



**EEDS Capstone Project Team 2C: Final Report**  
Solicitation Number: EEDS0011

**SUSTAINABILITY EDUCATION AND LEARNING COMMITTEE WEB PORTAL**  
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## **Executive Summary**

This EEDS capstone research project is focused on researching best design options for an online web portal that would make it easier for OSU students to discover and engage in sustainability programs. The Sustainability and Education learning Committee (SELC), our project partner, has an objective to create a cohesive online tool that encompasses environmental, sustainability, and natural resource education (ESN) opportunities at Ohio State. This will hopefully increase members of ESN majors, decrease time to a degree, and increase student awareness of sustainability opportunities around campus. We employed cross-university comparisons, intra-university focus groups, and high school focus groups to determine the best way to structure the website and engage current and prospective students. We completed benchmarking analyses of other universities, conducted focus groups with High School and college students, and conducted a survey of OSU students to gain feedback on student preferences and needs for such a web portal. Through focus groups, we engaged in several open conversations about the tools and resources that students use in regard to sustainability education and their opinions about the current websites and resources. We conducted one University focus group and two high school focus groups, which we will also summarize in this report.

We hope to provide important research and results from our background research, focus groups, and survey for SELC to use that will aid in the creation of an online web portal, bringing more prospective students into ESN majors and easing the experience for current students. Our background research shed light on aspects of websites that students and users find useful and components of other Universities' websites that achieve SELC's goals for our sustainability portal. Furthermore, our focus groups from Grandview Heights High School provided crucial input about web portals from the point of view of prospective students. This is key to providing

recommendations for increasing the interests and inflow of prospective students. The University focus group directly focused on a student who had a clear scope of changes and features he wanted to see. Many of these suggestions correlated with our background research findings. Finally, the survey we created was the last component to our research. In this survey, we asked structured questions that forced participants to decide between different formats, categorization styles, and their opinions on available resources. This survey allowed us to provide SELC with important details including the best way to structure the web tool and existing issues with sustainability web pages.

## **Introduction**

Our goal was to provide background data to SELC that will help them in creating an interactive and comprehensive guide to all sustainability related majors and coursework at the University. This includes current and prospective students' insights and feedback on sustainability education at Ohio State. Our project was split into three research objectives, created and adjusted to focus on our goal. These include:

1. Identify exemplary communication tools with outstanding websites, online resources, and studies on human engagement components that can inform the creation of an effective web tool.
2. Host focus groups at local high schools, host focus groups with different OSU departments, and conduct a survey to collect feedback on what is most useful to include in the tool to help with college decisions, course planning, etc.
3. Identify relevant information from both Ohio State focus groups and survey results and high school student focus group results to find the compatible interests, the difference in needs between current and prospective students, and identify the most necessary components to include in the web tool.

Research objective one required in depth analysis of other universities and the structure of their web portals. This step also included research on the “do’s and don’ts” of web design. Based on our findings, we make educated recommendations about web design structure and aesthetics. The second research objective was the most important and took the most effort and time. Between scheduling focus groups, preparing questions, creating a survey, and receiving responses, these tasks required focus, patience, and attention to details. Constructing questions that were specific and easy to answer for the survey was imperative. Lastly, objective three put all of our research together and compares and contrasts the opinions and suggestions of perspective and current students. In this objective, we make recommendations and suggestions, backed by our research and results, on the most important and necessary aspects that should be included in our web portal.

## **Background Research**

When it comes to designing the look and usability of a Sustainability Portal, there are different goals that Ohio State's Sustainability Education Learning Committee hopes to achieve in order to create a successful web portal. Overall, the goals are to effectively communicate sustainability education programs at Ohio State University and to create a visually appealing, user-friendly web platform. Through our background research, we have studied what students/users find useful in a website, as well as specific university sustainability websites that achieve the same goals that SELC has for their own sustainability portal. By conducting this research, we are able to make recommendations regarding the aesthetic, functions, and content elements of the web portal so that it can serve as an effective, engaging resource and tool for all intended audiences.

### *University Example: Oregon State*

When finding an example of a well-made sustainability website, Oregon State University's Sustainability at OSU site exceeded all expectations. Their website not only encompasses all sustainability-related information pertaining to the university, but it does so in a clear and understandable manner; the website is professional and well-made but is also easy to maneuver, making finding the needed information easy. Although the information is well broken down and separated into specific categories and web pages, there are a few features that each of these pages all contain within the site. These include short blurbs of text, active links in textboxes, eye-catching photographs, various statistics/numbers, and clickable icons that take you to various sites. However, even though all of these details make the website attractive, it's the breakdown of their drop-down menus that makes this website so useful and effective (See Appendix for an image of these features).

