THE OHIO STATE UNIVERSITY

SUSTAINABILITY INSTITUTE

Student Perspectives on Advancing Sustainability at Ohio State

The Ohio State University: Environment, Economy, Development, and Sustainability Capstone Course

Start Date: January 10, 2023

End Date: April 24, 2023

Team Members

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Executive Summary

This report details the research our capstone group conducted for The Ohio State University Sustainability Institute into student opinions on the ideal future for sustainability education at the university. In the fall of 2022, the Sustainability Institute began an initiative called Advancing Sustainability at Ohio State (ASOS) with the goal of transforming the university into a nationwide leader in sustainability. In early 2023, they began researching peer universities and consulting key stakeholders in their planning. We were tasked with gathering insights from current Ohio State students into their ideal future of sustainability education at the university. In addition to delivering this report to the Sustainability Institute, our findings were presented on March 10th and April 21st to the Sustainability Education Visioning Committee (SEVC), a group of staff planning the ASOS initiative.

We conducted research via two one-hour focus group sessions and a survey distributed to all current undergraduate and graduate students. The focus groups were casual and conversational, providing us with in-depth feedback, while the survey provided a large sample of quantitative data. As of April 23rd, 2023, the survey has gathered 1,851 responses. From our two focus group sessions, we derived five major themes: a lack of sustainability accessibility, a desire for integration of sustainability into current courses, a need for university transparency, a recommendation to incentivize widespread student involvement, and a need for more sustainability career development. These themes were corroborated by our preliminary analysis of the survey results. Our key recommendations include integrating sustainability into existing courses, creating a centralized source of sustainability information, and publishing data about current university sustainability initiatives.
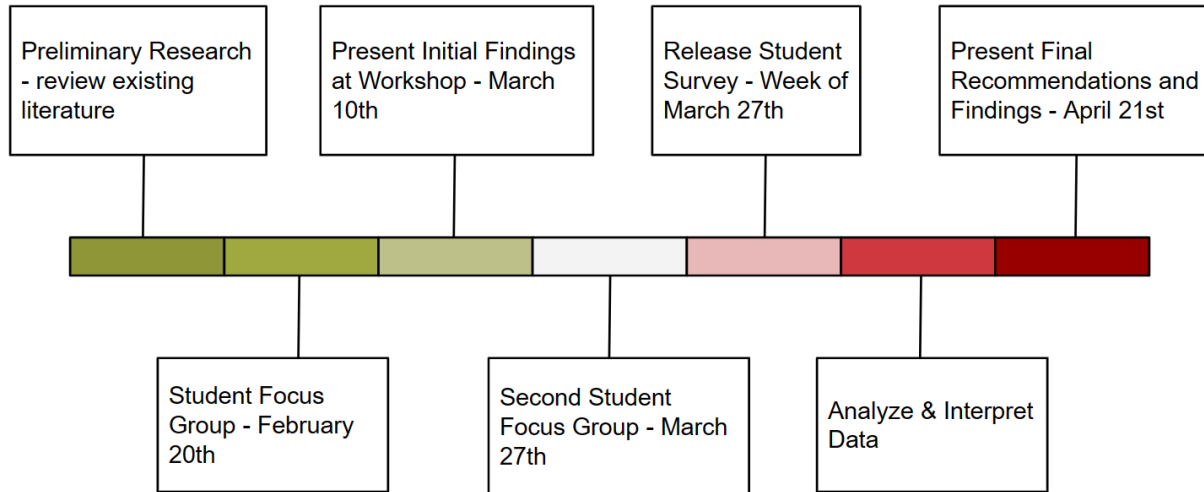
Introduction

Our project, as part of the Environment, Economy, Development, and Sustainability (EEDS) Capstone course, worked in conjunction with The Ohio State University Sustainability Institute as they plan their ASOS initiative. The goal of this research was to amplify student voices in the decision-making process for the university's upcoming changes in sustainability curriculum. We presented our findings to the SEVC so that they may craft ASOS to best serve student needs and interests regarding sustainability. Our data and recommendations will inform the white paper (a formal proposal to Ohio State administrators) that will be published in December of 2023. We devised three objectives for the semester:

1. Develop and run focus groups with current students interested in sustainability from diverse demographics to collect representative perspectives and suggestions regarding sustainability at Ohio State.

2. Analyze data collected through focus groups in search of major themes to inform our recommendations to the Sustainability Institute.

3. Develop a survey to be distributed to all students at Ohio State to obtain a spectrum of beliefs from those with varying knowledge of sustainability.

Each of these objectives required active collaboration with the Sustainability Institute to ensure that the data being collected, and our timeline (see Figure 1), aligned with the needs of the ASOS initiative (see Appendix A). We were also mindful that a future capstone project could build upon our own since the ASOS timeline extends beyond this semester. Through our accomplishment of these three objectives, we found that Ohio State students desire greater accessibility to sustainability information and increased university transparency.

Figure 1

Project Timeline

| Preliminary Research - review existing literature | Present Initial Findings at Workshop - March 10th | Release Student Survey - Week of March 27th | Present Final Recommendations and Findings - April 21st |

| Student Focus Group - February 20th | Second Student Focus Group - March 27th | Analyze & Interpret Data |

Focus Group Methods

Student focus groups were one of two primary methods of data collection. Our aim for these focus groups was to capture in-depth ideas from students about their aspirations for sustainability education at Ohio State. The first focus group targeted sustainability-adjacent students throughout campus, composed of students in majors outside of sustainability but participating in sustainability-involved clubs or living in the Ohio State sustainability living community SUSTAINS. The second focus group targeted students in the College of Food, Agricultural, and Environmental Sciences (CFAES). We designed these focus groups to be informal and conversational, creating a comfortable environment for our participants. We provided Chipotle catering as an incentive for participation. Each session began with a post-it-note activity that was developed in a mock focus group created and moderated by Mitch Owen, CEO of Leadership and Organization Development Inc. This activity required students to quickly brainstorm answers to five questions posted around the room within 2-minute

increments, and was conducted silently to capture as many unique responses as possible. After the session, we sorted the post-it note responses and imputed them into an excel data file to decipher key themes.

Following the post-it-note activity, we held a conversational question and answer session (see Image 1 for session setup) in which focus group moderators asked a variety of prepared questions, which are found in Appendix D. These questions were purposefully broad and open-ended to stimulate discussion and spark creativity. For example, we asked participants to describe their "blue-skies" scenario – in which there were no limits on money, time, or manpower – for the future of sustainability education. If the groups gave interesting responses that we wanted to explore more, we followed up with improvised questions. Our team had multiple note takers within the room, ensuring we captured everything discussed in our sessions. From here, we reviewed ideas from both activities and synthesized a list of major themes and recommendations.

Image 1

Focus Group Setup

Focus Group Data Collected

Below are examples of both qualitative and quantitative data collected from each focus group. These themes from focus group responses are summarized in Figure 2.

Post-It-Note Activity Qualitative Data Collected (Verbatim Responses):

In your perfect world, what would Ohio State offer in terms of sustainability education?

"Integrated sustainability into classes rather than requiring or making new ones" - *Focus Group 2 Participant*

"Relating all classes to sustainable development goals" - *Focus Group 2 Participant*

What is not working in terms of Ohio State's sustainability efforts?

"Lack of shared information - we are not on the same page" - *Focus Group 1 Participant*

"Transparency on goals and progress" - *Focus Group 2 Participant*

"Disconnect between SENR students' efforts and the rest of campus" - *Focus Group 2 Participant*

Figure 2

Post-It-Note Activity Quantitative Data Collected (Themed Responses):

In your perfect world, what would OSU offer in terms of sustainability education?

