

Muscatine Community College Sustainability and Environmental Responsibility (SER) Initiative



“Cardinals going Green”

University of Iowa - School of Planning and Public Affairs
Capstone Project

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Executive Summary

Muscatine Community College (MCC) and Phi Theta Kappa (PTK) members partnered with the Iowa Initiative for Sustainable Communities to work towards fostering a more sustainable campus. This agreement established a UI Project Team that would perform a multi-faceted project: a) assist PTK with their Honors-in-Action project, b) assess the culture of sustainability at MCC, and c) develop a framework for MCC to create a unique and customized Sustainability and Environmental Responsibility Plan (SER Plan).

The UI Project Team created, administered, and analyzed surveys regarding behaviors, beliefs, and perceptions about environmental sustainability. Members of PTK and the UI Project Team completed a waste audit to collect data on the efficiency of the waste management methods utilized at MCC. The UI project team completed research of peer institutions to determine methods of developing an SER Plan.

With these findings and participating in stakeholder engagement through a focus group, the UI project was able to create a customized framework for MCC to establish an SER committee, create an SER plan, and propose several actions such as improving the waste management system, increasing sustainability education in the curriculum, and encouraging low carbon transportation that will help MCC reach their sustainability goals.



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Introduction

Topic and significance

Over the past decade and across the United States, colleges and universities have sought to integrate sustainability-minded and environmentally responsible policies and principles into campus operations. Sustainability, or “the balance between the environment, equity, and the economy,” has become a crucial component to all operations as the global climate crisis persists and with impending changes to the climate soon becoming irreversible. The EPA says that “to pursue sustainability is to create and maintain the conditions under which humans and nature can exist in productive harmony to support present and future generations.”ⁱⁱ

Important measures to create and maintain a sustainable college campus and learning environment include reducing greenhouse gas emissions by evaluating an institution’s carbon footprint and implementing targeted policies to become a zero-waste campus. Carbon footprints and zero-waste programs, while related, address different aspects of human impacts on the environment. A carbon footprint is the sum of all greenhouse gas emissions generated by an institution. Contributing factors to the calculation include food consumption, transportation practices, energy usage, and waste production. While a carbon footprint assessment can inform zero-waste policy, an institution still must evaluate the current waste management system and adopt changes where necessary.

This document will provide policy recommendations and action steps for one community college in Iowa, Muscatine Community College (MCC) intends to take to reduce its carbon footprint and increase its climate resilience and sustainability. This report was prepared by a University of Iowa (UI) student team, working with faculty and staff of MCC along with student members of Phi Theta Kappa (PTK), a student organization at MCC.

Context

The City of Muscatine is the seat of Muscatine County and is home to just under 24,000 people at the time of the 2020 Census, a 3.8% increase over the last ten years. The largest racial/ethnic groups that are represented in Muscatine are White alone (87.7%), Hispanic or Latino (18.5%), and Black or African American alone (4.1%) and the city’s median household income is \$53,768.ⁱⁱⁱ In its population of residents 25 years of age and older, 36.6% are high school graduates, 19.2% have completed some college, 12.1% earned an associate degree, 13.4% earned a bachelor’s degree, and 6.6% earned a graduate or professional degree. The manufacturing industry makes up 35.4% of employment for Muscatine County, followed by 20.9% in educational, health services and social assistance, and 8.5% in retail trade.

In 2020, an average home in the city of Muscatine cost \$131,700. The average annual temperature in Muscatine is 51.8°F, dropping to 26.4°F in the winter, and 74.3°F in the summer. Muscatine’s largest employer is the HNI corporation, followed by Grain Processing/Kent Feeds, and the Muscatine Community School District.^{iv} HNI, one of the largest and most successful office furniture manufacturers in the world, was established in Muscatine, IA in 1947. HNI owns over 12 brands including Respawn and Allsteel, and HeatGlo. The HNI corporation also employs 3,800 workers who commute to Muscatine for work.^v

Since 1929, Muscatine Community College (MCC), originally Muscatine Junior College, has served the community of Muscatine and the surrounding area. MCC is a part of the Eastern Iowa Community Colleges System (EICCS) which has education centers in seven different communities in Eastern Iowa.



Students who enroll at one of the campuses in the EICCS can choose to pursue either an Associate in Arts degree with which they may choose to apply toward a 4-year degree through EICCS’s transfer agreements with 23 private and public universities across the state, or over 30 career technology programs as varied as vet tech, fine arts, and culinary arts.

MCC enrolls between 1,300 and 1,500 students each year and employs a staff and faculty of around 60 total members at their 65-acre campus that houses nine buildings. MCC primarily serves the community of Muscatine with satellite centers in Columbus Junction and Wilton. The Muscatine Community School District (MCSD) is made up of 22 total schools with a total enrollment of 7,050 students. There is one high school in MCSD, which in the 2020-2021 school year had an enrollment of 2,113, and an 82.03% graduation rate^{vi} which is below the state average of 90.2%.^{vii}

MCC Student Demographics

During MCC’s 2022 Spring enrollment season:

- The total student enrollment was 1,225 students
- 29.1% of students took classes full-time, 19.9% were part-time and 48% of students were also enrolled in high school concurrently while at MCC.
- 55% of students self-identified as female, and 45% as male.
- 68.2% of students identified as white, 20.6% as Hispanic, and 3.8% as Black.
- 42.8% of MCC’s student body (non-high school students) were first generation students, meaning that they are the first in their family to attend a higher education institution.
- 6.7% of students are either 18 or 19 years of age, and 18.8% are 20 or 21.

During MCC’s 2021 fiscal year:

- 44.6% of students received financial aid from Pell grants, which are only awarded to students “who display exceptional financial need.”^{viii}
- The largest percentage of students were enrolled in Liberal Arts (226), Business Professional (39), Veterinary Technician (34), and Information Technology (31) programs of study.
- During MCC’s 2020-2021 academic year, 54% of students attended their classes online only, 12.1% in-person, while 33.9% took a combination of online and in-person classes.

The national Phi Theta Kappa Honors Fraternity holds a chapter at MCC, membership in this which is exclusive to high-achieving students who meet certain academic standards. The Honors-In-Action project is an intensive, year-long service project that PTK chapters must complete to be recognized at the regional and national levels. For the 2022 calendar year, MCC’s PTK chapter chose to focus on environmental sustainability, and so the UI project team acted as consultants for planning and guiding the aims of their project.



