

Chapter 3.

Promoting Sustainability to First-Year Students

Anna Sangree, Ashley Colón, Bree Coleman

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Introduction:

The American College & University Presidents' Climate Commitment, signed by President Ayers in 2007, emphasizes the importance of colleges and universities lowering their carbon footprints through minimizing waste, and involving students in sustainability-focused education (ACUPCC, 2014). With the University of Richmond's date for carbon neutrality set for 2050, the university recognizes the need to take immediate action. In order to meet this goal, the university seeks to increase use of public transportation, improve recycling, and increase energy efficiency on campus.

The university provides transportation resources, recycling bins next to most trashcans in popular student locations, and full time staff working for the Office of Sustainability. However, the many resources provided by the university will not facilitate movement towards the campus sustainability goals if students do not participate. According to the most recent survey on campus, 42% of students at the University of Richmond believe that human activity is causing climate change (See Chapter 1). Still, students do not seem to correlate their everyday actions with rising levels of greenhouse gasses. In order to target students on campus, we have structured an informative and engaging sustainability education module to take place during First Year Seminar classes. This module aims to inform students about the impact their actions have in furthering progress of their campus towards the 2050 goal.

Finally, encouraging student sustainability, through the first year seminar and through the first-year packing list, is not only important for campus sustainability goals, but also for society. If young people learn to live sustainably, they will carry these actions with them for the rest of their lives. College graduates also will be leaders in our country's future organizations. Those educated on sustainability will bring their

knowledge and practices into the workplace (AASHE, 2010). Small efforts to promote sustainability, like our proposed first-year initiative, contribute to long-term attitudinal change.

Why UR should target first-year students?

Targeting students before they enter and when they first are assimilating to university life helps perpetuate a culture of campus sustainability (Stewart, 2010). First-year students are most susceptible to new information and still have their entire college career ahead of them.

When students first arrive on campus, they still have strong place attachments to their homes. These place attachments define their attitudes and behaviors towards sustainability. For example, many freshmen come from suburbs where public transportation is not readily accessible. These students, therefore, still primarily associate a personal vehicle with transportation. During their first year, however, students begin to create place attachments to the University of Richmond and these attachments will begin to shape their attitudes. If the university as a whole demonstrates sustainable actions and attitudes to freshman, we believe the students will assimilate these behaviors into their routines, and therefore, continue a culture of sustainability to future students. The university must incorporate sustainability into students' first year experiences so students will identify the school, and then themselves, as more environmentally conscious.

Realizing the importance of freshman, many schools incorporate sustainability into orientation programs (American University, 2014; Green Mountain College, n.d.) (Ithaca College, n.d.). At University of Richmond, the current orientation activities rigorously occupy freshman's time, so adding a sustainability module to orientation seems unrealistic. We therefore chose to add our module to first-year seminars. Modules in a classroom setting encourage engagement and participation. Incorporating our module into hall meetings led by resident assistants, another option, would not have reached as many students in as engaged an atmosphere.

As a supplement to our project, we decided to add sustainable updates to the "Things to Bring" list on the housing website. Freshman preparing to furnish their college

dorm rooms frequent this page. We believed updating the list, would be a low effort, high impact project encouraging freshman sustainability.

First Year Seminar Module

Layout

Our First Year Seminar module will be a short, in class, presentation on important aspects of campus sustainability. The module contains both a 20-minute and 50-minute section to provide duration options to professors. The 20-minute session is ideal for an addition to a class period, while the 50-minute session can substitute for a class missed by a professor needing to leave campus for a conference. Eco-reps, who are students working for the Office of Sustainability, will conduct these sessions. Eco-reps encourage, through example and education, environmentally sustainable practices amongst their peers.

In both the 20-minute and 50 minute sessions, eco-reps will focus heavily on public transportation and recycling. The session will open with a short introduction to the work done by the Office of Sustainability and lead into a video from the University's sustainability website. The video details how campus facilities handle recyclables and how the recycling process works off campus. Through an activity called 'Recycle-it-Right' eco-reps will address common recycling questions, such as 'Are bottle caps recyclable?' and 'How much food residue is too much?' Eco-reps will provide soda bottles, sandwich boxes, and other items purchased on campus. The session will then introduce students to the University's shuttle system and connecting GRTC bus routes and will inform them about free student bus passes, detailed maps, and online trip planners the university provides. To end the session, eco-reps will facilitate an activity in which students must find a route from campus to a place of interest. This activity will emphasize the variety of nearby locations accessible by bus.

In the 50-minute session, eco-reps will also inform students about climate change and lead a discussion activity to teach students about water and energy conservation strategies.

Recycling Focus

Recycling is an easy way for campuses to reduce their emissions and meet their Climate Commitments. The recycling process keeps waste out of landfills, reducing the amount of land that must go to waste disposal. This process also promotes natural resource and energy conservation by reducing the amount of raw material companies extract.