For students, the “Academics” tab is their main resource, providing the Sustainability Course Lists. These lists are separated into undergraduate and graduate courses but are also broken down by courses that are either directly focused on sustainability or have a sustainability “lens” with a main focus elsewhere. They also provided a definition of sustainability pertaining to how they made this distinction between the classes (“Sustainability Course Lists,” 2020). This breakdown allows students to see what classes best align with their interests relating to Sustainability.

The “Operations” tab covers all the different areas that pertain to how the university conducts sustainability. The information captured here covers their energy sourcing and usage, food consumption and waste on campus, various green buildings on campus, recycling, water usage, information on electric vehicle charging, and sustainable purchasing practices (“Operations,” 2020). This information allows for anyone interested to see how the university as a whole is implementing sustainability, with all that located in one place.

The “Planning & Assessment” tab breaks down its information into three categories: Committees, Planning, and Policies. *Committees* lists past and current sustainability groups on campus and a summary of their goals and achievements, *Planning* summarizes the different plans the university has in place and is currently executing to achieve various sustainability goals, overall university strategy, and their carbon commitment, and *Policies* lists their Recycled Paper Policy (“Planning, Policy & Assessment,” 2020).

Within the “Get Involved” tab, there is information as to how to participate in sustainability at Oregon State University based on your relationship to the school, whether you are a student, faculty member, or a visitor. One of the resources listed is their own Carbon Calculator to measure your carbon footprint with tailored questions that pertain directly to

Oregon State and their campus. The questions relate to topics on transportation, consumption, energy and heating, food, and water, giving you your own personal footprint. After taking the Carbon Calculator quiz, it gives your personal results and compares them to the average of other countries, the US, and the state of Oregon. There's also a login option where you can keep past scores and analyze your trends ("Carbon Calculator," 2020). Overall, the "Get Involved" page helps answer what individuals can do to contribute to all the work and effort the university has made towards their sustainability initiatives.

Considering all this information, it is clear that Oregon State University has a great sustainability website. Their tabs are organized and well-defined with no cross-over in content allowing for any and all information to be easily found. Having short textboxes on the main pages that include links to a more in-depth description makes maneuvering the website quick, avoiding large blocks of text that the user would have to sift through. Overall, Oregon State University's Sustainability at OSU website is effective at communicating information and clearly organizes the information based on who it might pertain to, while a professional look draws you in, all of which really speak to the importance that sustainability has to Oregon State.

### *Website Design*

Various articles discussing the dos and don'ts of higher education website design. Campus Technology, a digital magazine for higher education, published an article by Rhea Kelly, "Prospective Students Want to Know About Academic Programs More than Cost, Reputation," where they polled nearly 5,000 college freshmen from more than 900 four-year schools, asking them what kind of information they were looking for when visiting a university's website. The results showed that more than anything, students primarily searched for information about majors and minors. The study also showed that social media is an important factor with



42% of students following the school they attend on Instagram, 37% following their Facebook page, and 22% follow their university's Twitter account. The article also noted that even though students are becoming more career-focused in their college search, "many schools don't provide prospective students with enough information on the experiences, opportunities and outcomes students will have in individual programs" (Kelly, 2018). This information provides insight as to what information needs to be made easily accessible to future and current students and what needs to be kept most updated in order to be successful.

Two other resources we found were by web design companies that provided information regarding what they've learned that future college students do and do not hope to see on a potential school's website. In "What Images Do College-Bound Students Want to See on Your Website?" by Sara Arnold from the technology company OmniUpdate, they have learned through creating websites for different higher education institutions that students hope to see career and graduate schools placement statistics, testimonials from current and past students, a mobile-friendly website, videos showing what makes that school different, and information about cost and tuition (Arnold, 2017). On the other hand, the article "Five Things Prospective Students are NOT Looking for in a College Website," by the Kyle David Group's Matt Harwick discusses what not to do when trying to create an enticing website for future students. One of the things they highlighted was poor readability and that the site "must convey the necessary information students are looking for—nothing more and nothing less" (Harwick, 2016). It's also encouraged to avoid long forms, often required for students to fill out to receive the information they need, but instead websites should just readily give the information students need. Again, the Oregon State University example hits the mark as far as what to avoid on their website. On any of the main pages of their sustainability site, there are text boxes containing

just the vital information so as to not overwhelm users, which makes finding what they need quick and easy. Once you click on the specific link that takes you to the page containing the information you're truly after, then the information becomes lengthier and provides greater detail. Their "Academics" tab also includes student spotlights in various sustainability-related degree programs, discussing the work opportunities they have had and where they are headed in their careers.