Project Goals

The UI project team, PTK, and MCC administration collaborated from January - May 2022 to:

- Formulate a Long-term Sustainability and Environmental Responsibility plan for Muscatine Community College to reduce greenhouse gas emissions and waste through campus policies and practices
- Develop a project for the students of MCC Phi Theta Kappa chapter to reduce MCC waste and greenhouse gas emissions in the fall semester of 2022
- Collect and analyze data on the culture of the MCC student body and administration to curate a positive environment and comprehension of environmental sustainability goals, including education and diversity, equity, inclusion, and justice implications

Towards completing the above tasks, the UI Project Team:

- Worked with Phi Theta Kappa to plan and execute their Honors-in-Action project (conducted research on current recycling practices at MCC through a waste audit and planned future recycling education activities based on the audit findings)
- Partnered with Phi Theta Kappa to conduct a student and faculty/staff survey to collect data on the culture of sustainability at MCC
- Utilized existing data regarding MCC's waste production and researched sustainability best practices at similar institutions to create a long-term plan
- Held regular meetings with Phi Theta Kappa and MCC administration
- Identified and collaborated with key stakeholders to accomplish the goals outlined above
- Researched grants and other relevant funding opportunities for Phi Theta Kappa and MCC at large to pursue to achieve these goals





Background

Literature and Theories

Climate Change

According to the International Panel on Climate Change (IPCC), “human activities have caused global temperature to rise about 1.0 °C degrees above preindustrial levels (before the 1880s) and that, if increases continue on the current trajectory, global warming will likely reach 1.5 °C between 2030 and 2052.”^{ix} The Environmental Protection Agency states that reaching this increased temperature could increase the frequency, durations, and intensity of heat waves, worsen air and water quality, cause rising sea levels, change ecosystems’ patterns of migration and reproduction, and increase the frequency and intensity of extreme weather events.^x These consequences of global warming pose risks to health, livelihoods, food security, water supply, human security, and economic growth. These impacts could disproportionately impact vulnerable groups of people.

The Role of Community Colleges

Higher education institutions have become increasingly aware of their role in preventing or limiting the effects of climate change. Several pieces of academic literature state the obligations of higher education institutions fall in two distinct categories: one, reducing the carbon footprint of their operations, policies, and practices and two, advancing curriculum and pedagogical approaches that prepares students combatting climate change in their future careers. The latter objective could result in workers and citizens that are more literate about global warming, its consequences and ways to mitigate it. Indeed, many international organizations, such as UNESCO, have advocated extensively for climate change education and developed and distributed resources to support it.

Higher education has become a front runner for advancing carbon neutral practices. Higher education has several key components that position them to be leaders in global warming mitigations -- including personal stake from students concerned about the future to research laboratories, facilities, and skilled faculty. Community colleges can prepare students for contributing to a sustainable future through both short-term training programs. According to The Community College Handbook for Sustainability Education and Operations, “This dual function will be more important than ever in navigating the complex multi-industry and interdisciplinary paradigm shift over the next ten years.”^{xi} Community college’s unique role in preparing future students and workforce is a strong cause for community colleges to understand, teach, and prepare their students for a future where sustainability is the centerfold. For example, community colleges also can directly address the need to transition displaced workers from failing industries such as coal, into growing clean industries such as solar and wind.

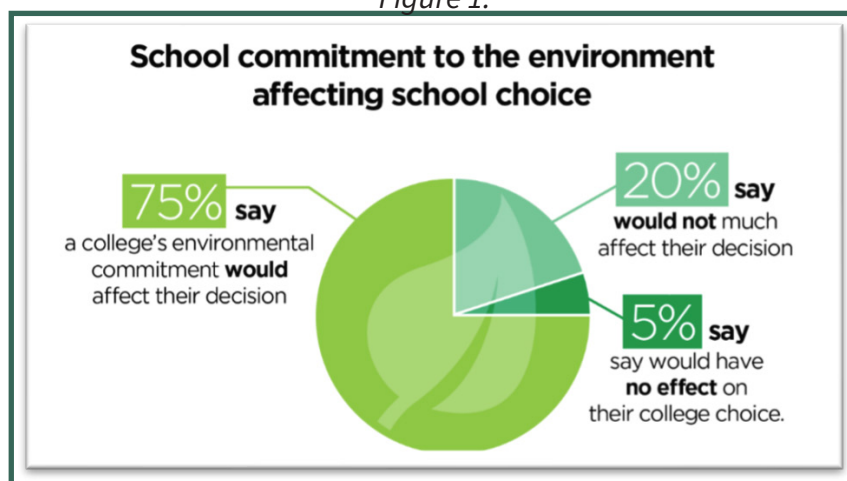
Community colleges can be leaders in shaping sustainable and just change in local economies. They have connections to industry, government and community that can be leveraged to drive sustainable practices, technology, and knowledge.^{xii} Students are local, so they have a stake in their community’s livability and therefore ideal candidates to be shaped into engaged citizens. The curriculum and programs are nimble and responsive based on employer needs and timelines. The flexibility aligns with the urgency to get sustainability in the curriculum early, often, and across all disciplines. The diversity of demographics includes age, ethnicity, and backgrounds which are ideal for complex problem solving, critical thinking, and creativity.^{xiii} On the other hand, community colleges also face their own set



of unique challenges including initiative fatigue and high turnover rate. Commuter campuses by design make it difficult to keep student led or inspired sustainability initiatives started and moving forward in the long term even when successfully implemented. It is also challenging to convince faculty that sustainability is a practice of embedding knowledge in the current curriculum rather than adding more information and work into their syllabus.^{xiv}

While many higher education institutions have moved forward with prioritizing sustainability, this action has been driven by students and staff, with administration following their demands.^{xv} This practice is often inefficient because of the restricted financial, managerial, and organizational support received, which are crucial for success. Research shows, in addition to the positive effects on the environment, sustainability plans also can produce other positive side effects for institutions that opt to implement them. Young people and future college students are more concerned about climate change and are looking for futures that can align with values and practices that embody sustainability. According to the Princeton’s Review 2021 College Hopes and Worries Survey of 14,093 US college applicants and their parents, 75% indicate that institutional commitment to environmental issues would affect their choice of college: a 10% increase from 2020.^{xvi}

Figure 1:



In addition to the moral and social responsibility for action, this data suggests a potential direct competitive and financial benefit. Academic literature demonstrates that a framework encompassing strategic planning, managerial and financial support, monitoring and evaluation, knowledge transfer, and transparency is key to ensuring a successful and collaborative transformation. This strategy allows students and staff members to be actively involved without bearing an unreasonable burden, which should reside with the university’s directors.^{xvii} Therefore, sustainability transformation for higher education institutions includes a developed centralized, institution-level framework.^{xviii} To accomplish this broad goal, first, universities should publish a sustainability strategic plan, in which the university states and defines its environmental stand, and a roadmap to show time-bound objectives and the pathways for achieving these objectives.^{xix} This plan works to achieve the first purpose of higher institutions mentioned above (reducing their carbon footprint in relations to their operations, policies, and practices). As well, institutions need a better understanding of the needs, barriers, and challenges underlying a transformative change towards sustainability.^{xx} This can be spread across administration, faculty, and staff, as a permanent presence and embodiment of the campus. However, as community colleges have high turnover, this is critical to adopting and successfully implementing a sustainability plan that is rooted in cultural and lasting change.



Research and Tools for Sustainability

The demand for this change at higher education institutions has not gone unmet and support for institutions that want to face climate change through sustainability measures exists. The Association for the Advancement of Sustainability in Higher Education (AASHE) is an organization that “empowers higher education faculty, administrators, staff, and students to be effective change agents and drivers of sustainability innovation. We work with and for higher education to ensure that our world’s future leaders are motivated and equipped to solve sustainability challenges.”^{xxi} This organization officially launched in 2005 after the demand for such resources was growing, originally provided by the Education for Sustainability Western Network only to western U.S. and Canada universities.^{xxii}

Research also highlights different methods that higher education institutions can utilize to become more sustainable through their dual role discussed above. First, a study utilized in Swedish upper-secondary education classrooms demonstrated the importance to use carbon footprint calculators. The study examined how students’ discussion and reasoning evolved when using a carbon footprint calculator to understand carbon dioxide emissions. The carbon footprint calculator supports students in using different modes of “developing an understanding of climate change and its relationship to human activities.”^{xxiii} The study concludes that the carbon footprint calculator “mediates features of the environment that students otherwise could not perceive; it makes the invisible visible.”^{xxiv} This evidence shows that utilizing a carbon footprint calculator can be a tool that makes carbon emissions more tangible for students to understand and thus a crucial instrument to employ in education settings and for baselining emissions and progress on change.

Another challenge that higher education institutions face in achieving sustainability is comprehensive solid waste management programs. Research has shown, “conducting a waste characterization study is a critical first step in successful waste management planning and advancing the overall sustain-ability of an institution of higher education.”^{xxv} A waste characterization study (further referred to as a waste audit) is a method for analyzing the waste stream. The goal is to observe what type and quantity of waste is produced and how it is disposed of. The data revealed from the audit can indicate how much is discarded in a certain period, how much waste is discarded in garbage, recycling, or other mechanisms and what types of materials are often incorrectly discarded. This type of analysis is not only beneficial for the purposes of environmental sustainability, but also financially responsible. Understanding the produc-tion of waste in relationship to its costs can reveal waste disposal patterns that are costing the institution valuable dollars.^{xxvi}

Community colleges also need to consider transportation regarding their emission production. According to “Commuting Costs for Community College Students”, 95.4% of community college students commute and 89.9% commute by automobile.^{xxvii} Transportation is of particular concern nationwide as the greenhouse gas emission from transportation has increased 20% in 1990.^{xxviii} The EPA found that in 2016, “the GHG emissions of the transportation sector exceeded the emissions from the electricity sector and, for the first time in history, became the main emitter of GHG emissions in the country accounting for 28.5% of the total emissions.”^{xxix} Additionally, passenger cars represent the largest source of emissions, accounting for 42.2% of transportation sector emissions. One study examined how emissions from the daily commute of tenants of a building make up a significant share of the total carbon footprint of the body. The study examined Rinker Hall of the University of Florida and found that tenant transportation (measured via survey of tenants and distance-based method for emissions calculated) made up about 24% of the building emissions.^{xxxi} Rinker Hall is home to the University of Florida’s school of Architecture, Planning, and Construction. There were 2,341 participants that completed the survey for this study. Almost 90% of staff respondents used private cars, while about 67% of faculty respondents used private cars.^{xxxii} Student respondents used private cars at a much lower rate at approximately 20%.^{xxxiii} While



commuter emissions can range widely across institutions, this is an important element of sustainability plans.

A critical aspect of successful implementation of sustainability plans is engagement from students. To create and maintain engagement, the sustainability plan needs to include elements that build and reinforce sustainability principles which are best taught through experience and practice, rather than in the abstract form.^{xxxv} One tool that can be used to do this is a campus garden. A campus garden is a public space created and maintained by the campus community where participants can plant and harvest vegetables, herbs, and fruit.^{xxxvi} While not the most impactful mechanism for sustainability, this option can connect students to sustainability through behavioral engagement. Beyond connection to the sustainability plan, research shows that frequent experience with a natural environment is linked with an increase in positive environmental attitudes and behaviors.^{xxxvii} In addition, research shows that interest in being involved with community garden was not as strongly tied to direct interest or experience with gardening or pro-environmental views, but most closely tied to students' own motivations.^{xxxviii} This could be a key factor in getting students involved with a project like a campus garden, and then further invested in the campus sustainability plan.

One final tool that community colleges can utilize in their sustainability plan is the curriculum of the institution. According to authors of "Teaching Education for Sustainable Development at University Level", "essentially, external circumstances as a global level dictate that embedding sustainability into the curriculum is a responsibility all universities must undertake."^{xxxix} Not only does this promote the education of sustainability, but the labor market has an increased demand for graduates to be literate in sustainability, as company leaders increasingly see sustainability as one of the top three priorities according to the McKinsey Global Survey.^{xl} However, research also indicates that environmental education falls short of producing sustainable solutions for society when only relying on informing people of environmental harm.^{xli} Research demonstrates that the most effective curriculum changes include participatory action research (PAR) in which educators should encourage "participatory, action-oriented learning opportunities that enable students to apply their knowledge to improve real-world environments."^{xlii} This type of curriculum change would be effective in addressing higher education institution's role of advancing curriculum and pedagogical approaches that prepares students combatting climate change in their future careers.

DEIJ Topics

The effects of climate change will not only be felt in natural ecosystems as temperatures rise, but also will "destabilize socioeconomic systems,"^{xliii} and minority and low-income populations will bear the brunt of its effects. It is of the utmost importance that when planning for climate resilience and sustainability, that communities that will feel disproportionate impacts from not only the changes in the climate but from the actions taken by organizations to combat it are appropriately considered while sustainability plans are in the design phase.