Focus Group #1: "Perfect World" Response Themes		
Theme	*Number of Responses (#)*	*Percent of Responses (%)*
More Fieldwork Opportunities	4	16.7%
Wide Course Variety	4	16.7%
Integrated / Mandatory Sustainability Curriculum	**8**	**33.3%**
Sustainability Advertisement & Attitude	4	16.7%
Recycling / Composting	4	16.7%

Focus Group #2: "Perfect World" Response Themes		
Theme	*Number of Responses (#)*	*Percent of Responses (%)*
Career Opportunities	2	11.8%
More Field Opportunities/Events	4	23.5%
Better CFAES Marketing	1	5.9%
Campus Wide Integrated Sustainability Curriculum	**8**	**47.1%**
More Local Community Partnerships	2	11.8%

What is not working in terms of Ohio State's sustainability efforts?

Focus Group #1: "Not Working" Response Themes		
Theme	*Number of Responses (#)*	*Percent of Responses (%)*
Access to Sustainability Resources and Information	**7**	**24.1%**
Student Culture	3	10.3%
Composting, Recycling & Food Waste	**9**	**31.0%**
River/Wetland Restoration	2	6.9%
Partnerships	3	10.3%
Campus Investment & Infrastructure	2	6.9%
Public Transportation	3	10.3%

Focus Group #2: "Not Working" Response Themes		
Theme	*Number of Responses (#)*	*Percent of Responses (%)*
Administrative Accountability, Choices, & Partnerships	6	23.1%
Siloed Sustainability Curriculum	2	7.7%
Lack of Innovation & Initiative	**12**	**46.2%**
Access to Sustainability Resources	6	23.1%

Survey Methods

A campus-wide survey was our second method of data collection. Our aim for the survey was to gather a wide range of quantitative data that reflected students' views on current sustainability curriculum and initiatives. We sent the survey via email to all undergraduate and graduate students at Ohio State, offering entry into a raffle for a Hydroflask water bottle as an incentive for early response. We used data from our focus groups to guide our creation of the survey questions, which focused primarily on sustainability curriculum, information availability, and career development, along with general demographic questions for analysis purposes. We used a mixture of multiple choice (selecting one or top three options), true and false, and short answer format questions. The full list of questions is located in Appendix H.

Figure 3

Survey Creation Timeline

Survey Data Collected

Our student survey featured a self-report question describing respondents' prior sustainability knowledge, the results for which are located in Appendix I. Using this self-report, our group analyzed the survey responses through two different data filters: respondents who self-reported prior sustainability knowledge 1-2 (least familiar with sustainability concepts) and respondents that self-reported 3-4 (most familiar with sustainability concepts). Though in-depth analysis of all survey data exceeds the scope of this project and will instead be carried out by the Sustainability Institute, we compared preliminary data to our major themes gathered from our

focus groups. One such theme, the need for integrating sustainability into current curriculum, appeared in our survey data. Question 7, "In the future, how would you prefer for Ohio State to integrate sustainability into its curriculum? (select all that apply)," yielded the responses shown in Figure 4.

Figure 4

Survey Responses to Question 7

Choice Options	<u>Most</u> Familiar with Sustainability	<u>Least</u> Familiar with Sustainability
Integrate Sustainability Curriculum into Elective Courses for all Majors	**602**	**269**
Develop a Required Sustainability GE for all Majors	481	234
Develop a Required Sustainability GE that is Major Specific	401	190
Integrate Sustainability Curriculum into Major Course for all Majors	451	172
Develop Sustainability Focused Programs for Future Student Enrollment	575	262
Other	44	24
Total Number of Respondents	1223	630

Another notable survey question, Question 12, asked "Which characteristics would you most strongly associate with a university that is a leader in sustainability? (Choose your top three)." The responses are pictured below in Figure 5.

Figure 5

Survey Responses to Question 12 (only 4 out of 10 possible choices are represented)

Choice Options	<u>Most</u> Familiar with Sustainability	<u>Least</u> Familiar with Sustainability
Every student who graduates has a basic knowledge of sustainability, including how to apply it in their job and personal life	463	**387**
A Range of Sustainability Programs are Offered, Including Certificates, Minors & Majors, in Sustainability-Related Topics	461	265
Sustainability content is embedded into one or more core courses for most major and master programs	259	232
The university has a set of ambitious sustainability goals for its campus, including net zero carbon emissions and waste generation, and is on target for reaching these goals	**541**	206
Total Number of Respondents	1223	630

The remaining survey results are located in Appendices J and K.

Barriers

Our group encountered barriers in the facilitation of focus groups and the distribution of our survey. Primarily, conversation tended to diverge from our targeted information within each focus group, which required flexibility and skillful redirection from our moderators. An unexpected barrier for our survey distribution was the limited number of recipients an OSU email can have, along with the limit of total emails that can be sent per day. To combat this barrier, the master list of email addresses was divided between all group members, including our Sustainability Institute partners, Matt Griffin and Claire Huffman. Each group member then sent the survey introduction, as well as a link to our survey, to 500 recipients 10 times. Some group members had to repeat this process twice to reach the entire undergraduate and graduate student

body. This also led to students receiving information about the survey at different times, on different days, and from different people.

Findings

Focus Group 1 Summary

1. The group felt that the university lacked proper communication channels for sustainability, expressing that sustainability information was hard to find because it was decentralized and treated as niche. The students heavily expressed the need for a centralized source, since the lack of accessibility is a huge barrier for involvement.

2. Students would like to see more transparency regarding how the university is pursuing their sustainability efforts and insisted that this information should be easy to find. One student provided the example of publishing a carbon emissions report on each campus building.

3. In connection to transparency, students also highlighted that they would like to see The Ohio State University use its influence to create standards for university partners. Some felt that it was hypocritical for the university to boast its sustainability efforts while partnering with organizations that are major contributors to environmental and climatic damage.

4. Students wanted to see sustainability integrated into their specific courses rather than the creation of new offerings. Sustainability touches on each aspect of everyday life, so it would be logical to teach what these impacts are. Those within sustainability-related majors wanted a mandatory sustainability course, but those outside of sustainability-related majors felt that a sustainability general education requirement would breed contempt and apathy.

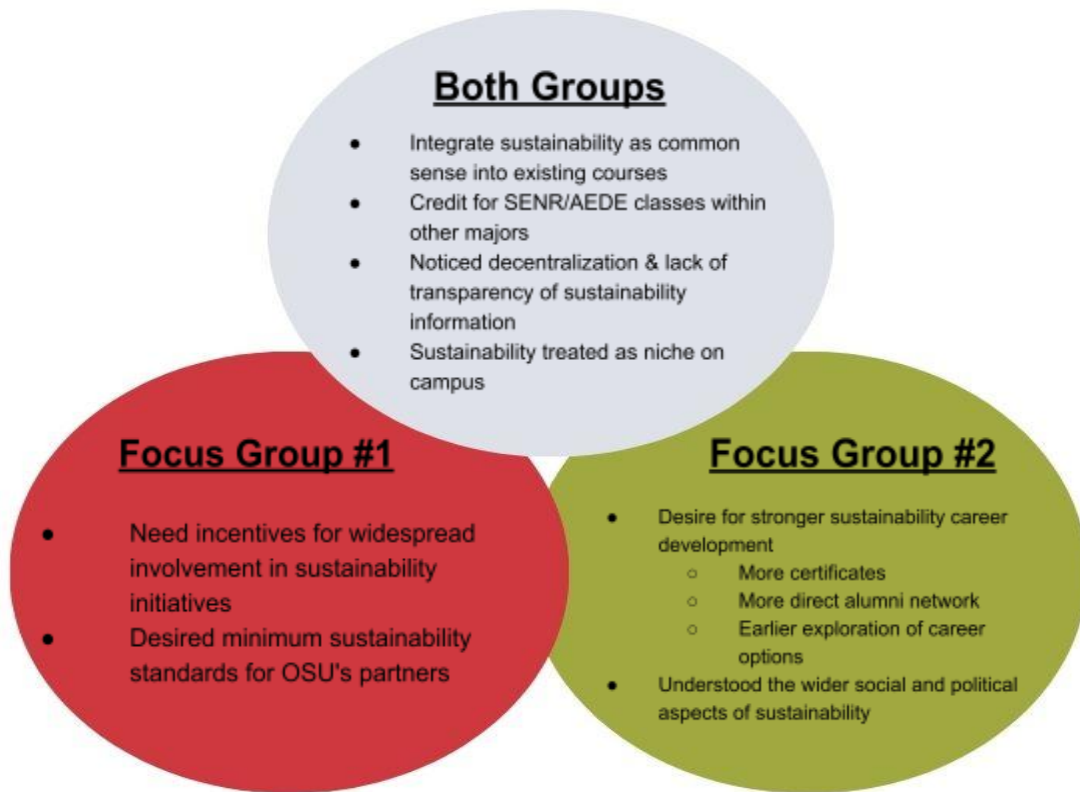5. Students thought that the university should provide incentives for direct sustainability

involvement in order to reach those who might not initially care about sustainability. One well-received suggestion was using extra credit to incentivize participation in sustainability-focused events such as an Olentangy River clean up.

Focus Group 2 Summary

1. The second group also expressed a desire for integration of sustainability concepts into existing courses, similar to group 1.

2. The students felt that the university would benefit from greater centralization of sustainability information. Despite the students mainly being a part of the College of Food, Agricultural, and Environmental Sciences, they expressed that they struggled to find sustainability information.

3. These students expressed that they read the School of Environmental and Natural Resources email newsletters, and believed that a campus-wide sustainability newsletter could be a successful way to distribute sustainability news and resources to the entire student body.

4. In terms of career development, students felt that it would be beneficial if the university offered more courses or programs that resulted in certification. They wished there was earlier and greater exploration of sustainability career options, which could include a more direct alumni network.

5. The students recognized that sustainability is a rapidly evolving field, which current courses do not always reflect. Additionally, the current curriculum misses out on conflict mediation and communication to people with dissenting opinions surrounding sustainability.

6. The students felt that student organizations often did work voluntarily that the university should instead be doing and/or supporting (especially in regards to waste management).

Figure 6

Comparison of Focus Group Responses

Both Groups

- Integrate sustainability as common sense into existing courses
- Credit for SENR/AEDE classes within other majors
- Noticed decentralization & lack of transparency of sustainability information
- Sustainability treated as niche on campus

Focus Group #1

- Need incentives for widespread involvement in sustainability initiatives
- Desired minimum sustainability standards for OSU's partners

Focus Group #2

- Desire for stronger sustainability career development
  - More certificates
  - More direct alumni network
  - Earlier exploration of career options
- Understood the wider social and political aspects of sustainability

The Venn diagram above is a brief summation of the similarities and dissimilarities between

groups. Using these commonalities, we synthesized the five major themes featured in Figure 7.

Figure 7

Summary of Themes from Both Focus Groups

01 Lack of Sustainability Accessibility

02 Integrate Sustainability into Courses

03 University Transparency

04 Incentives for Involvement

05 Deeper Career Development

Survey Summary

As of 4/23/2023, the survey results generally reflect those of the focus groups. We split our analysis into two categories, between those who self-reported as relatively un-familiar with sustainability and those who self-reported as relatively familiar with sustainability. While there were some variations between the two groups, we found consensus that students want:

1. An integration of sustainability into course electives of all majors.

2. A greater effort to share sustainability opportunities, including:

   - Courses involving sustainability

   - Volunteer opportunities on campus and in the greater Columbus area

   - Other learning initiatives outside of the classroom

3. Education on the basics of sustainability (what it means, and how they can personally integrate sustainability practices into their own behaviors).

Students are interested in learning about sustainability, but they need a specific place to go to learn. Having course electives for each major that focus on sustainability was a popular idea for both students who identified themselves as knowledgeable and less knowledgeable about sustainability. The survey results suggest, as do the focus groups, that the university would benefit from greater and more localized sustainability opportunities both in and out of the classroom.

Final Recommendations

Using data from our focus groups and our survey, we generated the following recommendations for the SEVC to incorporate within the ASOS initiative, listed in descending importance.

Education

1) Integrate sustainability into existing courses and curricula..

2) Allow students in other disciplines to receive credit for courses in the School of Environment and Natural Resources (SENR) and the Department of Agricultural, Environmental, and Development Economics (AEDE).

3) Advertise relevant sustainability courses in CFAES to other colleges.

4) Create a sustainability module for student orientation, educating them on daily-life aspects such as recycling and compost sorting.

University Initiatives

1) Create a centralized source for students of all majors to regularly receive information surrounding sustainability events, programs, initiatives, and more.

2) Improve waste reduction (composting & recycling) through greater education and provide progress updates (e.g., amount diverted from landfill).

3) Reduce campus wide emissions via renewable energy and make emission reduction statistics publicly accessible.

4) Create more local partnerships within the Columbus community, specifically sustainable organizations.

5) Facilitate events that foster excitement around sustainability and provide incentives for involvement.

6) Create more partnerships with sustainable suppliers and have minimum requirements to use Ohio State's influence to encourage sustainability.
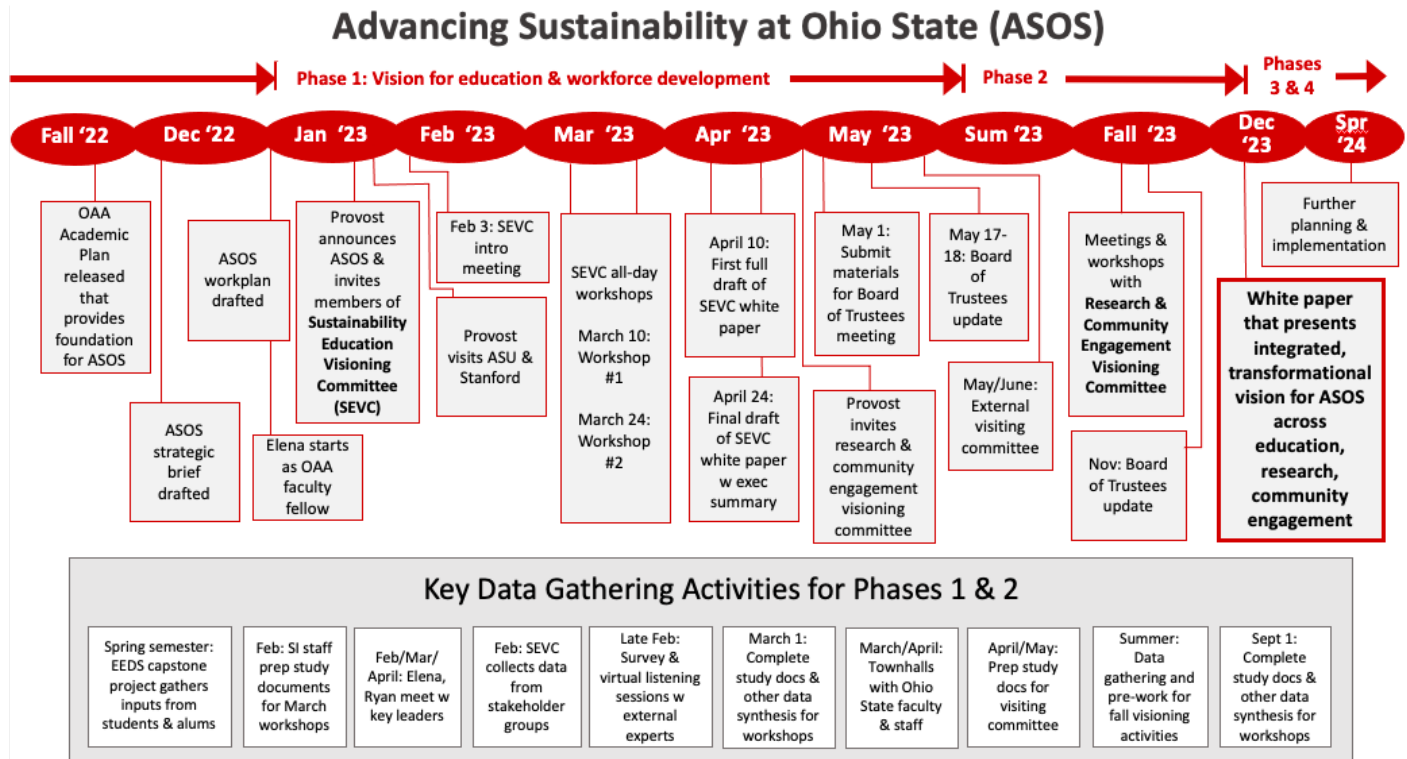
Conclusion