### **High School Focus Groups**

The second research objective focused on identifying and implementing strategies for soliciting feedback from all potential web portal stakeholders, particularly from students. In this case, potential students are prospective students, particularly high school senior students. To gain better insight into the steps prospective students take to gain admission into college/university, we held a focus group with approximately 30 Advanced Placement (AP) Environmental Science junior and senior students from Grandview Heights High School, Columbus, Ohio. Grandview Heights High School is a public high school within the larger suburban setting of Grandview Heights, Ohio.

The high school has about 349 students grades 9-12 with a 95 percent graduation rate (US News, 2017). Further, seventy percent of seniors who took the AP exam during the 2016-2017 academic year earned a score of a 3 or better (maximum score is a 5) (US News, 2017). Colleges/universities generally accept a score of 3 as "qualified", while a 4 is deemed "well-qualified" and a 5 as "extremely-qualified" (Princeton Review, 2020). These scores mean a high school student has proven capable of understanding the curriculum of an introductory-level college course. Because enrolling in AP courses are optional at Grandview Heights High School,

it is assumed that the juniors and seniors who take AP classes are on the trajectory to enroll into college/university.

Grandview Heights' estimated population is 8,321 and of that population, 95.42% of residents are White; 1.80% Asian; 1.09% Black or African American; 0% Native American; 0% Native Hawaiian or Pacific Islander (World Population, 2020). The median household income is \$6,345.71 per month and the average family size is 2.91. Additionally, 33.82% of Grandview Heights residents have earned their Graduate degree; 40.87% have earned their Bachelors degree; 2.94% have their Associates degree; and 6.02% of Grandview Heights residents have graduated high school. These demographics are reflected in Grandview Heights High School demographics. Ninety-three percent of enrolled students are White; 3% Black or African American; 2% Hispanic; 1% Asian; 0% American Indian/Alaskan Native; and 0% Hawaiian/Pacific Islander (US News, 2017). Lastly, 10% of students are economically disadvantaged. To be classified as economically disadvantaged by Grandview Heights High School standards is to receive free or reduced-price lunch meals (US News, 2017). Grandview Heights High School is ranked 18th (out of 916) within Ohio's Best High Schools.

### *Methods*

The main method for this research objective was gathering qualitative data. This form of data was used because of the nature of focus groups. A focus group is defined as a group of interacting individuals having some common interest of characteristics, brought together by a moderator, who uses the group and its interaction as a way to gain information about a specific or focused issue (M. Marcak, n.d.). In this case, the interacting individuals with some common interest are the ~30 AP Environmental Science high school students from Grandview Heights High School, Columbus, Ohio and the information to be gained is their insight regarding

sustainability, web design, and academic and career projections. We chose to conduct focus groups because it is the best method to assess prospective students' needs, likes and dislikes, and view their overall impressions of the admissions process in colleges/universities.

The data consisted of conversational and impersonal responses from the high school students. Although the focus group was impersonal and conversational, the discussion was framed based on 12 questions. To begin, we gauged the classroom's perception of sustainability. We asked, "what are the first words that come to your [high school students] mind when thinking about sustainability?" Next, to gauge interest in college web design, we asked, "Do you think colleges/universities have fully adapted into the new-age digital platforms and information is easy and accurate to find?" For clarification purposes, we went on to ask, "What areas need improvement?" Lastly, to gauge the classroom's perception of the college/university admission process, we asked, "when you [high school students] were applying to college, did you think it was important to research potential careers and salaries before committing to a major field of study?"

### *Results*

To summarize the outcome of the focus group, the responses can be encapsulated in three blurbs: students are attending college/university based on their needs being met for their field of study, not based on location; college/universities' websites are not up-to-date regarding functionality and navigation; and it is important for the college/university to showcase what current students and alumni are participating in and accomplishing in their respective fields of study on the website. Out of the ~30 high school participants, three of the students will be attending Ohio State in the fall, and one of those students will be joining the School of Environment and Natural Resources (SENR) as an Environmental Science major. Several

questions and statements of these prospective Ohio State and SENR students have been detailed below to provide more direct and applicable data for SELC (Grandview Heights High School Interview, 2020).

