Two graduate students, who are members of the Stevens Sustainability Coalition (SSC), in collaboration with Sarah Gilly of Gotham 360 (Energy & Sustainability consultant to Stevens), developed and administered a sustainability literacy assessment (SLA) for distribution in January 2020. Questions were adopted from SLAs used by high-ranking AASHE universities, including Stanford University and UC Irvine; a project developed by an alumnus of Stevens Institute of Technology (SIT) for a graduate course; and by Gotham 360. Finally, questions were generated and organized by the two aforementioned graduate students, with the institution modifying the survey and sampling methodology to be more straightforward, then distributed it.

The sample was collected between January 24, 2020 and February 6, 2020 by emailing the student body, both graduate and undergraduate. Results were entirely and completely anonymous. The survey was composed of 10 questions and included two additional sections: (1) demographic identification and (2) an optional survey with an opportunity to provide comments.

A total of 356 responses were registered, indicating a response rate of 5.74%. Variables such as age, gender, major and school were collected. Some results include:
1. Approximately 70% of the sample accurately answered, "Life-cycle assessment (LCA) is a tool that evaluates the…" by choosing answer choice B, "Environmental, social and economic impact of a product or service system from conception to disposal."
2. Approximately 36% of the sample accurately answered choice D, "Reenergize" when asked, "Of the following, which isn't part of the new paradigm redefining the 3R's of the Zero Waste Movement?"
3. Out of the students who replied "Not important" (1) to the survey question "How important was sustainability to you prior to attending SIT," 22% replied that sustainability, now, as an SIT student is "Very important" (5). In addition, of the students who replied "Low importance" (2) to the survey question "How important was sustainability to you prior to attending SIT," 21% replied that sustainability, now, as an SIT student is "Very important" (5).

It is clear we need to educate students on sustainability, since LCA is becoming widely used as a technique for cost-benefit analysis, yet we are left with a relatively low score for result #1. This especially holds true for result #2, given how prominent the zero-waste movement is becoming.

However, it seems that most students who didn't find sustainability important before attending SIT still do not feel that it is particularly important. In other words, they don't passionately respond that, now that they are SIT students, sustainability is "Very important" (5). Even though there is an active environmental engineering program and a growing sustainability management program, the bigger message has not gotten across to the broader student body. Because sustainability encompasses so many major concerns in today's world, there is tremendous opportunity for SIT

to continue to work to increase sustainability literacy, educate the student body on existing and future sustainability practices on campus, and to motivate the student body to be citizens of the world concerned about sustainability.

Since this is the first year that SLA was distributed, we cannot measure change over time, but we will begin to measure so in coming years. Moreover, SIT will include these same questions on the senior exit survey to measure changes in sustainability literacy between students arriving and students nearing the end of their time at SIT. In order to account for "cheating," the questions will be shuffled randomly using a random sequence generator and the order of the answer choices will be randomly shuffled as well.

On the next page, please find the SLA, including the demographic questions and optional survey included in the email sent to the student body.

A. Email Announcement

Stevens Institute of Technology is committed to sustainability. We recognize our responsibility to society and our planet, and in the face of climate change, we must make decisions that better everyone. Given our commitment and Stevens' position as a leading technical institution, we must prepare tomorrow's leaders to be technically proficient in sustainability.

To measure the general knowledge of sustainability in our student body, the STARS Steering Committee, with input from the Stevens Sustainability Coalition, has created a brief, 10-question Sustainability Literacy Assessment (SLA). The results of the SLA will help guide Stevens in developing its sustainability programs. We ask that you take about 5 minutes of your time to complete this assessment before next Friday, January 31st.

Please complete the assessment by clicking here.

If you wish to be notified about your performance on this assessment, please provide your email address where indicated at the end of the assessment. Summary results may be shared with the campus community, but individual results will only be seen by the committee.

Thank you for joining us in making Stevens a more sustainable institution!

B. Sustainability Literacy Assessment

B1. Identification

1. What is your age?
2. How many semesters have you been at Stevens?
3. What school are you in?
    a. School of Engineering
    b. School of Business
    c. School of Systems & Enterprises
    d. College of Art & Letters
4. Are you…?
    a. Undergraduate
    b. Graduate
    c. Graduate certificate
5. Which of the following best describes your enrollment?
    a. Part-time
    b. Full-time
    c. Online
6. What is your major?

B2. Questions

Please do not feel ashamed to answer "I don't know." Remember: This is not a graded exam, and your responses are entirely anonymous (we do not know your name). This will assist us in better understanding the knowledge base of the student population.

Which of the following refers to the "triple bottom line," often used by businesses in their sustainability practices?
- Economic growth, Compliance, Stakeholder inclusion
- Prevention, Protection, Partnerships
- People, Planet, Profit
- Water and waste management, Renewable energy use, Land use
- I don't know

Which of the following is an asset that nature provides, free of charge, used by humans in economic growth and development? (This term is known as natural capital.)
- Water
- Concrete
- Glass
- Cell phone

Life-cycle assessment (LCA) is a tool that evaluates the…
- Environmental impact of a product at the extraction of the raw materials used
- Environmental, social and economic impact of a product or service system from conception to disposal
- Social impact a product has on a city or municipality when realized
- Life expectancy of a country
- I don't know

Which of the following accredits a business for sustainable activity?
- EPA
- GRI
- IRS
- SEC
- I don't know

Which of the following foods is the most carbon-intensive to produce?
- Chicken
- Fish
- Red meat
- Vegetables
- Fruits
- I don't know

What is the most common reason that an animal becomes extinct?

Invasive and/or abundant species disrupt their ecosystem's function.

Their habitats are being destroyed by climate change.

Pesticides are making their habitats uninhabitable.

Hunting is killing them in unprecedented numbers.

I don't know

Which of the following is a renewable energy source? (Select all that apply)

Oil

Geothermal

Coal

Natural Gas

Wind

Solar

Nuclear

Hydroelectric

I don't know

Which of the following is not always a part of a business' supply chain?

Extraction

Production

Reverse logistics

Consumption

I don't know

Of the following, which isn't part of the new paradigm redefining the 3R's of the Zero Waste Movement?

Refuse

Reduce

Reuse

Reenergize

I don't know

Which of the following is not a global warming threshold we must stay below to avoid pushing many of our natural ecosystems past a dangerous turning point?

3.0° C

1.5° C

1.0° C

2.0° C

I don't know

C. Survey (Optional)

Considering the themes of sustainability presented in the SLA, please answer the following questions using a scale of 1 to 5, with 1 being not important and 5 being very important.

1) *How important was sustainability to you prior to attending SIT?*
2) *How important is sustainability to you now as a SIT student?*
3) *As a student on campus, how important is it to you to make an effort to reduce energy consumption?*
4) *As a student on campus, how important is it to you to make an effort to reduce water usage?*
5) *As a student on campus, how important is it to you to make an effort to recycle?*

If you have other ideas for campus sustainability initiatives, please list them here: