



Promoting Sustainability to First-Year Students

Anna Sangree, Ashley Colón, Bree Coleman

Climate Change and the University of Richmond: Current Challenges and Future Directions. Earth Week, April 21-25, 2014
Poster produced for Environmental Studies/Geography and the Environment Senior Seminar



Introduction to the Project

Over 700 universities across the United States (AASHE, 2010), seeking to be progressive and containing the resources for change, have partnered together under the American Colleges and Universities President's Climate Commitment to lower their carbon footprints and increase sustainability education on their campuses (ACUPCC, 2014). The President's Climate Commitment includes 7 tangible actions, of which the University of Richmond must follow two or more. With the University of Richmond's date for carbon neutrality set for 2050, advancing these actions is crucial (ACUPCC, 2014). On the list of tangible actions are increasing use of public transportation and increasing energy efficiency on campus. For the university to successfully implement these actions, the university must gain student support for the projects. In order to target students on campus, we structured an informative and fun sustainability education session to take place during First Year Seminar classes. These sessions aim to inform students about the importance of using public transportation, recycling, and conserving water and energy on campus, while also giving students a better understanding of how to participate in these actions. We believe students find public transportation and recycling on campus to be confusing and find water and energy conservation daunting because the university does not properly explain how to use these services and conserve. Our First Year Seminar session will be led by students so first year students will have peer role models. Along with the First Year Seminar session, with the suggestion of the University of Richmond campus sustainability coordinator, Megan Zanella-Litke, we also updated the packing list for incoming first-year students to include environmentally friendly items. We focused on first year students in our efforts because we believe orienting students to sustainability early will allow students to understand for the rest of their time at the university.

Modules

20 Minute Session:

This module is meant to be a short, in class, presentation on important aspects of campus sustainability. It will include:

- > Introduction to Campus Sustainability and the President's Climate Commitment
- > Show video from the Sustainability website about how recycling works on campus.
- > Conduct an activity in which students determine which receptacle to place an item.
- > Show students popular transportation routes, along with what can be found near them.
- > Explain why taking the bus is beneficial and provide tools for making trip planning easier.

50 Minute Session:

This longer session is ideal for a professor who is going out of town or who wants their students to have a deeper understanding of how they can be a part of campus emissions reduction.

- > Simple background on the affects and causes of climate change.
- > Discuss how college campuses contribute to climate change and how they can mitigate.
- > Describe the process of waste disposal and recycling for items discarded at the university.
- > Explain recycling misconceptions and common questions
 - o i.e Should bottle caps be thrown away? Is a box with grease no longer recyclable?
- > Discuss car emissions vs. public transportation emissions
 - o Provide information on free bus passes and online bus routes.
 - o Encourage train or bus transportation home.
- > Discuss waste minimization and water and energy conservation techniques.

Both sessions will conclude with information about the Office of Sustainability and environmental campus organizations, to encourage freshman to get further involved.

Packing List

Problem Observed:

Incoming freshman bring items to campus they later rarely use. This generates unnecessary waste from unused plugged in appliances using standby power (Meier, 2009) and discarded hardly used items. Students also do not bring items contributing to campus wide sustainability, promoting energy efficiency or water conservation.

Solution:

Every incoming freshman reads the packing list when deciding what to bring with them to campus. We decided updating the packing list would encourage sustainable actions for students before they arrive to campus. We found the old outdated packing list on the housing website. We met with the leader of the housing department to change the packing list. We added a few new items to the list, like a mattress pad and removed other items, like a printer (See Figure 1). We also added a link to the sustainability website explaining energy star items, like refrigerators and light bulbs. To the packing list, we had originally hoped to add reusable water bottles and recycling bins but were unable to make these changes. We hope to encourage other students to work on adding other environmentally friendly items to the list in the future.

Recycling

Problem Observed:

Many students express confusion towards recycling properly. They wonder how to dispose of candy wrappers, bottle caps, and food residue. In addition, if the students perceive an environment that is not receptive to good recycling habits, individual students are less likely to recycle (Sharp, 2009).