Political Profile

Political ideology is important to our discussion about waste and carbon emission reduction to effect climate action because political ideology has been shown to be tied to climate views and behaviors.^{xliv} According to research conducted at Purdue University and published in the journal *Global Environmental Change*, "political conservatives are less likely to adopt climate change-mitigating behaviors" compared to political liberals.^{xlv} Muscatine County as a whole leans conservative, based on 2020 presidential election data, but the age group of our partners at MCC largely identify with Democrats



or no party at all. Thus, our student partners at MCC may be more likely to adopt our recommended climate change-mitigating behaviors, and put pressure on faculty, staff, and administration to do so as well, than a different population in Muscatine County.

In the 2020 presidential election, 10,823 (52.02%) voters in Muscatine County, of which Muscatine is the county seat, voted for the Republican candidate and 9,372 (45.04%) voters voted for the Democratic candidate.^{xlvi} This is reflective of the state of Iowa as a whole, in which 52.80% of voters voted for the Republican presidential candidate and 44.65% of voters voted for the Democratic presidential candidate.^{xlvii} In terms of voter turnout, 69.76% of registered voters in Muscatine County voted in the 2020 presidential election. This turnout rate is lower than the statewide turnout rate of 76.91% in the same election.^{xlviii}

The 2020 presidential election results in Muscatine County are largely in line with the number of registered, active Republicans and Democrats. As of April 2022, active Democrats make up 30.98% of registered voters in Muscatine County, and active Republicans make up 34.14%. The other registered voters are either not registered with a party (33.98%) or are affiliated with another party (8.92%).^{xlix}

Because Muscatine Community College largely serves the 18-24 age group, it's important to note registered voters in that age group voted at a rate of 56.66% in Muscatine County in the 2020 presidential election, compared to 60.51% statewide for the same age group.^l The 18-24 age group of voters in Muscatine County differs from the county at large in terms of political party affiliation, with 32.90% of voters in the 2020 presidential election identifying as Democrat, 23.75% identifying as Republican, and 41.29% identifying with no party.^{li}



Methodology

To develop the framework for long-term sustainability planning and PTK Honors-in-Action project the UI Project Team measured the baseline of the culture around sustainability and the baseline of waste management. The UI project team created a school survey to assess behaviors, beliefs, and perceptions of sustainability. PTK and members of the UI project team completed a waste audit. In addition to baselines from MCC, the UI project team completed research of peer institutions. Finally, the UI project team hosted a stakeholder focus group to ensure engagement and institutional support from MCC.

MCC Student/Faculty & Staff Survey

The first element of baselining was to understand the culture of sustainability at MCC. The UI project team wanted to understand how frequently students, faculty, and staff practiced sustainable behaviors, their understanding of sustainability, and how MCC implemented a practiced sustainability, and feedback on what could be improved. To measure this, a school wide Sustainability Survey (See Appendix) was created to broadly measure sustainability literacy, perceptions, and practices.

The survey was separated into a student edition (see Appendix) and a faculty/staff edition. The surveys were similar in their measurement of practiced sustainable behaviors and sustainability literacy, but the faculty/staff survey was altered to include survey questions that directly applied to the following categories: faculty, administration/staff, and janitorial/maintenance staff. The student survey focused on sustainable practices, self-perceptions about their understanding of sustainability, and perceptions of preparedness for their futures and practicing sustainability in their respective fields. The faculty/staff survey differed in that there were sections designed specifically for faculty, administration/staff, and maintenance staff. This allowed the UI project to understand how sustainability and policy changes to achieve sustainability would impact each of these groups more specifically and guided our project to consider all points of view and stakeholders.

The survey also included a demographics portion to compare survey respondents and MCC population to ensure external validity. After the student survey was edited, the faculty/staff survey was created to have a better understanding of how the curriculum and practices at MCC shaped the sustainability culture.

The survey was created and edited by two faculty members within the University of Iowa's School of Planning and Public Affairs. The survey was then entered into Qualtrics as the data collection platform. This software was chosen because of the conversion to Microsoft Excel, allowing for more accessible and easier analysis. The student survey was sent to a small group of PTK members for pilot testing and then sent to be approved by MCC administration. The faculty/staff survey was pilot tested by one faculty member. The surveys were conducted March 21 through April 4 for both students and faculty and staff. Several strategies were employed to garner a higher response rate.

First, faculty members were encouraged to allow students to complete the five-minute survey during class. This would permit students to complete the survey during the time that was already dedicated in their schedules. Second, the survey was also posted on MCC's courses management website, ICON. And thirdly, to incentivize participation, students who completed the survey could volunteer to enter a drawing to win one (1) of ten (10) twenty-five dollar (\$25) #MakeltMuscatine gifts cards offered through the Muscatine Chamber of Commerce. The faculty/staff survey was distributed through school email.

The UI project team also utilized past data from the Hope Center Survey for Eastern Iowa Community College published in March 2021. The Hope Center Survey provided data about students'



insecurity during the COVID-19 pandemic. This data helped the project team understand barriers that the MCC students face every day. This helped make the development of the sustainability framework more equitable and responsive to students' needs.

PTK Project

The UI Project Team held a focus group meeting with PTK members on their annual Honors-in-Action Project. During the meeting, it became clear that in addition to focusing on sustainability in general, they were interested in focusing specifically on recycling. To create hands-on experiences for PTK members, the UI Project Team guided them in planning and executing a waste audit. Through taking adjacent recycling and trash bins in two high-traffic areas on campus and sorting through the waste, PTK members gathered information on the effectiveness of campus recycling. The waste was collected from bins in two sites: 1) a student commons area and 2) the campus library. The waste audit gave PTK members valuable qualitative information on MCC recycling that also helped guide the recommendations in this report.

In addition to the hands-on waste audit, the research team analyzed current recycling policies at MCC. This was done through meetings with custodial and student housing staff. PTK members participated in these meetings. After conducting the waste audit and meeting with said professionals, PTK members determined they wanted to create informational posters to place near campus waste bins. The messaging on the posters will guide students, faculty, staff, and guests in choosing which bin to use when disposing of waste. The posters will show commonly disposed of items found in the waste audit, which were different in different locations. The posters will reflect these differences. For example, the messaging in labs will be different than the messaging in the library.