### *Descriptive Statements*

1. *Does salary matter? For example, did you [high school student] research salaries while researching majors?*
  - a. Male (18) (Prospective Environmental Science Student): “Yes, but I am more interested in the principles of sustainability like helping future generations. So, salaries did not play a major factor for me.”
  - b. Male (17) (Prospective Nursing Student): Yes. Nursing provides job stability and can provide me a good quality of life.
2. *For students attending Ohio State in the Fall, what programs have you attended leading to college admission?*
  - a. Male (18): “OSU Engineering Day”
  - b. Male (17): “OSU Buckeye Day”
  - c. Male (17): “OSU SENR-Department Visit”
3. *For students attending Ohio State in the Fall, what are some key points that drew you to Ohio State?*
  - a. Male (17) (Prospective Environmental Science Student): “SENR. Overall, there was a welcoming environment and I felt a connection between myself and the department.”
  - b. Male (18) (Prospective Engineering Student): “Ohio State has everything I need. There is nothing that the university can’t do for me.”
4. *Have you visited the SENR website? What do you think of it?*
  - a. Male (17) (Prospective Environmental Science Student): “I haven’t been on the website much, but I haven’t had any trouble accessing the information I needed.”
5. *What are you looking for on colleges/universities' websites?*
  - a. Male (18) (Prospective Engineering Student): “Active IT administrators who can help troubleshoot. I visited the University of Cincinnati’s website and the log-in portal didn’t recognize my username and password and then IT administrators were not helpful. Because of all the hurdles it took to get a functioning account, I decided to no longer pursue the application process to that school.”

### **University Focus Group and Survey**

Our third research objective focused on identifying and implementing strategies for soliciting feedback from all potential web portal users at the university level. A focus group format was decided upon to solicit this information. The purpose of hosting focus groups was to facilitate conversation with students and ask for feedback on the most useful components to

include in the web tool that would help with college decisions and course planning. Several university departments that have sustainability-related studies were identified through SELC and these departments were originally asked to help advertise the focus groups to the students. Upon the changes in university policy that took place post the COVID-19 shutdown, the focus groups had to be canceled and a survey was designed instead. The department heads were instead asked to help distribute and solicit participation in a survey that was designed from the original focus group questions (See Appendix for University Focus Group Questions).

### *Methods*

One university-level focus group was able to take place before the rest had to be canceled due to COVID-19. This focus group only involved one student, but the information obtained was very valuable in helping the Capstone Team pivot to the survey format. This student was also able to provide interesting insight as a Data Analytics and Psychology double major. From a data analytics perspective, this student highlighted the importance of well-organized tabs, a universal color palette, graphics and visual cues, well-defined categories and keywords or search terms, and information that has high relatability, such as a student spotlight. From the conversations during this primary, university-level focus group, the Capstone Team learned that:

1. It would be potentially helpful for students to be able to access all possible tracks (i.e. specializations, concentrations, course options) within their major or minor as part of the degree planning process.
2. Students would potentially be interested in a tool that recommends classes or helps align them with a major, minor, or course.
3. Students would potentially like to see more student pathways, stories or spotlights, and career paths to help decide upon a major, minor, or course.
4. Students would potentially like to see sustainability majors, minors, and coursework sorted according to the Six Dimensions Sustainability Framework established by the SELC.

The preliminary information obtained from the background research and the in-person, university-level focus group allowed the Capstone Team to identify key components students

may be looking for in a web tool that helps with degree planning. The Capstone Team was able to restructure initial focus group questions into survey questions that would reveal information about student preferences and needs without the conversational component.

The survey itself asked introductory questions about the students' academic unit, major, and rank to assess the variety and representative nature of the data collected, followed by several multiple choice, Likert scale, and short response questions (See Appendix for University Survey Questions). The multiple choice and short answer questions were meant to solicit information about the useful resources students have access to and the resources they perceive as lacking in regards to sustainability education. The Likert scale questions were in matrix format and asked students the degree to which they agreed (ranging from strongly disagree, disagree, neutral, agree, to strongly agree) with certain statements about accessibility of sustainability information and perception of the resources currently available. The survey asked a total of 17 questions and was sent to students in the following departments: Earth Science; Geography; Global Public Health and Environmental Health Science; Civil, Environmental, and Geodetic Engineering; Anthropology; Food, Agricultural, and Environmental Sciences; and SUSTAINS Learning Community. It was also sent to SELC committee members and several professors that teach sustainability-related courses, including Introduction to Environmental Science, for distribution.