Solution:

The University of Richmond has many great informational resources about recycling. However, while this information is readily available, students may not know how to access it. Our session will first show a short video from the campus Sustainability Office (Figure 3). This video covers how, and what, can be recycled, while also showing what happens to recyclables after being picked up from campus recycling bins. After the video, we will go over common points of confusion that have even puzzled environmentalists. To do this, we will conduct an activity, called 'Recycle-It-Right', an activity done at other schools (University of Alberta, 2014). Students will be asked to determine the proper disposal of a variety of items commonly purchased on campus. Since the session is led by other students, this will encourage first year students to recycle as they see their peers being knowledgeable and comfortable with the subject (Sharp, 2009).

- Computer, ~~Printer~~
- Desk lamp
- ~~Dry erase message board~~
- TV, ~~stereo~~, microwave
- Sheets for a regular twin (unless you have requested a longer bed which is the x-long twin size).
- Towels, pillow
- Wastebasket
- Small refrigerator (no larger than 4.1 cubic feet)*
- Closet space savers (closets have one shelf for storage)
- Under-bed storage boxes. Clearance approximately 8". Bed may be raised on purchased cup risers or two cinderblocks stacked horizontally. Cinderblocks will be available on move-in day.
- Clothes hangers
- Laundry basket or bag and detergent
- Flashlight and extra batteries (for possible power outages; candles not allowed)
- Surge protector/power strip (must be Fire Shield Brand). Available in the UR Bookstore.
- Extension Cords (must be Fire Shield Brand) Available in the UR Book store.
- Small carry case/wire basket for toiletry items
- ~~Mattress Pad or Egg crate foam~~
- Robe and flip flops for shower (first-year residence halls have hall bathrooms)

*The University is committed to a Climate Action Plan approved in 2010 to reduce our environmental footprint. You may want to consider Energy Star products. For more information, please visit the Sustainability website.

Figure 1. The updates made to the first-year packing list located on the housing website.

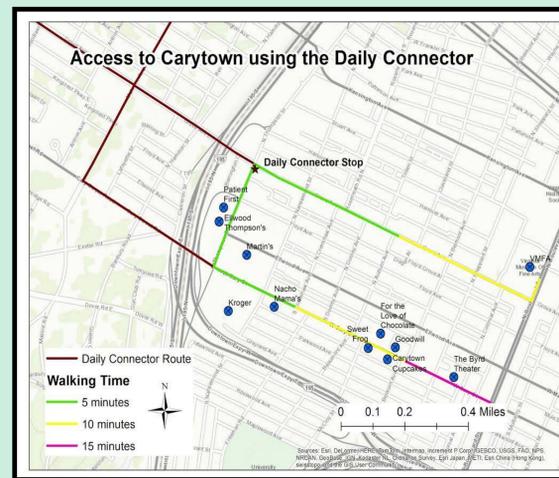


Figure 2. Map of Carytown and the Museum district in Richmond showing walking time to popular places from the Daily Connector bus stop

- Names of Participating Professors**
- Dr. Sydney Watts, English
 - Dr. Mary Finley-Brook, Geography
 - Dr. Feldman, LAIS
 - Dr. Maurantonio, Rhetoric & Communications
 - Dr. Winiarski, Douglas
- Special Thanks:**
- Ms. Litke, Megan
 - Ms. Bigler, Carolyn
 - Dr. Sydney Watts
 - Dr. Smallwood



Figure 3. Image from the sustainability recycling video to be shown in the First Year seminar session.



Figure 4. Slide that will be used in the sustainability first year seminar session to educate students on places that can be reached using the Daily Connector shuttle.

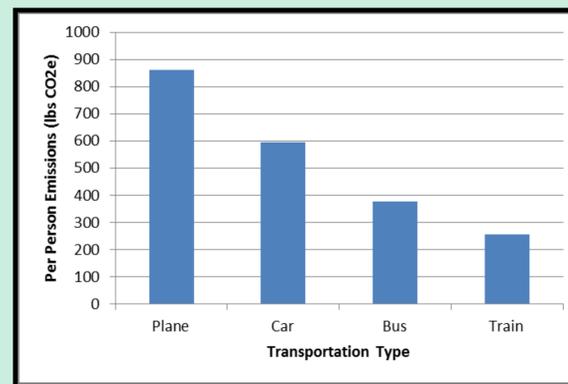


Figure 5. The average per person CO2 emissions from different forms of transportation commonly used by University of Richmond students.