Our engagement with students at Ohio State provided meaningful critiques of the current state of sustainability at the university and allowed us to synthesize recommendations for the Sustainability Institute. Our findings demonstrate the high level of care and support students show for sustainability on campus. To become a leader in sustainability education, it is critical that Ohio State integrate sustainability into its instruction of *all* disciplines. The current perception of sustainability is that it is niche, which must be changed. Information on what the university is doing in sustainability and how students can become more involved must be publicly available and easily accessible. We are honored to have played a role in such an impactful project, and we thank the Sustainability Institute for all of their support.

<u>Appendices</u>

Appendix A - Ohio State ASOS Initiative Timeline

Advancing Sustainability at Ohio State (ASOS)

Source: Elena Irwin

SHARE YOUR THOUGTS ON SUSTAINABILITY

WHILE EATING CHIPOTLE

JOIN OUR CAPSTONE GROUP IN A FOCUS GROUP DICSUSSING THE FUTURE OF OSU SUSTAINABILITY. THE EVENT WILL BE CATERED BY CHIPOTLE.

SIGN-UP BELOW

FEBRUARY 20TH
5:30-6:30 PM
LOCATION ON CAMPUS WILL BE RELEASED
TO THOSE SELECTED TO PARTICIPATE

Appendix C - Focus Group Demographics

Focus Group 1:

Gender	Race/Ethnicity	Age	Year	Major
Male	White	21	4th year	Environmental Science
Female	White,Asian,Native Hawaiian or Pacific Islander	24	5th+ year	Environmental Science
Male	Black or African American	20	2nd year	Computer Informational Science
Male	White	20	2nd year	Natural Resource Management
Male	White	20	2nd year	History
Male	White	22	3rd year	Sustainable Plant Systems, Horticulture
Female	White	19	1st year	Zoology
Female	White	20	2nd year	EEDS
Female	White	20	2nd year	Environmental Policy and Decision Making
Female	Asian	22	4th year	Economics, Applied Environmental Studies (PSP)
Male	White	20	3rd year	Electrical and Computer Engineering

Focus Group 2:

Gender	Race/Ethnicity	Age	School Year	Major/Minor/Certificate
Female	White	18	1st year	Biochemistry
Male	White,Asian	21	3rd year	Environmental Engineering
Female	Hispanic	22	4th year	EEDS
Female	White	21	4th year	Environment, Economy, Development, Sustainability
Male	White	18	1st year	Architecture
Female	Asian	20	3rd year	Environmental Policy Decision Making
Female	White	21	4th year	Major in Environmental Science, Minor in Rural Sociology
Female	White	22	4th year	EEDS
female	White	22	4th year	EEDS

Appendix D - Focus Group Agenda (Applied to both focus groups)

Q: Introduce yourself. (5 min)
P: Get acquainted with our participants and provide some demographic context to their answers

Post-it Note Activity (10-15 Mins)
Split into groups of ~3. There will be 2 minutes for each poster to write your brief response to the question. Only 1 idea per post-it note! This is a silent activity so as to not affect each other's responses.

1. **What comes to mind when you think of sustainability?**
2. **What is not working in terms of Ohio State's sustainability efforts?**
3. **What social and/or economic trends do you expect to see in the next 10 years that will affect sustainability?**
4. **What scientific trends do you expect to see in the next 10 years that will affect sustainability?**
5. **In your perfect world, what would Ohio State offer in terms of sustainability education?**

Determine the big ideas for each question's responses.

Broad, open ended questions to get to the heart of the issue (10 min each)
Per Mitch, establish ground rules of discussion
1. When someone speaks, all should listen
2. Be respectful, and don't personalize your comments or target individuals
3. Participate fully
4. Try your best to stay *on task*

Q: How does sustainability currently relate to your experience at Ohio State? Have you discussed sustainability topics in class? Is your day-to-day student life affected by sustainability initiatives?

Q: How capable do you feel about finding sustainability information on campus and staying in the know? How can the University work to improve this communication?

Q: What types of programs and skills would be most beneficial for you as students to have access to / what should OSU sustainability curriculum focus most on implementing?
*Leave this open ended at first, then list the following as examples if no response is given
- Developing new, more specific sustainability majors/minors
- Programs that help students earn certificates within a course or series of courses (almost like a minor, but instead you would earn the certificate when completed)

- Dual-degree programs - earn a sustainability degree that is COUPLED with something more specific and interdisciplinary (like business, management, engineering, etc, similar to what ASU offers)

Q: What partnerships should OSU look into to advance their sustainability community outreach? (low priority)

Q: What do you think you're missing or what do you not quite understand about sustainability?

As they leave
Q: If there was anything you wanted to mention about the future of sustainability at Ohio State, but weren't able to; please feel free to write it down on the papers provided and hand it to a moderator. Please write your participant ID at the top.

Appendix E - Focus Group 1 Post-it Note Responses

What comes to mind when you think of sustainability?	
Theme	%
Economy	19.2%
Collaboration	7.7%
Future/Long-Term	**23.1%**
Reducing Waste	11.5%
Innovative Thinking & Social Change	15.4%
Natural Conservation	**23.1%**

What social and/or economic trends do you expect to see in the next 10 years that will affect sustainability?	
Theme	%
Consumption Patterns	**32.0%**
Politics	12.0%
New Technology	12.0%
Composting	12.0%
Resource Scarcity	**20.0%**
Social Movements	12.0%

What scientific trends do you expect to see in the next 10 years that will affect sustainability?	
Theme	%
Renewable Energy	**23.1%**
More Advanced Technology	15.4%
Waste & Utility Efficiency	11.5%
Changes in Climate	15.4%
Loss of Ecosystems & Resources	**19.2%**
Other	15.4%

Appendix F - Focus Group 2 Other Post-It Note Responses

What comes to mind when you think of sustainability?	
Theme	*%*
Community Development/Governance	15.2%
Environmental Justice Considerations	**21.2%**
Conservation of Resources	15.2%
Consumption & Consumerism	18.2%
Climate Change & Accountability	**21.2%**
Multi-Faceted	9.1%
Totals	

What social and/or economic trends do you expect to see in the next 10 years that will affect sustainability?	
Theme	*%*
ESG/Sustainable Economics	18.5%
Clean Energy Technology	18.5%
Diversity & Social/Political Sustainable Equity	**33.3%**
Retail and Consumer Trends	22.2%
Social Media	7.4%

What scientific trends do you expect to see in the next 10 years that will affect sustainability?	
Theme	**%**
Environmental Technology Use	18.2%
Medicine	9.1%
Climate Change Awareness & Impacts	**31.8%**
Research & Development	18.2%
Energy & Equitable Extraction of Resources	22.7%