#### *Translating Focus Groups to Surveys*

When the Capstone Team was working to restructure the focus group questions into a survey format, emphasis was placed on the information the team sought to collect per the recommendation of Gina Jaquet from the SELC. The focus group questions were designed to be open-ended and foster conversation that could reveal a lot of information, but the survey questions were required to be direct with easy, simple responses. The survey questions needed to

be direct to minimize the time commitment so a large number of responses could be collected and so that explicit answers could be arrived at, even without the ability to discuss students' responses with them. Particularly helpful in designing the survey was the use of a likert scale (strongly disagree, disagree, neutral, agree, to strongly agree scale) because they force participants to make choices that reveal their preferences and perceptions without asking them to write a detailed response.

One of the most important questions and overarching objectives to be identified in this study is the best way to structure an interactive web tool and how it could best meet student needs. One of the most important questions asked in the survey gets at this objective by asking students to choose which of the following options would be the most helpful to them when searching for sustainability-related courses:

- A full list of sustainability-related courses with the ability to apply filters based on personal interests and needs.
- A search engine that brings up relevant, sustainability-related courses based on the keywords typed in. The search engine would also have the ability to apply filter categories, similar to the Web of Science.

In both of these web-tool options that were proposed to students, the potential for filter capabilities were said to be based upon different dimensions or components of sustainability, course levels, topics, and departments.

### *Results*

The Capstone Team received 1259 survey responses from students at OSU. One of the most relevant is student preference for web tool interactive feature and format. Students were specifically asked, "If I am searching for sustainability-related courses, which of the following sounds the most useful to me? A full list of sustainability-related courses with the ability to apply filters based on my own interests and needs, OR a search engine that brings up relevant,



sustainability-related courses based on the keywords I type in. The search engine would also have the ability to apply filter categories.” Of the total 1259 responses, 863 students said that they preferred a full list of sustainability-related courses with the ability to apply filters based on their own interests and needs, while 396 students said that they preferred a search engine that brings up relevant, sustainability-related courses based on the keywords they type in. The majority of students who participated (68.55%) prefer a full list of sustainability-related courses with the ability to apply filters based on their own interests and needs (over a search engine with the same functions). Students were additionally asked how they would like to see this information sorted, and it was proposed that this information be broken down or filtered according to broad components of sustainability or the Six Dimensions Framework created by the SELC, i.e. according to the following categories: human-natural systems; environmental and earth systems; economy and governance; society and culture; engineering, technology, and design; and health and well-being. A total of 1208 student participants (95.95%) thought this would be an effective way to organize the major, minor, and course information. The students that responded to the survey represent a total of 98 different majors across the university, implying that the survey responses come from a wide variety of departments (See Appendix for a full list of represented majors). A full data set can be furnished upon request.

### **Recommendations**

According to all of the background research and the focus groups and surveys administered to both high school and university-level students, the Capstone Team can make several recommendations based on the needs of each of the potential user groups of the sustainability web portal. Beginning with the background research on web design and the model website of Oregon State University, the Capstone Team can make recommendations regarding

the aesthetics, functions, and content elements of the web portal. Regarding the organization of the information, creating useful tabs with well- distributed subcategories will be very beneficial. Compiling all the information that SELC wishes to include in the web portal and organizing it all into approximately five to eight overarching categories would give the website a clean look and wouldn't make the user feel like they're being bombarded with information.

Additionally, with reducing time to degree as one of the main goals of this portal, it's vital that the class lists are organized in a way that can be filtered and classes can be easily found based on personal search criteria. The way Oregon State separated classes into sustainability courses and courses with sustainability-related content is a good first step towards organizing the class information. However, SELC and the Sustainability Institute have created the Six Dimension Framework that breaks down courses by six different aspects relating to sustainability. Having these dimensions explained and used as a filtering option when trying to find classes would be very beneficial in that students are more likely to take classes that interest them and find the right learning path for themselves. This would directly contribute to a quicker time to degree as students would be able to organize the classes they want to take and would be able to plan ahead with their interests in mind.

Concerning the aesthetics of the website, one recommendation would be to make the website wider versus longer. Having to scroll too much could make a user breeze past important information, whereas if you have two or three textboxes or photos next to each other, it allows the user to see more at once and provides more opportunity for them to lay their eyes on something that interests them. Based on the suggestions from the articles, it would be beneficial to have icon links to different Ohio State sustainability social media accounts. Further, having a built-in slideshow of a few student testimonials from various academic units on campus talking

about a valuable experience they had regarding their studies and what they are doing, or wish to do, with their degree will show future students that studying sustainability can be done in many different degree programs and can lead to many different career opportunities.

