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## Call to Action: Climate Change is Calling

Elizabeth MacCoy

*Pepperdine University*, [elizabeth.maccoy@pepperdine.edu](mailto:elizabeth.maccoy@pepperdine.edu)

Timothy Good

*Pepperdine University*, [timothy.good@pepperdine.edu](mailto:timothy.good@pepperdine.edu)

Sarah Fischbach PhD

*Pepperdine University*, [sarah.fischbach@pepperdine.edu](mailto:sarah.fischbach@pepperdine.edu)

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# Call to Action: Climate Change is Calling

Elizabeth MacCoy, Timothy Good, & Sarah Fischbach, Ph.D.

## Abstract

The sustainability movement found in many popular companies (i.e. Patagonia, Toms Shoes, Rareform) promotes helping the changing climate as part of their marketing strategy. Our research begins to uncover the benefits of these movements that shape student's thinking towards sustainability. This study aims to evaluate sustainability on the campus of Pepperdine University from the students' point-of-view after participating in a sustainability project in marketing classes. A convenience non-probability sample of 75 participants engaged in the quantitative Qualtrics online survey. Our results reveal that Pepperdine students who participated in the marketing campaign consider sustainability important, have positive attitudes toward the environment and participate in sustainable behaviors. Grounded in transformative learning theory, we provide a call to action for students at Pepperdine University as a means to engage in the changing sustainability climate.

*Keywords:* Sustainability, Transformative Learning, Single-use Plastics, Call-to-Action

## Introduction

For the past four years, The University of California in Santa Barbara (UCSB) has prided itself on being a plastic-free campus. UCSB offers one of the oldest environmental study programs in the country, and has spent the last four years expanding sustainability efforts across their community. UCSB joins a list of several schools across the world who all take part in the Plastic

Pollution Coalition that centers around reducing plastic use. In order to raise awareness for their participation in the Plastic Pollution Coalition, UCSB distributed free copies of the book *Moby Duck*, which highlights the horrors of ocean pollution. Additionally, a giant rubber ducky was built out of trash found in the ocean and displayed on campus to supplement the book distribution (Bezark, 2015).

The reason the efforts put forth by the students at UCSB were so successful was largely due to the fact that it gave the public a visual representation of the damage caused by the plastic waste. It is easy to claim ignorance when it comes to pollution and assume that a little plastic here and there would do no harm. However, the creation of a giant rubber duck constructed purely of trash collected from the ocean illuminates the horrifying reality of our excessive plastic use. This terrifying depiction of ocean pollution not only educated the public, it sparked a desire for change.

UC Santa Barbara's initiatives to reduce plastic use help connect community efforts of reducing plastic to the curriculum of the environmental study programs. Students rallying around the Plastic Pollution Coalition not only promotes the need for a plastic reform on campus, but in the Santa Barbara community as a whole. The idea behind the movement is that the actions taken by the students will inspire the actions of members of the Santa Barbara community who have similar environmental concerns but are unsure of how to properly address them. The students of UCSB serve as an example of how

these environmental issues can be addressed, and the actions of those in the community follow (Bezark, 2015). Our call to action is to have Pepperdine students take action towards the changing climate.

### **Review of Literature**

#### **Sustainability**

Environmental issues should be the core of learning in higher education, especially coastal universities. College students not raised on the coast may act similar to tourists when attending college, and therefore engage in almost the exact same activities tourists engage in. Some of the detriments tourism brings to coastal environments that the article mentions are mangrove forests and seagrass meadows have been removed to create open beaches, tourist developments such as piers and other structures have been built directly on top of coral reefs, and nesting sites for endangered marine turtles have been destroyed and disturbed by large numbers of tourists on the beaches (Marinespecies.org, 2019). Taking it a step further, tourists and students alike, have a 'short-term mindset' when visiting coastal regions. This mindset brings about phrases that may sound like, "I'm only here for a short amount of time so my footprint won't be as impactful as someone else who lives here permanently" or "It doesn't really matter if I think about sustainability and the environment because my support or non-support won't make a difference" (LA Times). When, in reality, the ocean is one of the most important things on the earth.

The ocean is a necessary part of human life and often times it is forgotten that what we put into the earth, is what we get out of it. "Ocean services is being subjected to human activity that

is having a measurable impact in reducing ocean productivity" (A Blueprint for Coastal and Ocean Sustainability). So what exactly does the ocean do and how are we supposed to sustain it? The ocean provides over 50% of the world's oxygen, covers 70% of the earth's surface which in turn regulates our climate and weather, \$282 billion in goods and services for the U.S. economy, medicine, and food just to name a few (National Ocean Service). Being sustainable for the cause of the ocean impacts human health, the food we eat, and the animals that call the ocean their home. In the past few decades, humans have managed to dump tons of waste into the ocean that is now building up into what the National Ocean Service calls plastic islands. Plastic islands are huge patches of plastic in the ocean that contain higher levels of trash than surrounding areas (GreenMatters). These islands are the source of plastic toxins entering the oceanic food chain, and from that they impact humans because we ingest the toxins the animals are exposed to. According to a study from Geology and Human Health, humans have a tendency to be irresponsible about cleaning up after ourselves, and that won't float for much longer. We don't realize that this problem starts with the individual.