The University of Richmond has many great informational resources about recycling and proactively encourages students to understand waste. However, while this information is readily available, students may not know how to access it. Students often express confusion towards how to dispose of some items, like candy wrappers, bottle caps, and food residue. While the Sustainability website explains what to do with these items, the information does not reach students. This lack of attention and overall confusion leads students not to recycle properly. A perceived environment of low standards of recycling can make individuals less likely to care about their own habits (Sharp, 2009).

Our interactive module will allow time for students to engage with and ask questions about recycling. Having eco-reps answering student questions provides a positive example and a non-administrative perspective on the importance of waste reduction. Learning from a fellow peer will ease concern that they may be the only students working towards waste reduction (Sharp, 2009). Furthermore, interactive student led recycling activities have been conducted at other universities and have shown positive results (University of Alberta, 2014).

Eco-reps will provide answers to freshman's recycling questions, encourage freshman not to feel intimidated, and show appreciation for freshman's future contributions to emissions reduction.

Public Transportation Focus

Driving a personal vehicle with a single passenger emits a greater amount of carbon over time than a bus carrying a full load of riders. At the University of Richmond many individuals use a car instead of riding a public bus (See Chapter 1). In order to cut emissions, the University of Richmond has availed shuttle and bus services to students. Campus Transportation provides extensive resources for bus use (such as free bus passes,

bus schedules, and GPS bus tracking). Studies show how institution paid bus fares and favorable proximity of on campus student housing to bus stops correlate with high student ridership (Ripplinger, 2008; Brown, 2003). With a central transportation hub, and free bus pass, the University of Richmond already meets the criteria for good bus ridership potential. However, shuttles and GRTC buses are under-used. Students continue to travel in their personal cars due to a discomfort and a lack of understanding around the bus system. The FYS module aims to familiarize students with the GRTC website, campus transportation schedules, and go over how to obtain a free bus pass. Through teaching the first year students how to interact with bus times and routes, our module will foster confidence in and exploration of the bus system. A follow up activity can easily show students destinations of interest. These include locations for dining, entertainment, education, and additional public transportation such as coach buses and trains. Furthermore, the university should project an initial increase in ridership as students follow the actions of peers. Ridership will continue to increase as the first year class demonstrates by example how to utilize the transportation system (Ripplinger, 2008).

Energy Conservation Focus

A study conducted about reducing electricity usage in college dormitories showed that many college students are not mindful of their electricity usage because they do not directly incur the cost of an electricity bill. Student dormitories on the University of Richmond campus consume a lot of energy as students perform their daily tasks. While many have adopted the practice of turning off lights as they leave a room, there are still a great many other sources of energy waste. These include leaving electronics plugged in, energy inefficient appliances, and unmonitored thermostat settings. In our 50-minute session, we plan to cover energy efficient dorm life. Chargers for phones, laptops, e-readers and many other devices will continue to leach energy even when not being used to replenish the battery. Having a Fire Shield surge protector, as per University guidelines, gives students the ability to fully turn off all electronics that are not in use with a single switch. In our updated version of the student-packing list, Energy Star appliances are encouraged as alternatives to conventional fridges and microwaves. We also plan to explain the value of using Energy Star appliances in our 50-minute module.

Lastly, each dorm room has its own thermostat. We will explain how the university provides heating and cooling on campus, and encourage practices such as turning off the A.C unit during vacations. A study showed how the a combination of education, incentives and displays (such as posters in the bathroom to encourage students to turn off the light when they leave) can have a powerful impact on reducing electricity usage in dorms. (Bekkeret *al.*, 2013) Our module will help increase the education aspect of this model and help students become more aware of their energy usage.

Water Conservation Focus

Another area of sustainability we would like to introduce to first year student is water conservation. In our longer, 50 minute, module we would introduce these water reducing tactics in hope supplying the first year students with the skills to effectively conserve their water usage. The average American uses around 100 gallons of water per day domestically. The treatment and delivery of water uses a substantial amount of energy. Scientists project water scarcity will increase in severity all across the globe (Webber, 2008).

The wastewater on our campus produces more than 10,000 tons of CO₂ every year, though this number is decreasing (University of Richmond, 2014). To cut this number further, the university should promote water conservation further and we believe this would be most effectively market to first year seminars. In our first year seminar session, we will include a discussion activity on water conservation, encouraging students to reduce individual water footprints on campus. Eco-reps will encourage students to think about what they can do after sharing information on the amount of water we use.

Packing List

Many first year college students have never lived in a dorm setting before coming to college. This leads to many first year students bringing much more to campus than they will actually need or use. First year students often bring unnecessary items to campus and typically end up disposing of excess at the end of the year because they do not want to store something over the summer that they found unnecessary during the school year. Incoming students also tend to bring unnecessary appliances or electronics

that generate unnecessary electrical waste from unused plugged in appliances using standby power (Meier, 2009). In addition to creating waste, and using unnecessary electricity, students may not consider bringing items that contribute to campus wide sustainability.