As for the high school focus groups, the Capstone Team believes Ohio State's SELC should cater the web portal to prospective students and supply their needs in terms of applicability, functionality, and ability to navigate easily. When discussing prospective students, it is generally assumed that this means high school seniors. So, having a web portal written in readable and usable terms for the average 18-year old to comprehend is necessary. On the web portal, we recommend having filterability options for prospective, current students, and alumni.

Concerning the university focus groups, the survey responses have allowed us to propose a format and structure for the sustainability web portal's interactive features. Based on the responses that have been analyzed from the survey, we can recommend sorting all sustainability and sustainability-related majors, minors, coursework and other content according to the Six Dimensions Framework and we can recommend that an interactive tool that lists all potential majors, minors and coursework with filter abilities be designed over other proposed ideas for interactive features. The filter abilities can pertain to the six dimensions framework, or broadly to realms of sustainability, department, or course level. The comprehensive and interactive list of all sustainability majors, minors, and coursework with filtering abilities was supported by 68.55% of participants, and organizing the same information based on the Six Dimensions or broad areas of sustainability was supported by 95.95% of participants.

As we approach a new wave of digital platforms, the web portal serves as visitors' first impression of Sustainability at Ohio State. In order to give a good first impression, there needs to be a tighter connection among the different departments across the university, so that the website

is giving accurate information across the board. Not only current students will be looking at this information, but also thousands of prospective students will be turning to this website to research sustainable education at The Ohio State University. Moving forwards, the priorities for SELC's implementation of this web portal ought to be 1.) To create 5-8 useful tabs with well-distributed and defined subcategories that lend themselves to individual search needs, 2.) To make this tool accessible to all current students across the university and to prospective students and their families, and 3.) To organize it in the way that students want, according to the Six Dimensions Framework with filter capabilities for all major, minor, and coursework information.

The limitations of this study and the information that the Capstone Team has been able to collect must also be noted. The original focus group format was chosen because of its ability to lend itself to conversation and discussion. It became impossible to obtain information in the focus group setting during the course of this project, so the anticipated benefits from open discussion have been eliminated. However, the survey response rate is high and we have received a lot of valuable information. The only remaining concern is that the responses may be skewed by students who are studying majors within the School of Environment and Natural Resources. While the survey information was distributed widely, it went to one especially large group of students enrolled in Intro to Environmental Science with Dr. Brian Lower. The class was offered extra credit to take the Capstone Team's survey, and this is a class of around 600 people, most of whom tend to be studying environmentalism and sustainability. We would be remiss to not point out the potential skewing of our results for this reason. In future research, the Capstone Team recommends hosting the in person focus groups as originally planned. We think it would still be very beneficial to interact with students face-to-face to receive more insight and possibly new ideas that could not be elaborated upon in the survey format. Our recommendation

is that SELC design a web portal based on the recommendations and best practices outlined in this report. A testing phase of the portal could be conducted using student focus groups, and the feedback from these groups could direct the final design and any revisions to the structure and function of the portal.

## **Conclusions**

The Sustainability and Education Learning Committee Capstone Team encountered challenges as focus groups were changed to surveys and in person communication became impossible. After adapting to a new structure, the Capstone Team was able to gather research and feedback to provide SELC with beneficial information for the building of an OSU sustainability web portal.

After extensive background research, Oregon State University was found to be the best model for an exemplary website. Particularly their listings of sustainability courses were found to be beneficial to students and could be used as a framework for SELC. Additionally, using school colors along with Brutus as an icon showing sustainability related activities would be beneficial as opposed to long paragraphs describing activities going on. Showcasing student examples and alumni was also found to be important. These aspects would benefit SELC because presenting sustainability related courses in the most efficient way possible could help lower time to degree for students. Having an aesthetically pleasing website will not only boost future students' enrollment, it will also assist those within the university with their sustainability tracks within any department.

The focus group that was done at Grandview Heights High School found that students are choosing their university based on whether or not the needs of their field are met, not location; that students believe university websites are not up-to-date; and that students find it important for

universities to showcase what current students and alumni are participating in and accomplishing in their field. In addition, college websites often serve as a first impression for prospective students and their families. Thus, when designing features for future students, text must be kept readable for an eighteen-year-old. These recommendations can benefit SELC as they build this web portal, by providing as much assistance for students as possible and by making it as easy as possible to find sustainability related information at Ohio State.