#### **Theory of Transformational Learning**

Transformative learning and change does not happen overnight. Transformative learning involves experiencing a deep structural shift in the form of thought, feelings and actions of an individual (Kalsoom and Khanam 2017). In order to bring such change, sustainability teaching and learning must move beyond the traditional styles of education that will influence intellectual rigor, rationality and transfer of knowledge in the education process (Burns, 2015). While many

students have been active in the sustainability movement, a sustainability focus has not necessarily been reflected in college curriculum and teaching practices, where it could have an even greater impact on future leaders (Burns, 2015). Any process that builds on the modification of behavior goes through a transformational process. The theory of transformation states that you must go through small incremental changes receive by in and we collaborated with an emerging environmental program established in western coastal regions. For example, effective June 2018, the city of Malibu passed a ban on plastic straws, plastic stirrers or plastic cutlery (City of Malibu) as well as plastic bags and plastic sand bags (<http://www.malibucity.org/861/Plastic-Bans>). According to Burns (2015) it imperative to empower learners to become citizens who know how to understand and address problems such as the “no plastics please” project in a systematic and intelligent process. As with any group project, working collaboratively and physically in an active problem-solving process can engage the students with the living world in a more sustainable way (Burns, 2015).

As an initiative to engage the discussion on campus, the students in marketing courses developed marketing campaign focused on reducing the use of plastic straws (Example in Appendix A). During Fall 2018 and Spring 2019 students worked with the city of Malibu environmental sustainability analysts and the campus Green Team to promote environmental concerns. The involvement includes watching a short video by Sea Turtle Biologists (2015), presentation on Sustainability by the campus Green Team, as well as gathering City of Malibu

information and making flyers. One of the most interesting elements of the project is that students were forced to promote environmental issues. They may or may not be concerned with sustainability as a consumers, however, their exposure to the service learning project may influence their perceptives. Transformative learning involves shift of our understanding between our relationships with other humans and the natural world and our sense of the possibilities for social justice and peace and personal joy” (Kalsoom & Khanam 2017).

### **Hypotheses and Research Questions**

Some universities have put together initiatives (i.e. UCSB) to build sustainable awareness on their campus through the transformational process. This study seeks to expand the knowledge on our own campus to further explore the level of importance for sustainability, pro-environmental and sustainable behaviors. We propose that students who participated in the in-class service project at Pepperdine University will perceive sustainable practices at a higher level, be more pro environment and have more sustainable behaviors. Based on the above literature we propose the following hypotheses and call to action:

H1: Students at Pepperdine University put a stronger level of importance on sustainable practices than the average consumer.

H2: Students at Pepperdine University have a higher level of pro-environment perception than the average consumer.

H3: Students at Pepperdine University have a higher level of sustainable behaviors than the

average consumer.

Call to Action: Increase sustainable practices on the Pepperdine campus through incremental actions.

### Method

A student sample of 75 participants (50 female) with the majority of the participants holding Junior status (50%), and the rest of the participants as follows: Senior (20%), Sophomore (25%) and Graduate (5%) participated in our survey that assessed sustainable behaviors, pro-environment and household energy usage. The online questionnaire was distributed to students in marketing classes through the BA355 Pepperdine courses page as an email link during the Spring semester 2019. The electronic survey system Qualtrics was used to create and administer the questionnaire. There were no other materials needed for the study resulting in a low cost and environmentally friendly implementation.

### Measures

The questionnaire used in this study was made up of 20 items in total. The first question was used to gain the participants' informed consent. All of the measures were modified from the original scale developed by Ro et al (2017) sustainability measure scale.

**Importance of Sustainability.** Overall importance of sustainability was assessed with self-report measures. The participants were asked to response to Likert style questions to assess the participants' overall level of importance towards sustainability. The statements were as follows, "Sustainability is important to me" and "Sustainability is important to my

household," participants were asked to respond on a scale from (1 - strongly agree, to 7- strongly disagree).

**Pro-environment Attitude.** To further explore sustainability, pro-environment scale questions were used to explore environmental attitudes. To measure attitudes to sustainability we used 7 self report questions including the following examples "Life is too busy to worry about energy," "It is worth it for me to use less energy," and "I worry about the use of fossil fuels," participants were asked to respond on a scale from ((1 - strongly agree, to 7-strongly disagree).

### Energy Consumption Behavior.

Student energy consumption behaviors were measured using 3-item, 4 point scale to assess participants' perception in regards to others (1-More, 2 -Similar, 3- Less, 4-Don't know). The three categories of energy consumption behaviors included trash generated, water usage and utility usage (i.e. electric, natural gas).

**Sustainable Behaviors.** Participant sustainable behaviors were using 8-item, 5-point Likert scale to assess perceptions of their own self report behavior (1-Always, 5 - Never). These items include such questions as "Leave electronics on when not in use," "Recycle items collected in the community," and "Leave car idling for 2-minutes or more."