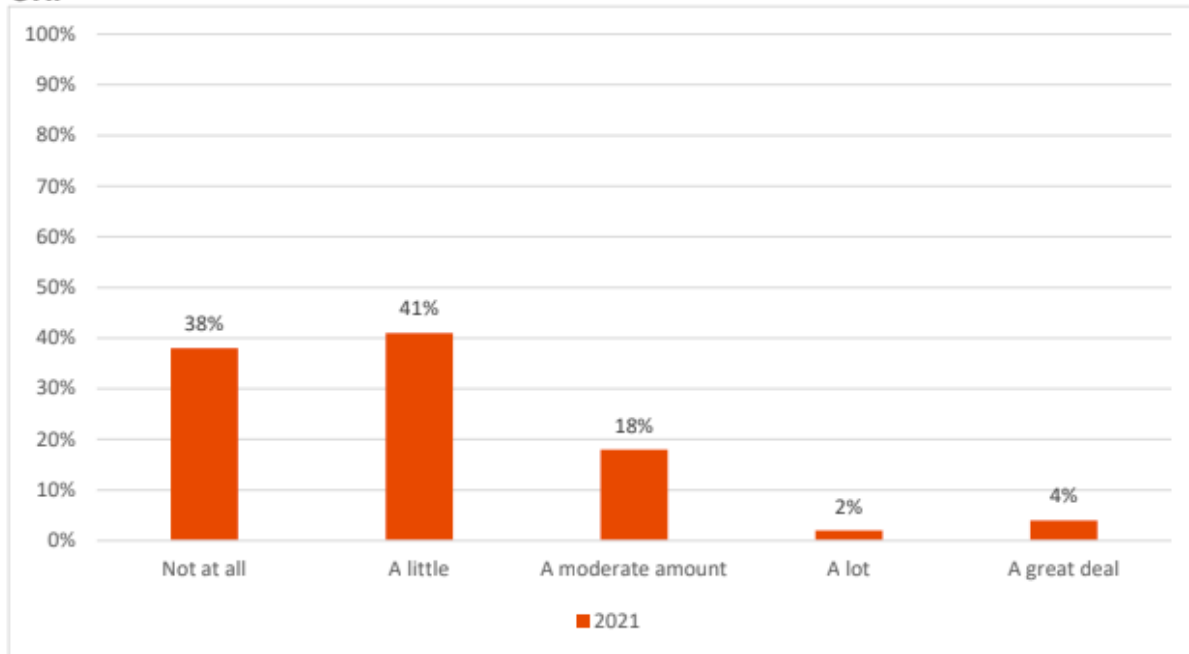Figure 10. Average student interest in sustainability courses at OSU
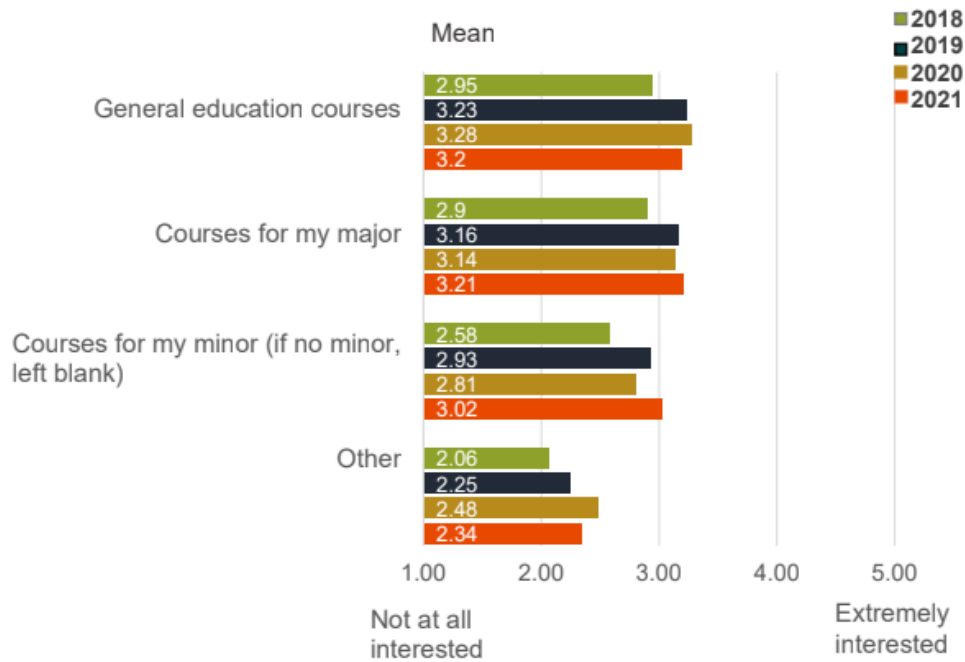
Figure 7.2. Knowledge of sustainability initiatives and programming in Columbus, OH.

Source: *SENR 2021 Campus Sustainability Survey: Results and Trends*

Appendix H - Survey

<u>Survey Email Language:</u>

Hello,

This survey has been sent on behalf of an Environment, Economy, Development, and Sustainability capstone group working with Ohio State's Sustainability Institute and the Office of Academic Affairs to gather **student opinion surrounding the future of Ohio State's sustainability curriculum**. Your feedback will help build a new vision to position Ohio State as the leader in sustainability education. We are looking to gather a range of student voices in this process, so all are welcome to complete this survey no matter your program of study or your familiarity with sustainability. Please take a few minutes to complete this Qualtrics survey. Completing the survey by April 10th will enter you in a raffle for several **Hydroflasks**! Responses will be anonymized, and we only ask for your email so we can notify you if you won one of the prize raffles. We are grateful for any and all feedback, thank you for your time!

Please contact Matthew Griffin.603, the Sustainability Institute's Program Manager of Co-Curricular and Community Initiatives, with any questions about the survey. You can learn more about the effort to advance sustainability curriculum, research, and engagement at Ohio State here.

Link to the survey: https://osu.az1.qualtrics.com/jfe/form/SV_0eU5EqZEzlqg0ku

<u>Survey Intro Paragraph</u>:

This survey has been sent on behalf of an Environment, Economy, Development, and Sustainability capstone group working with Ohio State's Sustainability Institute and the Office of Academic Affairs to gather student opinion surrounding the future of Ohio State's sustainability curriculum. Your feedback will help build a new vision to position Ohio State as the leader in sustainability education. We are looking to gather a range of student voices in this process, so all are welcome to complete this survey no matter your program of study or your familiarity with sustainability. Please take a few minutes to complete this Qualtrics survey. Completing the survey by April 10th will enter you in a raffle for several Hydroflasks! Responses will be anonymized, and we only ask for your email so we can notify you if you won one of the prize raffles. We are grateful for any and all feedback, thank you for your time!

The Sustainability Institute at Ohio State describes sustainability in the following ways:

- Sustainability means taking actions to improve the well-being of people and communities in ways that also protect the Earth's life systems. It is motivated by the fundamental dependence of humans on Nature and the desire to foster all forms of life on Earth now and in the future.
- Many organizations, businesses, and communities around the world have set sustainability goals, including zero net carbon emissions and zero waste, and are taking actions to achieve greater protection of ecosystems and prosperity for people and communities.
- Justice, including equitable access to resources and protection from environmental harms, is a core aspect of sustainability.
- Sustainability depends on the resilience of natural systems, people, and communities and their ability to recover and adapt in the face of more extreme weather events and other changing conditions.
- The interdisciplinary field of sustainability generates the knowledge that is needed to achieve a more sustainable and resilient world. It integrates knowledge and innovations from the natural, social, health, engineering, and policy sciences; knowledge of the human condition from the arts and humanities; and knowledge of practice from the professions and lived experiences of people.

