphasizing the benefits of changing the behaviour, because they are already convinced of its benefits. People who strongly advocate one position and are very familiar with a topic, easily fall into what Heath and Heath (2007) call the “knowledge trap” (p. 5). This concept describes a situation in which our own knowledge prevents us from adequately explaining the benefits of an idea to other people. Also student groups might be victim of this knowledge trap, because for them it is obvious why people should refrain from eating meat or driving a car. Nonetheless, before starting campaigns to promote people at the disinterest or deliberation stage to adopt similar behaviours, the incentives for these new behaviours should be strongly emphasized.

Nonetheless, groups should not only advocate behaviour change, but also realize how students’ behaviour is intrinsically linked to the design of the buildings they use. For example, one student mentioned that it was difficult to encourage students living in residence halls to save energy and water, because they had no obvious incentives. In the words of the student, this mainly occurred “as students do not pay their fair share of the cost, but an amount averaged over the whole of the halls.” According to this problem analysis, a structural redesign to make students pay for their water and energy bills would be a more direct incentive to change behaviour, rather than trying to educate students. Hence, developing the right incentives for sustainable behaviour could be a more successful strategy than rising awareness, because these incentive schemes make the benefits of sustainable behaviour tangible and can also automate the behaviour better (McKenzie-Mohr & Smith, 1999). This would mean for student groups that promoting awareness and behaviour change among students should not leave out the importance of the sustainable design of buildings in the first place. A double strategy of advocating for more sustainable buildings along with projects to address behaviour change could be one way to address this issue.

In conclusion, this section suggests that groups face challenges related to university bureaucracy and resistance, inter-group competition and student disinterest. As a main strategy to implement changes within the institution groups collaborate with supportive actors within the institution. Other groups maintained their outsider status and tried to create pressures from outside the institutional structure. Nonetheless, attempts to

generate change from outside or inside the university system are associated with different trade-offs, which vary depending on the different context of each university. Moreover, only one student group experienced direct competition with another group. Overall, respondents mentioned that they worked or intended to collaborate with other student groups. However, a successful collaboration is linked to certain necessary conditions – such as equal group status –, which should be taken into consideration. Finally, the section found that student groups mainly attributed the difficulty of engaging students in more sustainable behaviours to a lack of disinterest within the community. However, research suggests that disinterest might only be one barrier preventing behaviour change.

Conclusion

This qualitative study set out to examine the projects, challenges and coping strategies of sustainability student group. The results of the data analysis suggest that these groups implement three types of projects: First, *student-to-student outreach* increase awareness for sustainability issues and promote behaviour change within the student community. Secondly, students lobby for change at the university level through *student-to-university advocacy*. Thirdly, students collaborate with stakeholders inside the university to implement different *student-and-staff projects*. These types of projects further illustrate the contributions sustainability student groups make to the sustainability transformation of universities, namely through the education of peers, holding the university accountable and working as change agents to implement tangible sustainability projects.

Next, the results propose that groups face five internal challenges, namely a lack of people, knowledge, time, funding and difficulties with establishing an efficient internal organization. People appeared as the most valuable resource of a student group, as members act as mediating factors on the other challenges. A lack of commitment and continuity emerged as the two most important factors influencing the amount and kind of people involved within the group. Several aspects of these internal challenges were investigated more closely, such as the role of knowledge as a barrier for activism or as a power which groups could utilize to influence the discourse about sustainability at their university. Another issue which was discussed more in-depth was the role of leadership within a group: The success of projects appears to heavily depend on the contributions of

a few key members. However, these members might not like to see themselves in the stereotypical role of ‘leaders’, but try to inspire collective leadership, which nonetheless might fail due to a lack of commitment and input from other members.

Groups implemented multiple strategies to address these internal challenges. These strategies can be divided into attempts to mobilize resources from the outside or to better deal with internal resources. For instance, groups tried to generate additional income by selling more sustainable study material, or to spend their money more wisely. Further possibilities to build-on existing strategies were mentioned, such as collaborative planning sessions to develop common goals or the development of recruitment messages which specifically appeal to the general motivations of volunteers. In addition to improved outreach efforts, it could be beneficial for groups to specifically develop ways to increase the commitment and continuity of members. Enhancing group identification or personal and collective efficacy could be two strategies to enhance commitment.

In addition to those internal challenges, respondents mentioned external challenges associated with inter-group competition, university bureaucracy and resistance, as well as disinterest among the student community. Competition should only be weighted as a minor challenge as only one respondent mentioned this problem. Most respondents mentioned already existing collaborations or intentions to establish partnerships with other student groups. However, almost all respondents trying to implement changes at their university reported problems associated with bureaucracy or resistance. The outsider status of student groups emerged as one of the main reasons for their inability to quickly advance changes within the institution. Alliance building and incorporation of the initiative into the institution emerged as two strategies to obtain a certain insider status. Several strategic trade-offs were discussed associated with working inside or outside the university’s structure. For instance, groups that work inside the system might be more successful in focusing on incremental changes, whereas outsider groups might more effectively pressure for structural changes.

Then, disinterest among the student community was mentioned as a third external challenge to promote awareness rising and behaviour change. Despite the fact the wider academic literature values a lack of awareness as a major obstacle towards promoting more sustainable lifestyles, several researchers have become increasingly critical of this

perspective. Disinterest appears to be only one barrier to adapt more sustainable behaviours. Overall, promoting behaviour change is a complicated task which requires among others a tension between the current state of affairs and a future vision, as well as a strong emphasis on the benefits associated with the new lifestyle. Especially groups which engage in *student-to-student outreach* should take the complexity of this issue into consideration, to further improve their efforts to advance sustainability at their university.

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