Peer Institution Research

To establish a baseline from which to develop a framework for a long-term plan for MCC's sustainability efforts, the UI project team conducted a thorough review of the Sustainability and Environmental Responsibility (SER) plans of like institutions that could be considered peers to MCC. Institutions were evaluated by their type (offering either 4-year or 2-year programs to students), size (number of students served and geographical size), location (in the state of Iowa and elsewhere), and availability of access to established sustainability planning online. Peer Institutions that were reviewed included Grinnell College, Iowa Central Community College, and Kirkwood Community College in Iowa, and Citrus College, El Camino College, and Riverside Community College District in Southern California. Some of the goals initiatives that were present in peer SER plans would not be applicable to the MCC's capacity or interest, and so they were not considered. After comparison between the differing aspects of these SER plans, assessment of MCC's capacity, and analysis of the data gathered through the student and faculty survey, the UI Project Team developed an outline of how these institutions develop their SER plans, and of our suggestions for MCC to include in a proposed long-term sustainability plan.

Focus Group

The UI project team met with two MCC administrators and one faculty member to present early findings and further develop the recommendations. This opportunity gave both parties the opportunity to discuss the progress on the project, feedback for the recommendations, and further personalize the plan to fit the culture and feasibility for MCC.

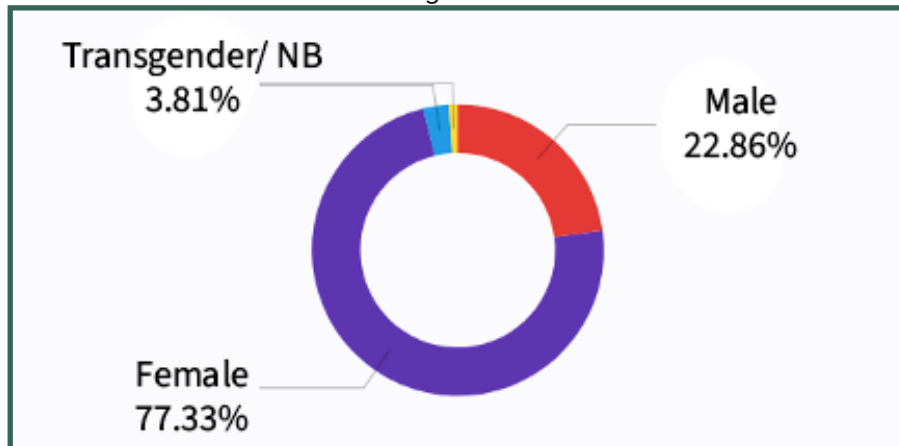


Findings

MCC Student Survey

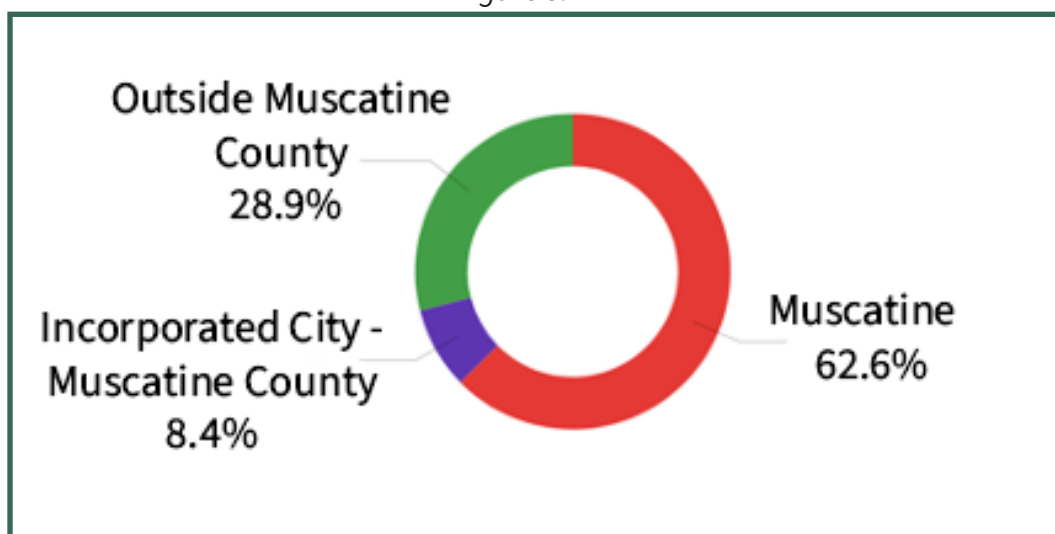
The student survey was completed by 126 students between March 21st and April 4th. The response rate was 10.29%. The profile of the student respondents is as follows: 73.33% of the respondents identified as female, 22.86% of the respondents identified as male, 3.81% of respondents identified as non-binary, non-gender conforming, or other, and the remaining 17% of respondents did not identify at all.

Figure 2:



Respondents were between 17 and 54 years old with an average age of 26 and a median age of 20. The majority (67 of 107) respondents, 62.6%, lived within the City of Muscatine; 28.9% lived outside Muscatine County, and 8.4% of respondents lived in incorporated cities other than Muscatine yet within Muscatine County).

Figure 3:



First generation students made up 60% (63) of respondents and non-first-generation students made up 40% (42). Respondents were from the following programs: Nursing (17.2%), Liberal Arts (16.2%), Science (13.2%), Business (11.1%), Healthcare (outside of Nursing) (11.1%), Vet Tech (8.1%), Trades (5.1%), Agriculture (5.1%), Criminal Justice (4.0%), Education (3.0%), Art (3.0%), Computer Science (3.0%).



