Cultivating Consciousness: Exploring Sustainability Literacy at CSULB

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Introduction & Methods

In our age of anthropogenic-driven climate change, knowledge of sustainability is vital. The importance of sustainability literacy is especially true for college students, as developing a climate-conscious lens in university can facilitate the prioritization of sustainability throughout professional life. The CSULB Climate Action and Adaptation Plan (CAAP) recognizes the need to increase student sustainability and climate literacy on campus, and such a goal requires developing a baseline understanding of student literacy.

This baseline was obtained through a Sustainability Literacy Assessment conducted in early 2024 that was completed by 371 students, of which 295 indicated that they were familiar with the concept of sustainability. Survey responses were analyzed for each of the fourteen individual questions, with nonanswers and selections of "I don't know" grouped under the "abstained" response. Questions were then classified into one of four categories— Definitions, Climate Basics, Societal Applications, and Specific Concerns—to determine which concepts are most challenging to students.



Implications & Recommendations

The results indicate that most students have a solid understanding of basic climate knowledge, which is foundational to the field of sustainability. Integration of sustainability and climate change issues across disciplines is an additional goal of the CSULB CAAP, and these results are a promising sign that such efforts could be used to facilitate a deeper understanding of sustainability. However, integration of sustainability into the curriculum should be done with consideration of the student perspective. As demonstrated by the results of this survey, although they are well versed in climate, most students overestimate their knowledge of sustainability concepts. While most are familiar with the general idea of sustainability, they lack understanding of specific key ideas within the field. Therefore, providing general background information on sustainability should still be done to ensure all students are on the same page. Students also lacked knowledge on the societal applications of sustainability. Understanding how sustainability intersects with issues of injustice is extremely impactful and has the potential to prompt student engagement with community organizations working for sustainable futures. Developing connections between sustainability, sociopolitical conditions, and a students' area of study can also increase awareness of how sustainable choices can be made in their professional life.

Apart from course design, this information can also assist Beach Sustainability in tailoring their communication of sustainability concepts to the student population. Topics that students are less knowledgeable on, such as Zero Waste and water scarcity, could have more emphasis placed on them to bolster student understanding. This could be done through social media and when engaging with students during campus events. Understanding these topics is particularly relevant as efforts are being made to reduce waste and water use on campus. Conducting this survey annually would allow Beach Sustainability to assess how student literacy is impacted by current and future initiatives. Gathering long-term data is vital as sustainability concepts become more incorporated across curriculums. A robust dataset would demonstrate the effectiveness of efforts to improve sustainability literacy and pinpoint areas requiring additional focus.

Fig. 1 Number of accurate survey responses per question.

The dashed line marks 295 answers, which is the number of respondents who consider themselves to be familiar with sustainability. Only question 3 reaches that threshold, and only eight of the fourteen questions are correctly answered by at least 200 students. Most missed were questions 1, 8, and 9, which asked students about the components of sustainability, principles of Zero Waste, and causes of water scarcity.



Test Your Knowledge!

Compare your knowledge of sustainability concepts to CSULB students using the questions listed below, which are among the most often missed by survey respondents. The correct answers are provided at the bottom right of this section.

1. Which of the following dimensions is NOT included in the most widely used concept of sustainability?

A: Society	C: Environment
3: Technology	D: Economy

Which of the following is NOT one of the principles of Zero Waste? 2.

A: Reducing consumption of resources is preferable to recycling.

B: Recycling is the most important solution for managing waste.

C: Systems and processes should be modeled after nature, which does not produce waste.

D: Materials should not be buried in landfills or burned, even to produce energy.

- 3. Which of the following is a contributor to scarcity of fresh water globally? Select all that apply.
 - A: Climate change
 - **B:** Natural disasters such as droughts and floods
 - **C:** Industrial pollution of water ways
 - D: Increased demand for water from a growing population

Survey Question Categories

Fig. 2 Percentage of accurate survey responses for each question category. Students did poorly on questions that asked about specific concerns within

sustainability, in this case Zero Waste efforts and loss of fresh water. Most

students have a strong understanding of basic climate information, but they

lack knowledge of how these concepts are applied and impact society.

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Correct Answers: 1:B, 2:B, 3:A-D