One of the most important findings of the university level survey was that students prefer a full list of sustainability related courses with the ability to apply filters based on their individual interests and needs (as opposed to other tools with the same function). This aids SELC's goal to meet the needs of students and provide them with sustainability related information to assist in their academic goals. The Capstone Team believes that the information reported here can help SELC in their goal to design a web portal that will help students locate academic programs of interest, showcase the variety of options to study sustainability, and make all sustainability related information, across different departments cohesive and accessible in one place.

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## **Appendix**

### *Key Contributors*

Gina Jaquet, SELC Representative, Project Partner

Department Heads from Sustainability-Related Academic Units

Dr. Biesi

Dr. Gremillion

Dr. MacKay

Dr. Munroe

Dr. Saltzman

CFAES Administrators

Adam Cahill

Molly Giammarco

Renee Johnston

Gregory Hitzhusen, Project Advisor

Dr. Brian Lower, Intro to Environmental Science

Grandview Heights High School

AP Environmental Science classes

Jeremy Huang

University Focus Group participant

### *Key Web Resources*

Oregon State University- Sustainability at OSU

### *Data Sets*

Data Set 1: High School Focus Group

Description: Grandview Heights Focus Group session with 30 AP Environmental Science students at Grandview Heights High School

Source: Transcription from recording during focus group session (furnished upon request)

Data Set 2: University Focus Group

Description: Interview with Jeremy Huang from Data Analytics and Psychology

Source: Transcribed notes taken during interview (furnished upon request)

Data Set 3: Qualtrics Survey of Current University Students

Description: Survey derived from focus group questions to engage with students from departments across the university

Source: Qualtrics Survey ([https://osu.az1.qualtrics.com/jfe/form/SV\\_9ubg0ZB55SGOizj](https://osu.az1.qualtrics.com/jfe/form/SV_9ubg0ZB55SGOizj)) and imported response data, Excel. "Sustainability Institute Web Portal Survey- Student Capstone Study\_April 22\_2020." (data files furnished upon request)

### *Oregon State Images*

Sustainability Course Lists

## Explore

Welcome to OSU's sustainability website!

Interested in joining clubs and organizations with a focus on sustainability but don't know where to find them? Overwhelmed by how much OSU has to offer? Check out our [new sustainability clubs & orgs page](#) for a comprehensive list of groups that are working towards creating a more sustainable community here at Oregon State University! #SustainableBeavs

- Energy
  - Assessment
- Food
- Green Building
- Natural Features
- Purchasing
- Overwhelmed
- Recycling
- Water
- Transportation

- Energy Policies and Rules
- Metering
- Renewable Energy

<https://fa.oregonstate.edu/sustainability/academics>

## Explore

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- Annual Reports
- STARS

- Calculate Your Carbon Footprint
- Green Certifications
- Students
- Faculty and Staff
- Visitors
- Support Sustainability



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NEWSLETTER

Qualtrics University-level Survey Questions

1. Name and Dot Number
2. Rank
3. Academic Unit
4. Major
5. Please respond to the following statements by ranking the degree with which you agree with them. Potential responses are *Strongly Disagree*, *Disagree*, *Neutral*, *Agree*, and *Strongly Agree*.
  - a. When applying to college, I found it easy to locate sustainability-related majors, minors, and academic programs within the university.
  - b. I am familiar with current academic web resources at OSU and find them to be easy to navigate.
  - c. I am familiar with current sustainability-related web resources at OSU and find them to be easy to navigate.
  - d. I find current university web pages surrounding sustainability to be interactive and engaging.
  - e. It is easy to find environmental and sustainability-related involvement opportunities outside of the classroom (student organizations, Learning Communities, Scholars programs, etc.)
  - f. An aptitude test (something similar to a personality quiz) that could help align me with a program based on my interests would be useful when searching for a sustainability-related major, minor, or other academic program.
6. Please respond to the following statement by ranking the degree with which you agree with it. Potential responses are *Strongly Disagree*, *Disagree*, *Neutral*, *Agree*, *Strongly Agree* and *I am currently enrolled in a sustainability major*.
  - a. If I am NOT enrolled in a sustainability-related major, but am interested in courses or minors that have sustainability-related content, options for courses or minors with sustainability content are easy to find.
7. Please respond to the following statement by ranking the degree with which you agree with it. Potential responses are *Strongly Disagree*, *Disagree*, *Neutral*, *Agree*, *Strongly Agree* and *I am NOT currently enrolled in a sustainability major*.
  - a. If I AM enrolled in a sustainability-related major, course and minor options from diverse fields of study that still encompass sustainability content are easy to find.
8. It would be helpful if sustainability courses were sorted by topic or the area of sustainability that they encompass (e.g., these areas might be: Human-natural systems; environmental and earth systems; economy and governance; society and culture; engineering, technology, and design; health and well-being, each as they pertain to sustainability)
  - a. Yes
  - b. No