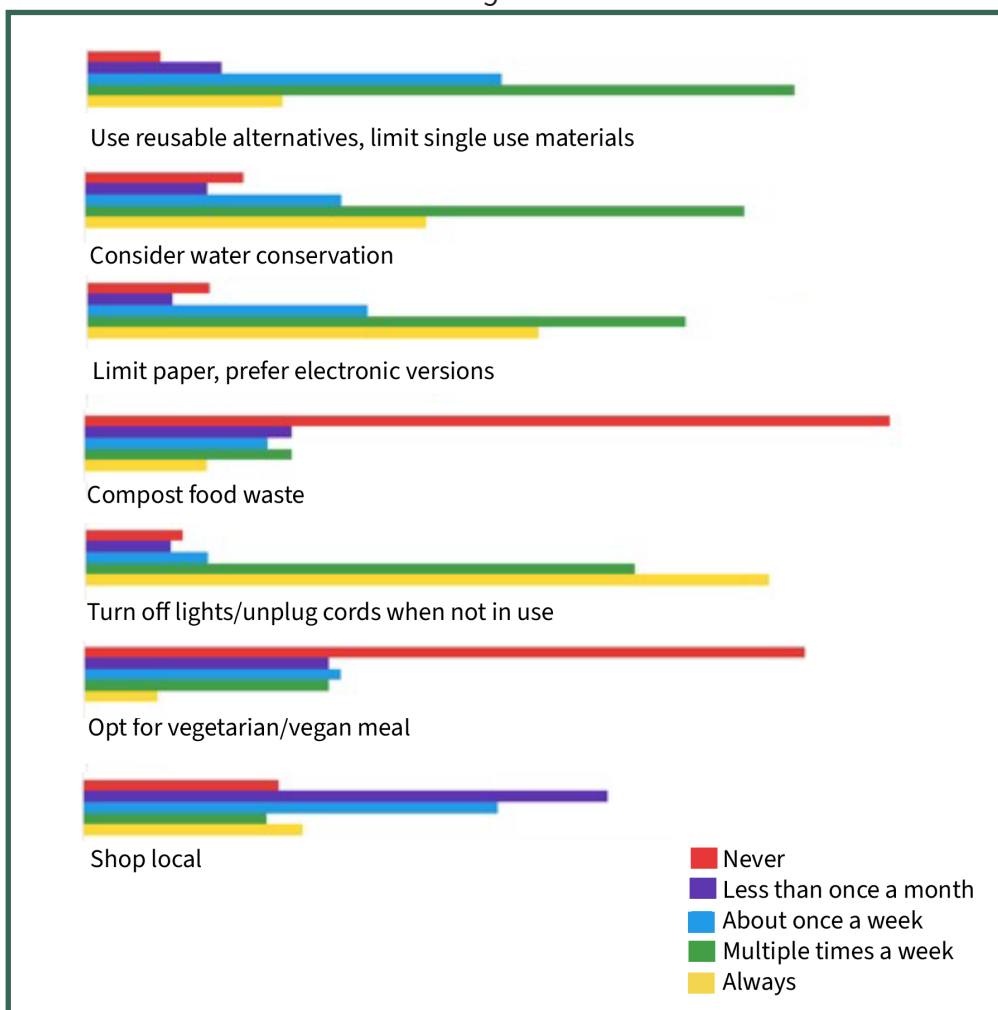
About 40% of the respondents were full-time students that also worked part-time. The chart below depicts the breakdown of students attending school full or part-time and if they work full or part-time.

Figure 4:

#	Field	Choice Count
1	Full-time student /work part-time	39.62%
2	Full-time student /work full-time	16.98%
3	Part-time student /work part-time	10.38%
4	Part-time student /work full-time	10.38%
5	Does not work	17.92%
6	Other	4.72%

The measurement of behaviors, perceptions, and opinions was initiated by a series of questions about behaviors. This was the first section of the survey, in which the following behaviors were not identified as sustainable behaviors in an effort not to prime students and cause any biases in the rest of the survey data. The table depicts the various practices that the students engage in and the frequency of engaging in them.

Figure 5:



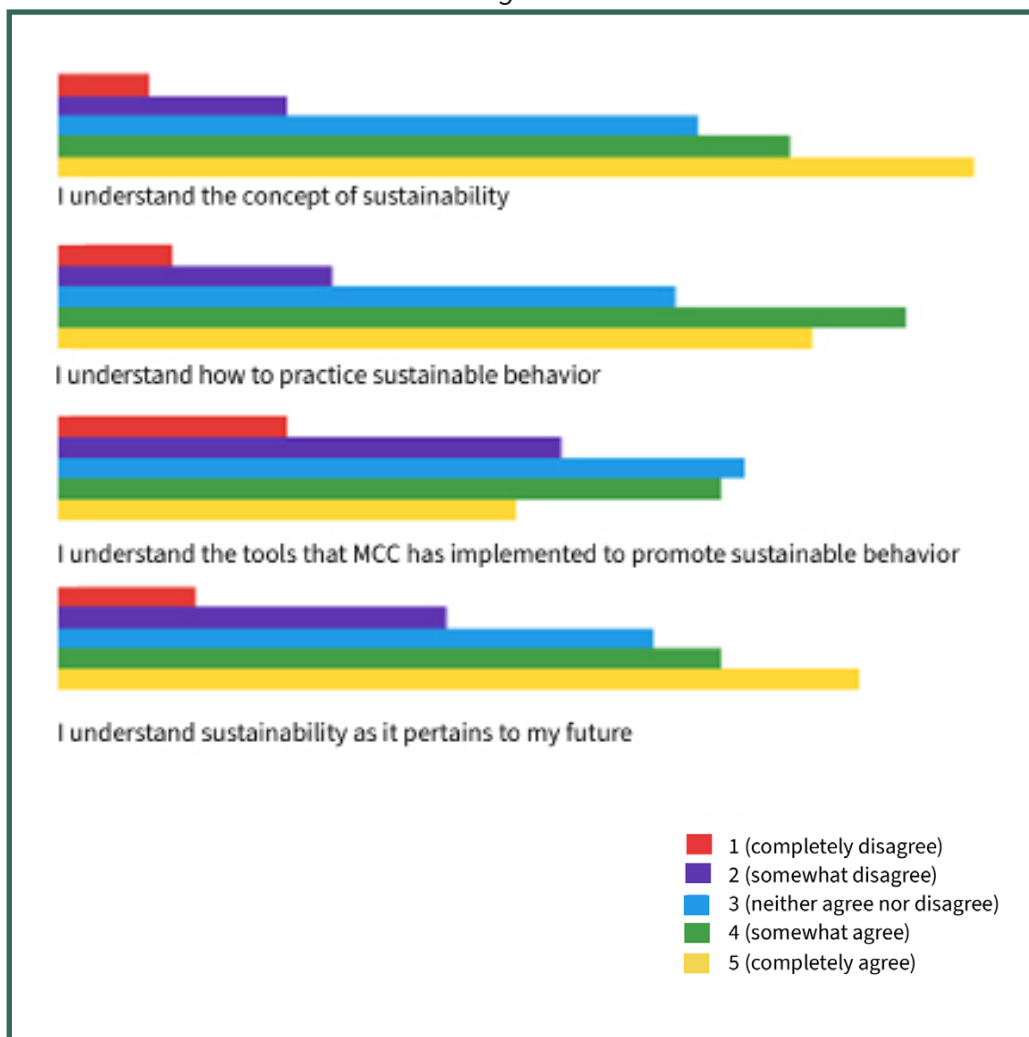


As the chart shows, the most practiced sustainable behavior is turning off lights/unplugging cords when not in use -- 44.4% of students said they always do this and 35.7% of students said they do this multiple times a week. The two least practiced behaviors were composting food waste and opting for a vegetarian/vegan meal option, 52.8% and 46.8% respectively said they never practice these behaviors. The majority of respondents selected 'multiple times a week' for the following behaviors: use reusable alternatives/limit single-use plastic (46.4%), consider water conservation while using faucet, shower, etc. (42.86%), and limiting printing paper and prefer electronic versions (39.9%). Shopping locally (farmers' market or local business) over Walmart, Amazon, etc. was the only behavior that the majority of respondents selected 'less than once a month' (34.1%), followed by 'about once a week' (27.0%).