Student Survey Questions- Research & Community Engagement Efforts
Sustainability Background Questions

1.) Based on your current knowledge of sustainability, rate yourself on a scale of 1 to 4 (least familiar to most familiar with sustainability concepts)
- 1 - not familiar with sustainability concepts
- 2
- 3
- 4 - very familiar and informed with sustainability concepts

2.) Did Ohio State's sustainability opportunities influence your decision to apply to attend the University?
- Yes - specifically the opportunity to access sustainability curriculum
- Yes - specifically the university's sustainability initiatives
- No - was not influenced by the university's sustainability initiatives
- No - was not influenced by the availability of sustainability curriculum

3.) I feel Ohio State could be more transparent with their energy practices on campus
- True
- False

4.) I feel Ohio State could choose more sustainable partnerships for their suppliers
- True
- False

5.) I have had real-world experience with sustainability through my classes or opportunities through Ohio State (even if not in a sustainability major)
- True
- False
- Interested but have not accessed the opportunity

6.) In the future, how would you prefer Ohio State to integrate sustainability into undergraduate curriculum? (select all that apply)
- Integrate sustainability curriculum into elective courses for all majors
- Develop a required sustainability GE for all majors
- Develop a required sustainability GE that is major specific
- Integrate sustainability curriculum into major course for all majors
- Develop sustainability focused programs for future student enrollment
- Develop sustainability focused programs in all colleges for future student enrollment

7.) What barriers have you experienced or perceived to enrolling in sustainability related coursework? (select all that apply)
- I have not been made aware of specific courses and course options regarding sustainability
- The courses would not have counted towards my major
- The location of the courses are not as convenient or accessible (Mid-West Campus)
- I have not been interested
- The courses did not fit into my schedule
- I have not experienced any barriers

8.) How would you prefer to hear about sustainability initiatives and updates in the future? (Choose your top three):
- Main Ohio State instagram posts
- Sustainability specific-social media account
- Separate emails to the whole student body
- Emails to the student body with other student events and updates
- Bulletins around campus

- Sustainability newsletter that you can opt into

9.) What types of sustainability knowledge are most important to you?
(Choose your top three):
- Basic understanding of sustainability and what it means
- Basic understanding of resilience and what it means
- How sustainability applies to my future career
- How to personally engage in sustainability practices
- Climate change, impacts, and risks
- Clean energy technologies, transitioning to more renewable energy
- Waste reduction and recycling
- Environmental and social justice
- Natural systems (e.g., climate, water, ecosystems, biodiversity)
- Human systems (e.g., policies, behaviors, culture, economy)
- Having a sustainability mindset (including, systems thinking, futures thinking, problem solving orientation)
- Ethical basis for sustainability
- Business case for sustainability
- Trade-offs (environmental, economic, social) in achieving sustainability
- Other (please specify):

10.) What could Ohio State do to better prepare you for a career or life beyond the classroom? What sustainability resources would be most useful to you? (Choose your top three)
- Sustainability specific career advisor
- Technical skills required for jobs Sustainability certificates in technical skills
- Connection to local sustainable businesses
- Networking with alumni working in sustainability
- Opportunities to engage with sustainability research
- Funding to support sustainability student organizations
- Listing of sustainability volunteer opportunities
- Listing of sustainability jobs
- A central hub for sustainability education, learning, and opportunities

11.) Which characteristics would you most strongly associate with a university that is a leader in sustainability? (Choose your top three)
- Every student who graduates has a basic knowledge of sustainability, including how to apply it in their job and personal life
- A range of sustainability programs are offered, including certificates, minors, and majors, in sustainability and sustainability-related topics
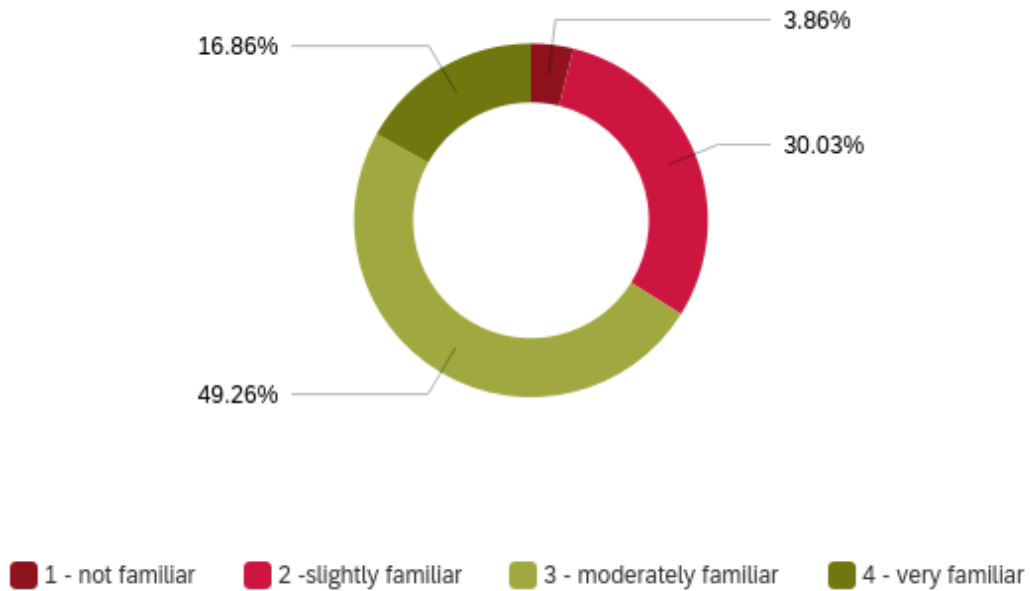
- Sustainability content is embedded into one or more core courses for most majors and master degree programs
- Students are engaged in cutting-edge research on sustainability topics
- The knowledge that is generated at the university is being translated in ways that help communities, businesses, and government to reach their sustainability goals
- Students have ample opportunities to work with communities, businesses, or government on sustainability projects
- Students develop skills that are directly applicable to their careers through internships with private, public, or non-profit sector employers
- Campus is used as a learning lab to demonstrate, test, and evaluate new sustainability technologies and practices
- The university has a set of ambitious sustainability goals for its campus, including net zero carbon emissions and waste generation, and is on target for reaching these goals

12.) If Ohio State should focus on one sustainability initiative moving forward, it would be _____.

Demographic Questions
- What gender do you identify with?
  - Male
  - Female
  - Non-binary/other
- Ethnicity
  - White
  - Black/African American
  - Native American/Alaskan Native
  - Asian
  - Hispanic/ Latino
  - Native Hawaiian/ Pacific Islander
  - Other
- What is your current rank?
  - 1st Year
  - 2nd Year
  - 3rd Year
  - 4th Year
  - 5th Year +
  - Graduate Program
- Major/Field of Study
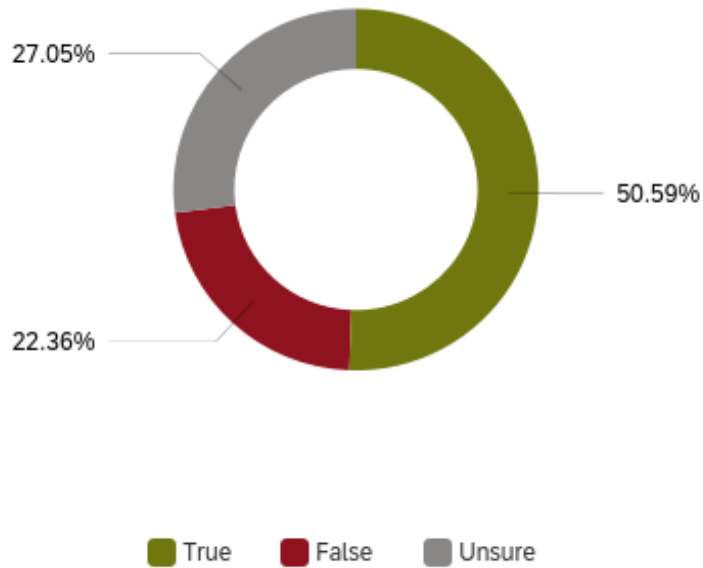 - _____
- Email Address
  - _____