In order to update the packing list, we first had to retrieve the old packing list from the university housing website. Once we had the list, we proceeded to remove items we felt unnecessary and add items we believed would promote sustainability amongst first year students. We added a few new items to the list, like a recommendation for energy star appliances and removed other items, like a printer (See Figure 1). Energy star appliances, such as refrigerators, will reduce the amount of electricity used throughout the day, and is especially important as many students opt to have at least one in their room. Removing the printer from the list will decrease the amount of paper waste created by our students, as they will need to use their print credits at one of the many printing locations available on campus. We took our modified list to a meeting with Ms. Carolyn Bigler, the Assistant Director of Student Housing. Ms. Bigler was enthusiastic about our changes to the packing list and our initiative to update it. In our meeting she gave us her suggestions and we finalized a new packing list that is now currently on the university housing website. Though we had originally hoped to add reusable water bottles and recycling bins, we were unable to negotiate those changes. By speaking with incoming first year students, we hope to encourage other students to work on adding other environmentally friendly items to the list in the future. For the end of the 2014-2015 school year, we believe it would be productive to ask rising sophomores what items they felt were unnecessary during their semesters as well as which items they wish they would have brought to campus.

Conclusion

The first-year packing list and first-year seminar module projects have already begun at the university. During the spring semester of 2014, proposed our updated packing list to the housing director. The University of Richmond housing website now displays our team's updated first-year packing list. The list will inform new students in the fall of 2014. We recommend future students talk more to first-year students to find

out what they think they could have or should not have brought to campus. Also, the updated list does not contain the amount of sustainable items we had originally hoped. Future progress could be made in suggesting freshman bring recycling bins for their dorm rooms, as many dorms have a recycling bin only in the hallway which is not always conveniently accessed.

Second, through emailing professors our team members know personally, we have five first-year seminar professors who have agreed to have the sustainability module in their classes next semester. The sustainability coordinator, Megan Litke, has agreed to train eco-reps to lead the modules in the classroom in time for the spring. We hope, at the end of the semester, to propose our updated module to other first-year seminar professors in order to get more participating classrooms. We also hope, with an increasing interest in the module, we will be able to incorporate more conceptual sustainability into the module, like discussion of human population growth, limits on resource consumption and carrying capacity, topics that studies have found assist students to think about sustainability in other course work. (Stewart, 2010).

We believe these steps will make a difference in the sustainability goals of this campus, in the future lives and workplaces of students we reach.

References

University of Alberta. (2014). Sustainability at Orientation. Retrieved April 10, 2014, from Office of Sustainability:
<http://sustainability.ualberta.ca/Events/SustainabilityatOrientation.aspx>

ACUPCC. (2014). Signatory List by Institution Name. Retrieved April 10, 2014, from American College & University Presidents' Climate Commitment:
<http://www.presidentsclimatecommitment.org/signatories/list>

ACUPCC. (2014). Text of the American College & University Presidents' Climate Commitment. Retrieved April 10, 2014, from American College & University Presidents' Climate Commitment:
<http://www.presidentsclimatecommitment.org/about/commitment>

University of Richmond. (2014). Climate Action Plan. Richmond.

Bekker, M. J., Cumming, T. D., Osborne, N. K., Bruining, A. M., McClean, J. I., & Leland Jr., L. S. (2013). Encouraging Electricity Savings in a University

- Residential Hall through a combination of Feedback, Visual Prompts and Incentives. *Journal of Applied Behavior Analysis*, 327-331.
- American University. (2014). *Green Orientation*. Retrieved April 25, 2014, from American University: Washington, DC.:
<http://www.american.edu/finance/sustainability/Orientation.cfm>
- AASHE. (2010). *Sustainability Curriculum in Higher Education: A Call to Action*. Denver: Association for the Advancement of Sustainability in Higher Education.
- Green Mountain College. (n.d.). *Sustainability in Student Life*. Retrieved from Sustainability at Green Mountain College:
http://sustainability.greenmtn.edu/living_learning/beyond_classroom/student_life.aspx
- Ithaca College. (n.d.). *Sustainability Education in Orientation*. Retrieved April 25, 2014, from Ithaca College: <http://www.ithaca.edu/rempevents/orientation/>
- Stewart, M. (2010). Transforming Higher Education: A Practical Plan for Integrating Sustainability into the Student Experience. *Journal of Sustainability Education*, 1.
- Meier, A. (2009). Frequently Asked Questions. Retrieved April 13, 2014, from Standby Power: <http://standby.lbl.gov/faq.html#reduce>
- Webber, M. E. (2008, September 1). Energy versus Water: Solving Both Crises Together. *Scientific American*.
- Sharp L. (2009). Higher education: the quest for the sustainable campus. *Sustainability: Science, Practice, & Policy*
- Jeffrey Brown, D. B. (2003). Fare-Free Public Transit at Universities: An Evaluation. *Journal of Planning Education and Research*, 169-82.
- David Ripplinge, J. H. (n.d.). Longitudinal Analysis of Changes in the Behavior and Attitudes.

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