**Demographic.** Participants were asked to report gender, year in school, number of people in their household and the city/state in which they call home.

### Results

H1: The first hypothesis predicted that Pepperdine students put a stronger level of importance on sustainable measures. The

evidence supports our hypothesis because our results show the following means and standard deviations for individuals ( $M=2.00$ ;  $SD=1.05$ ) and as a household ( $M=2.67$ ;  $SD=2.67$ ). A one-sample t-tests (test statistic= 2; agree) shows that the level of importance for sustainable measures was significant for individual Pepperdine students ( $t[74]=8.22$ ;  $p<.00$ ) as well as for the households in which they live ( $t[74]=2.21$ ;  $p=.03$ ). The one sample t-test shows a higher level of significance for the individual than the households in which the students self report which may represent the student living arrangements and the lack of sustainable practices as a household activity.

H2: The second hypothesis predicted that students at Pepperdine had a higher pro-environment attitude than the average consumer. We compiled a mean statistic for the 7 scale questions ( $M=2.63$ ;  $SD=.88$ ). A one-sample t-test (test statistic = 2.0; agree) shows that the pro-environment practices was significant for the individual Pepperdine student ( $t[74]=2.63$ ;  $SD=.88$ ). Looking more closely at the individual questions, one that did not have a higher average included “I try to be knowledgeable about our country’s energy policies” ( $M=3.75$ ;  $SD=1.66$ ) and “It is worth it to me for my household to use less energy, in order to help reduce our country’s dependence on foreign oil” ( $M=2.95$ ;  $SD=1.46$ ) which may result from the long term impact students have on the communities they live in. This hypothesis was supported.

H3: The third hypothesis predicted that students at Pepperdine had a higher level of sustainable behaviors than the average consumer. We compiled a mean statistic for the 8 scale questions ( $M=3.04$ ;  $SD=.49$ ). A one-sample t-test (test statistic = 2.0; agree) shows that the sustainable behavior practices was significant for

the Pepperdine students that participated in the study ( $t[73]=18.16$ ;  $SD=.49$ ). Taking a closer look at each of the sustainable behaviors that had the most significant include taking 12-minute showers are less ( $M=2.96$ ;  $SD=1.32$ ), recycle items collected by my community ( $M=2.74$ ,  $SD=1.35$ ), print double-sided ( $M=2.69$ ;  $SD=1.20$ ) and turn off unused electronics ( $M=2.88$ ,  $SD=1.24$ ). This hypothesis was supported.

### Discussion

The findings of this study support the claim that students who participate in a sustainability project on campus in the marketing courses found sustainability more important, engaged in pro- environmental attitudes, and practiced sustainable behaviors. In addition, these students have gone through a transformative learning process that allows them to become involved in a deep structural shift in the form of thought, feelings and actions of an individual (Kalsoom and Khanam 2017). Similar to the City of Malibu single use plastics ban, students have empowered themselves to become citizens who know how to understand and address problems (Burns 2015). Although the sustainability project is not the main focus of the course, students were able to develop improved sustainability attitudes that might not have been the case without the forced engagement in the project.

In order to provide a more robust study, we would need to conduct pre-and-post survey analysis to ensure that there were no confounding factors in the study. Our study uses one-sample t-tests with a set test-statistic based on the scales provided in the study, however it would be wise to conduct the same questionnaire to students who have not participated in the study and compare it

across the university. In addition, it would be valuable to conduct a parallel study not related to anti-straws and perhaps towards clean water or energy reduction to see if there were similar study results.

Through each students' small steps toward reducing plastic consumption, we can positively say that the plastic that ends up in the ocean and intoxicating the animals, will be lowered. From that, the food will be healthier for humans to eat, the air will be cleaner, and our climate and weather will be more stable.

Moving forward with these sustainable initiatives, we provide a call to action for students here at Pepperdine. The following steps are a guide to continue the sustainable discussion climate change is calling on our campus here at Pepperdine University.

Step 1: Watch the Video "Open Your Eyes" by Jeff Bridges which gives an overview of the damage on our planet and the small changes that we all can make to make a difference.

<https://www.youtube.com/watch?v=9zmvqIkIM-A>

Step 2: Take the Pledge to reduce single-use plastic waste found on the Plastic Pollution Coalition website:

<https://www.plasticpollutioncoalition.org/take-action-1>

Step 3: Encourage others to reduce single-use waste. Small changes can make a big difference. Here are some of the pro-environment companies that the Plastic Pollution Coalition recommends: Steelys Drinkware (<https://steelysdrinkware.com>), Ukonserve (<https://www.ukonserve.com>), ToGoWare (<https://www.to-goware.com>), and Life Without Plastic (<http://lifewithoutplastic.com/plastic-pollution-coalition-store/>).

We are sure there are many more wonderful companies out there and we recommend everyone to take small steps and make the change.

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**Appendix A**

Student Flyer Example, Fall 2018, BA 355



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