Appendix I - Student Survey Prior Sustainability Self-Report Data

Q2 - Based on your current knowledge of sustainability, rate yourself on a scale of 1 to 4 (least familiar to most familiar with sustainability concepts)
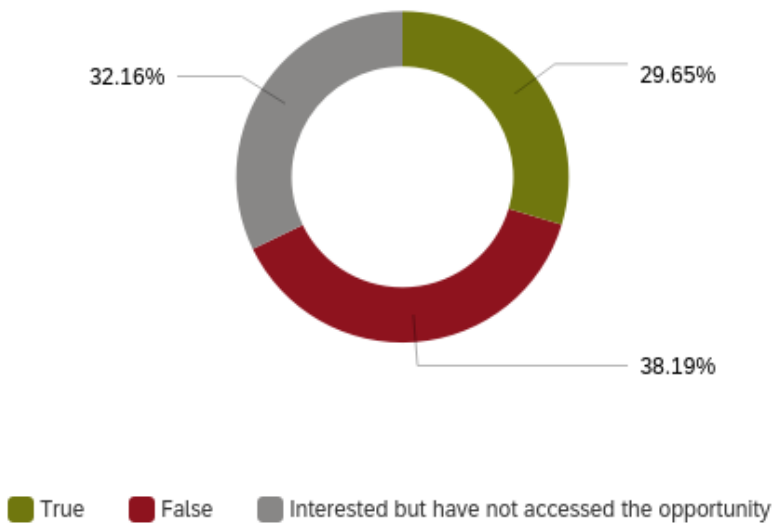

■ 1 - not familiar   ■ 2 -slightly familiar   ■ 3 - moderately familiar   ■ 4 - very familiar

Q4 - I feel Ohio State is taking meaningful actions to make our campus more sustainable (e.g., by reducing its carbon emissions and waste)

27.05%

50.59%

22.36%

■ True ■ False ■ Unsure

Q6 - I have had real-world experience (such as an internship) with sustainability through my classes or opportunities through Ohio State (even if not in a sustainability major)
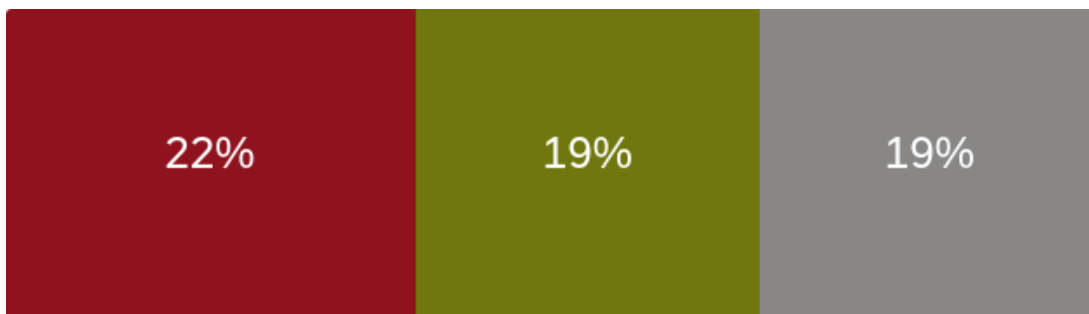

32.16%

29.65%

38.19%

■ True ■ False ■ Interested but have not accessed the opportunity

Q8 - What barriers have you experienced to enrolling in sustainability related coursework? (select all that apply)

24%	30%		18%		

■ I have not been made aware of specific courses and course options regarding sustainability

■ The courses would not have counted towards my major

■ The location of the courses are not as convenient or accessible (Mid-West Campus)

■ I have not been interested   ■ The courses did not fit into my schedule

■ I have not experienced any barriers   ■ Other (please specify in your own words)

Q9 -
How would you prefer to hear about sustainability initiatives and updates in the future? (Choose your top three)

22%	19%	19%

■ Main Ohio State social media accounts

■ Emails to the student body along with other student events and updates

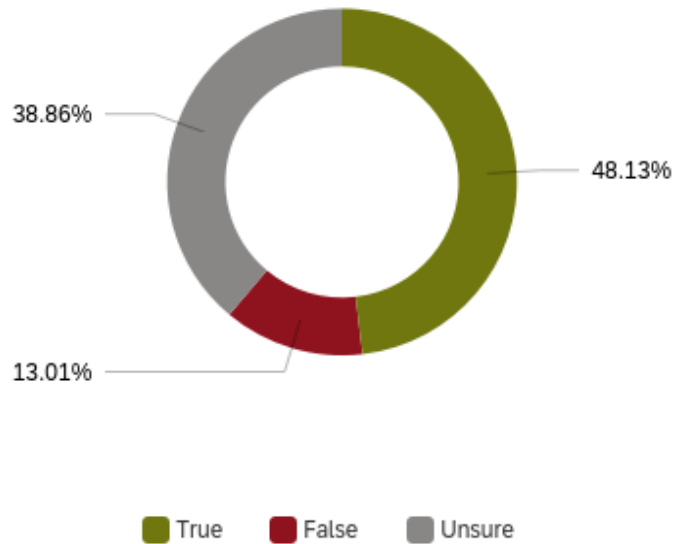■ Sustainability newsletter that you can opt into

34

Q10 - What types of sustainability knowledge are most important to you? (Choose your top three)

Q11 - What could Ohio State do to better prepare you for a career or life beyond the classroom? What sustainability resources would be most useful to you? (Choose your top three)
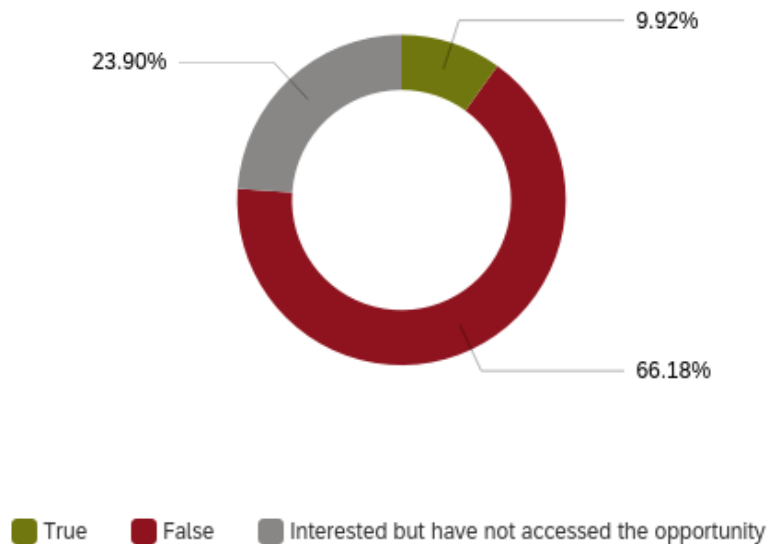
13%	14%	14%

■ Connection to local sustainable businesses   ■ Listing of sustainability volunteer opportunities