(Source : <http://sustainability.richmond.edu/transportation/index.html>)

Public Transportation

Problem Observed:

University of Richmond and GRTC busses are often seen leaving campus empty. Many students do not know the variety of places the bus system can take them in addition to lacking confidence in trip planning and safety. This lack of confidence stems from inexperience with bus use and an absence of awareness about transportation materials. Students rely on personal vehicles, and in doing so, they increase the CO₂ emissions on campus (Figure 5).

Solution:

Campus Transportation provides students with extensive resources for bus use (such as free bus passes, bus schedules, and GPS bus tracking). University of Richmond students already meet the criteria for good bus ridership potential. Studies have shown institution paid bus fares and favorable on campus locations (student housing, nearby bus stops) correlate with high student ridership (Ripplinger, 2008; Brown, 2003) Our aim is to dedicate a portion of both the 20 minute and 50 minute sessions to showing students locations accessible by bus. These include locations for dining, entertainment (Figure 2 & 4), education, and additional public transportation such as coach buses and trains (Figure 5). We will then familiarize students with the GRTC website, campus transportation schedules, and GRTC phone app. By having student peers lead the session, we hope to foster the security in and understanding of public transportation on campus. Furthermore, as students follow the actions of peers, a slight increase in ridership should be expected. Eventually, even more students likely will feel comfortable riding the bus after watching other students use the transportation system (Ripplinger, 2008) .

Water Conservation

Problem Observed:

The average American uses around 100 gallons of water per day domestically. The treatment and delivery of water uses a lot of energy. On our campus, wastewater produces more than 10,000 tons of CO₂ every year, though, thankfully, this number is decreasing (University of Richmond, 2014). To cut this number further, however, the university should promote water conservation.

Solution:

In our first year seminar session, we will include a discussion activity on water conservation, encouraging students to think about water usage and how to reduce individual water footprints on campus. We will encourage students to think about what they can do after sharing information on the amount of water we use.

Energy Conservation

Problem Observed:

While many students have adopted energy saving practices, like 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.

Solution:

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 is outfitted with its own thermostat. We will explain how heat and cooling are supplied to campus, and encourage practices such as turning off the A.C unit during vacations. Many college students are not mindful of their electricity usage because they do not directly incur the cost of an electricity bill, however, education, incentives and displays can powerfully impact reductions in dorm energy use (Bekker, Cumming, Osborne, Bruining, McClean, & Leland Jr., 2013). Our module would help increase education and hopefully help students become more aware of their energy usage.

Conclusion

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. Sustainability-educated college graduates are also likely to have strong leadership roles in their future organizations and therefore, will bring sustainability into the workplace (AASHE, 2010). Though long-term goals, like societal sustainability, sound unrealistic, small efforts to increase sustainable actions are where attitudinal change begins.

References

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

AASHE. (2010). Sustainability Curriculum in Higher Education: A Call to Action. Denver: Association for the Advancement of Sustainability in Higher Education.

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>

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.

Meier, A. (2009). Frequently Asked Questions. Retrieved April 13, 2014, from Standby Power: <http://standby.lbl.gov/faq.html#reduce>

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

Webber, M. E. (2008, September 1). Energy versus Water: Solving Both Crises Together. *Scientific American*.

David Ripplinger, J. H. (n.d.). Longitudinal Analysis of Changes in the Behavior and Attitudes.

Jeffrey Brown, D. B. (2003). Fare-Free Public Transit at Universities: An Evaluation. *Journal of Planning Education and Research*, 169-82.

Sharp L. 2009. Higher education: the quest for the sustainable campus. *Sustainability: Science, Practice, & Policy* Office of Sustainability, University of Richmond

Student Housing, University of Richmond

RiseGRTC.com

Transportation, Busses and Shuttles, University of Richmond