- c. I would prefer to see the courses sorted another way. (Please elaborate)
- 9. Were you set on your current program of study from the onset of your college career, or did you change majors?
  - a. I did not change majors
  - b. I did change majors. (If you changed majors, what resources helped you decide on the change)
- 10. If I am searching for sustainability-related courses, majors, and minors, which of the following sounds the most useful to me?
  - a. A full list of sustainability-related courses, majors, and minors with the ability to apply filters based on my own interests and needs. (These filters could be based on different areas or components of sustainability, course levels, topics, and departments)
  - b. A search engine that brings up relevant, sustainability-related courses, majors, and minors based on the keywords I type in. The search engine would also have the ability to apply filter categories, similar to the Web of Knowledge and Web of Science. (These filter categories could be based on different dimensions or components of sustainability, course levels, topics, and departments)
- 11. Potential filter categories for finding relevant sustainability-related courses, majors, and minors in the web tool could be based on different areas or components of sustainability, course levels, topics, and departments. What other filtering categories could be beneficial? (Short answer response solicited).
- 12. What university web resources could have benefited you when you were a high school student looking into universities and majors? (Short answer response solicited).
- 13. What university web resources could have benefited you as a current OSU student looking into sustainability-related majors, minors, and courses? (Short answer response solicited).
- 14. What degree planning tools do you find most useful? (e.g. sample course plans/four-year plan projection, required courses listed along with lists of possible electives, etc.) (Short answer response solicited).

*List of Majors Represented in University-level Qualtrics Survey (in order of response)*

1. Animal Industry
2. Environmental Science
3. Microbiology
4. Hospitality
5. Ecosystem Restoration
6. Animal Science
7. Landscape Architecture
8. Business
9. Political Science
10. Agriscience
11. Biology
12. Social Work
13. Biomedical Engineering
14. Molecular Genetics
15. Neuroscience
16. Civil Engineering
17. Actuarial Science
18. Musicology
19. Public Affairs
20. Environmental Engineering
21. Ecological Engineering
22. Finance
23. Mechanical Engineering
24. Early Childhood Education
25. Middle Childhood Education
26. Computer Science
27. Natural Resource Management
28. Aerospace Engineering
29. Evolution and Ecology
30. Environment, Economy,  
Development, and Sustainability
31. Accounting
32. Human Development
33. Plant Pathology
34. Marketing
35. Economics
36. Chemical Engineering
37. Electrical Engineering
38. Sustainable Agriculture
39. Korean
40. Arabic
41. Spanish
42. Architecture
43. Public Affairs
44. Chemistry
45. Biochemistry
46. Dental Hygiene
47. French
48. English
49. Environmental Policy and Decision-  
Making
50. Geophysics
51. Italian
52. Russian
53. Japanese
54. Turkish
55. World Economics
56. African American and African  
Studies
57. Linguistics
58. Physics
59. Astronomy and Astrophysics
60. Women's Studies
61. Anthropology
62. Food Science
63. Film Studies
64. Geographic Information Systems
65. Forests, Fisheries, and Wildlife
66. Computer Information Science
67. Data Analytics
68. Math
69. Medical Lab Sciences

70. Communications
71. Design
72. Sociology
73. Public Health
74. Sports Industry
75. Nutrition and Dietetics
76. Art and Technology
77. Fine Arts
78. Statistics
79. Zoology
80. International Relations and  
Diplomacy
81. International Studies
82. Operations Management
83. Criminal Justice
84. Fashion
85. Dance
86. Theatre
87. Philosophy, Politics, and Economics
88. Human Development and Family  
Studies
89. Teaching English to Speakers of  
Other Languages Education
90. Agricultural Education
91. Journalism
92. History
93. Logistics
94. Human Development
95. Nursing
96. Speech and Hearing Sciences
97. Real Estate
98. City and Regional Planning