■ A central hub for sustainability education, learning, and opportunities
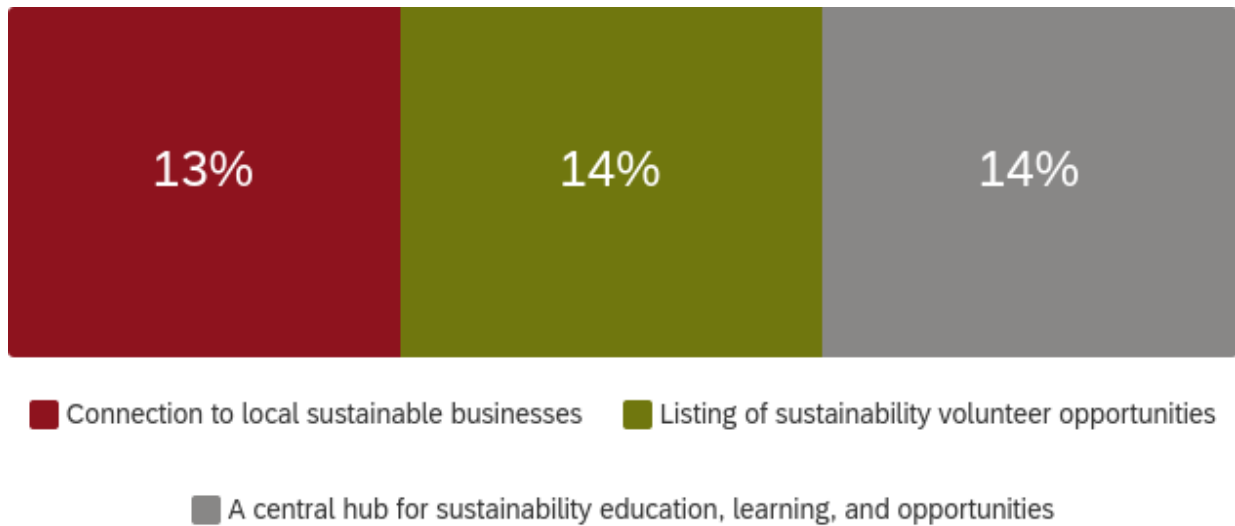
Appendix K - Student Survey Results from Least Familiar with
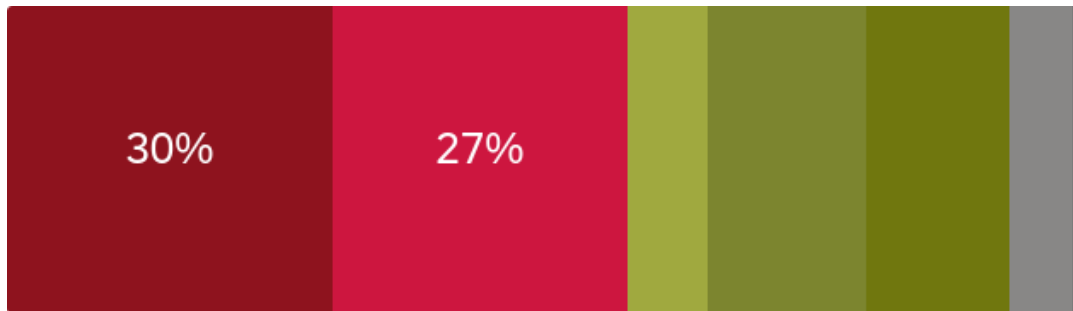**Sustainability Concepts Self-Report**

Q4 - I feel Ohio State is taking meaningful actions to make our campus more sustainable (e.g., by reducing its carbon emissions and waste)

38.86%
48.13%
13.01%

■ True   ■ False   ■ Unsure

Q6 - I have had real-world experience (such as an internship) with sustainability through my classes or opportunities through Ohio State (even if not in a sustainability major)
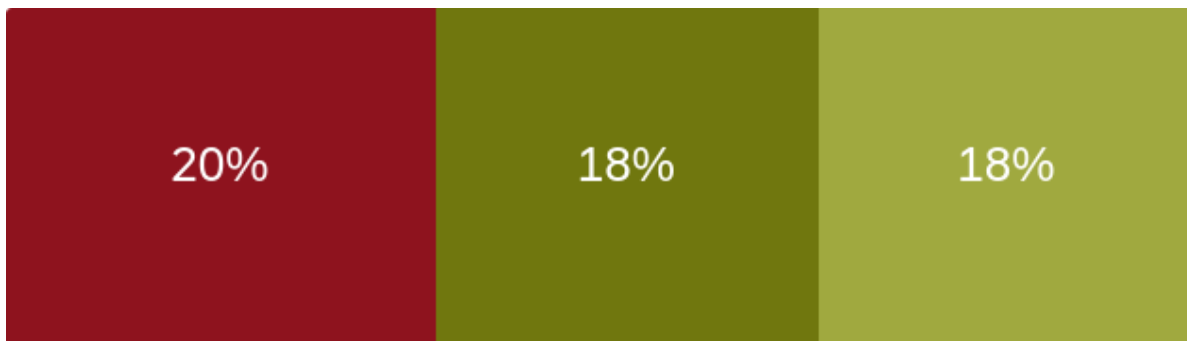

9.92%
23.90%
66.18%

■ True   ■ False   ■ Interested but have not accessed the opportunity

Q8 - What barriers have you experienced to enrolling in sustainability related coursework? (select all that apply)
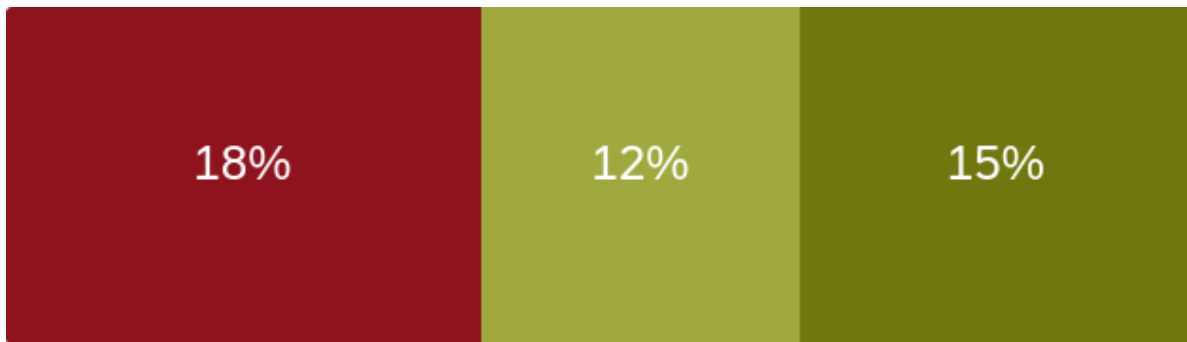

- 30% — I have not been made aware of specific courses and course options regarding sustainability
- 27% — The courses would not have counted towards my major
- The location of the courses are not as convenient or accessible (Mid-West Campus)
- I have not been interested
- The courses did not fit into my schedule
- I have not experienced any barriers
- Other (please specify in your own words)

Q9 - How would you prefer to hear about sustainability initiatives and updates in the future? (Choose your top three)


- 20% — Main Ohio State social media accounts
- 18% — Emails to the student body along with other student events and updates
- 18% — Bulletins around campus

Q10 - What types of sustainability knowledge are most important to you? (Choose your top three)

18%	12%	15%

- ■ Basic understanding of sustainability and what it means
- ■ How sustainability applies to my future career
- ■ How to personally engage in sustainability practices

Q11 - What could Ohio State do to better prepare you for a career or life beyond the classroom? What sustainability resources would be most useful to you? (Choose your top three)

13%	14%	14%
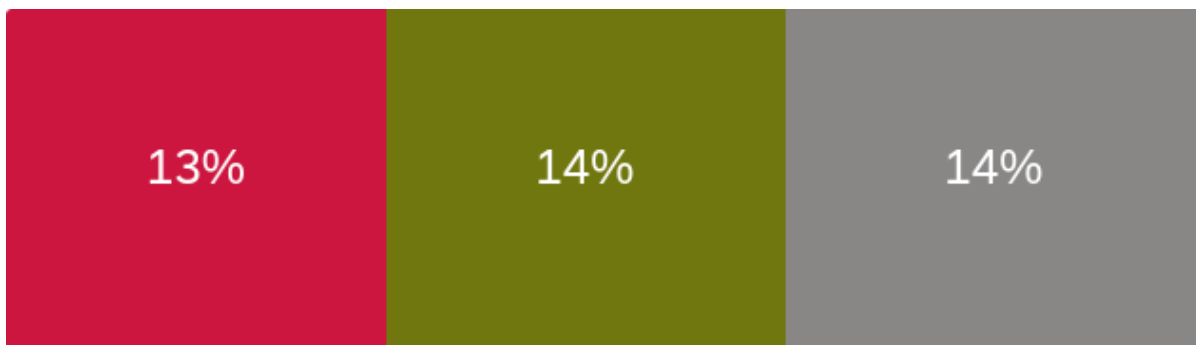
- ■ Opportunities to engage with sustainability research
- ■ Listing of sustainability volunteer opportunities
- ■ A central hub for sustainability education, learning, and opportunities

Appendix L - Project Member Contact Information

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