Collectively, these responses shed a light on the culture of sustainability in the MCC student body. Considering students that practiced four or more of the seven behaviors 'multiple times a week' or 'always' as being strongly committed to practicing sustainable behavior, 65 of 126 (51.6%) of the respondents to be so.

The UI project team also measured how students' understanding of sustainability aligned with their behaviors discussed above. The chart below depicts students' own confidence in their comprehension of sustainability, how to practice sustainable behavior in general and at MCC, and how sustainability pertains to future education or careers.

Figure 6:

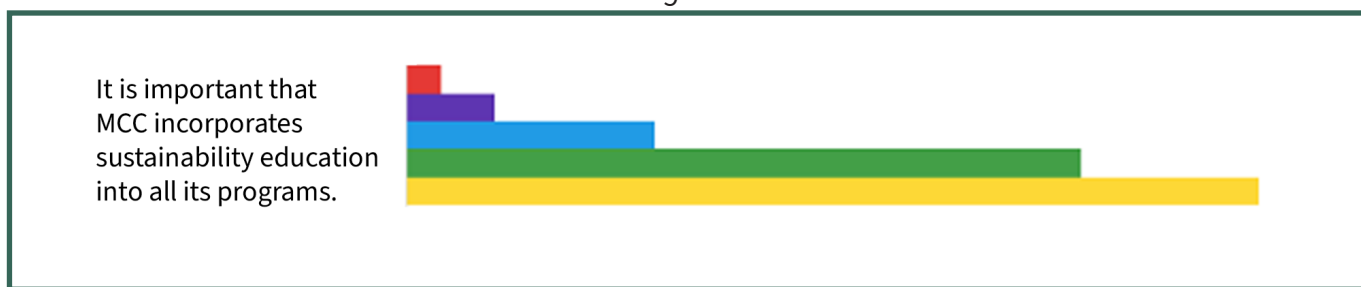




The student responses indicated that overall, there is a good understanding of sustainability. Students that responded fairly, very, or extremely confident make up 100 of the 114 (87.7%) responses to the statement, “I understand the concept of sustainability”. Student responses to understanding how to practice sustainable behavior were similar, but the majority stated being very confident (32.5%). Confidence decreased when asked about understanding tools that MCC has implemented to promote sustainable behavior, with the majority (27.0%) answering fairly confident. The confidence score increased again when asked about understanding sustainability as it relates to their future education or job, with only 20.4% stating they have no confidence or little confidence.

Students were then asked to respond to a series of statements that related to their education at MCC and future education/career. Students ranked the following statements from completely disagree (red on top) to completely agree (yellow on bottom).

Figure 7:



The above chart shows that 80.4% of respondents either completely agree (48) or somewhat agree (38) that it is important that MCC incorporates sustainability education into all its programs. However, below, the results vary widely as to students’ agreement of learning about sustainability in depth in at least one class. This is a stark contrast in agreement with the top answer (28.0%) of respondents in complete agreement, but a close second of completely disagree (27.1%). This is followed by 22.4% of respondents neither agreeing nor disagreeing.

Figure 8:





The graph below shows the student perception of how well MCC students feel prepared to consider sustainability in their field of study or job placement. These results are quite mixed with the most common response being neither agree nor disagree (27.4%) followed by: somewhat agree (20.8%), completely agree (18.9%), completely disagree (17.9%), and somewhat disagree (15.1%).

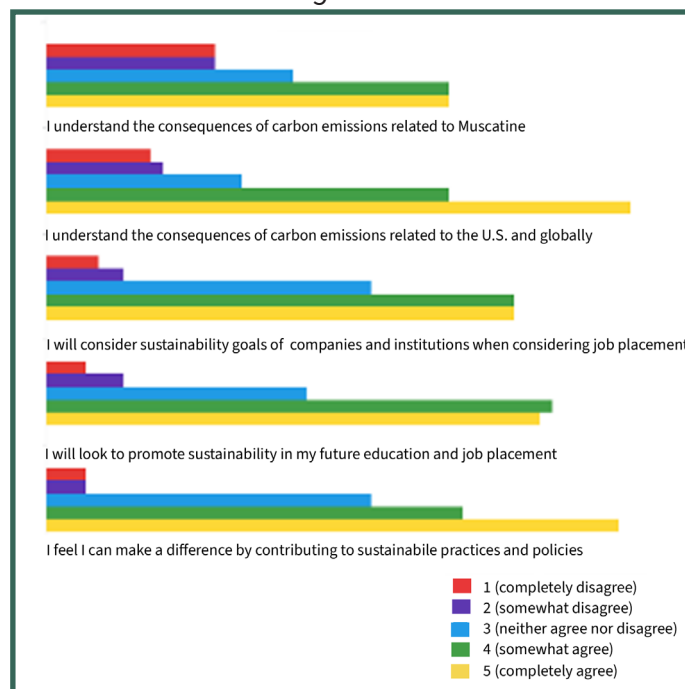
Figure 9:



The following five statements had similar results with 'somewhat agree' and 'completely agree' (percentage shown for combined responses) being the most common responses for all:

- I have learned and understand the consequences of carbon emissions as it relates to Muscatine and Iowa (57.9%)
- I have learned and understand the consequences of carbon emissions as it relates to the United States and globally (70.4%)
- I will consider sustainability goals of companies and institutions when looking for further education or job placement (67.3%)
- I will look to promote sustainability in my future educational institutions and job placement through my education at MCC (72.6%)
- I feel like I can make a difference in continuing education or in the future workplace by contributing to sustainable practices and policies (71.0%)

Figure 10:



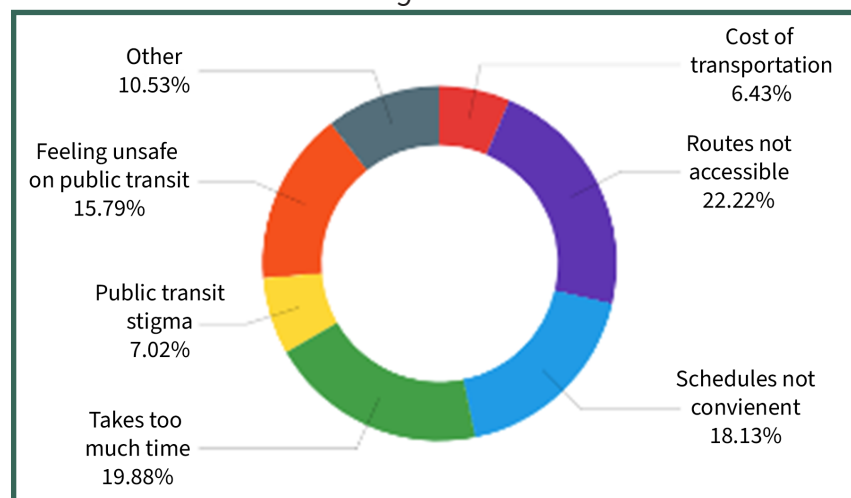
Another element of campus culture that the UI project team measured was how students travel to campus. Community colleges typically have high rates of commuters, which contributes to environmental emissions. Of the 125 students who answered this question, most (68.8%) drove their own or family car to campus.

Figure 12:



The second most common answer was that students did not commute to campus because they took most of their classes online (24.8%). The remaining respondents commute to campus in the following ways: walk or bike (4.8%), use public transportation (.8%) and carpool with classmates (.8%). The survey then asked students who responded to the previous question what barriers prevent them from using public transportation (unless they answered that they already use public transportation as their primary mode or transit). Below the chart shows the biggest concerns that prevent them from using public transportation-many students indicated multiple barriers.

Figure 13:

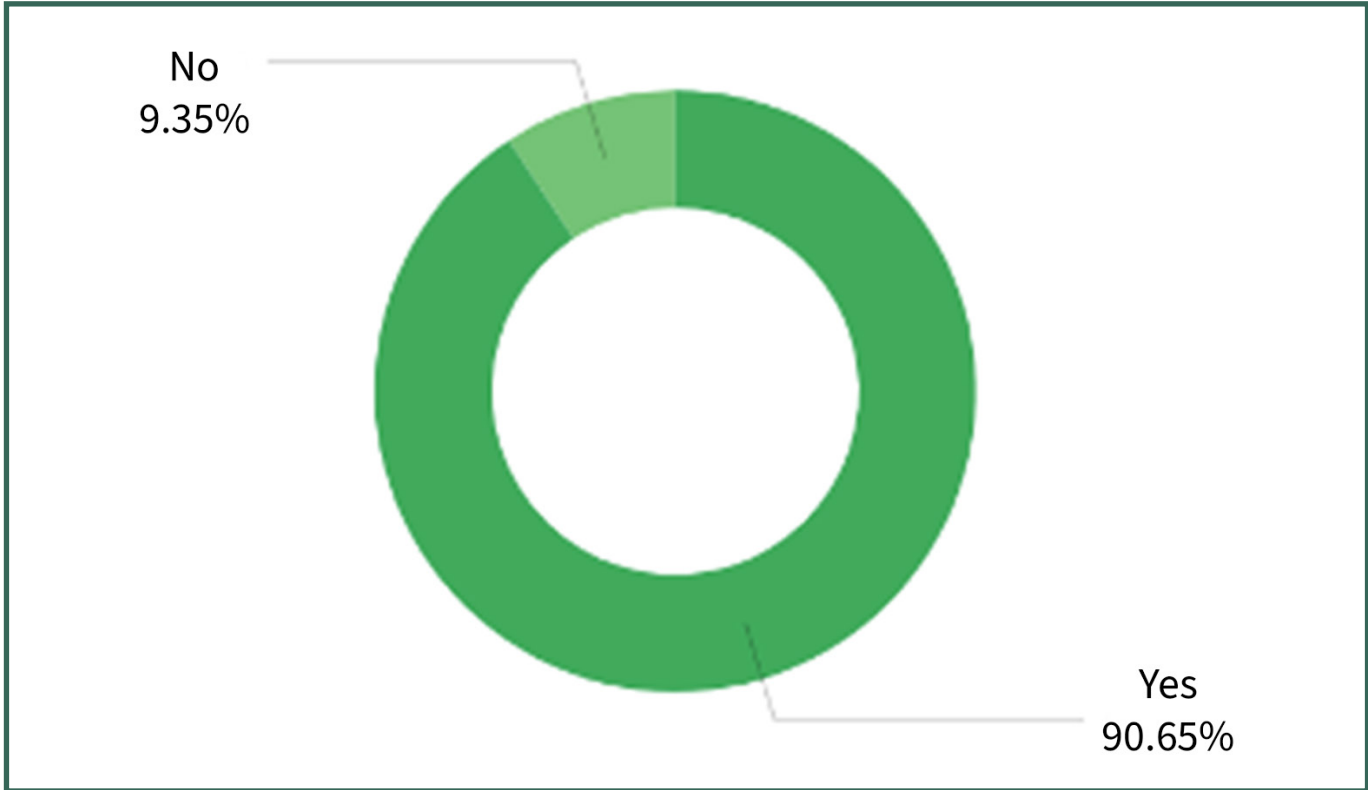


The most common response was that the public transportation routes were not geographically accessible (see Appendix B). The second and third most cited concern is that public transportation takes too much time, and the bus schedule does not align with class schedules. Barriers that receive the lowest responses include stigma of using public transportation (7.0%) and cost of public transportation (6.4%). Feeling unsafe or insecure on public transportation was an issue of concern for 15.8% of respondents.

Our survey concluded with asking students the following question: “Do you believe that human-caused climate change is happening and will have negative consequences unless society acts immediately?.” Of the 107 responses, 97 students said yes, and 10 students said no.



Figure 14:



Studies show that the top determinant of views on climate change is political orientation. According to a study, “Ideology, capitalism, and climate: Explaining public views about climate change in the United States”:

“Education, scientific literacy, and self-reported understanding of climate change have a positive effect on pro-climate views among liberals and Democrats but a negative or no effect on pro-climate views among conservatives and Republicans. This pattern has been attributed to such related social-psychological processes as biased assimilation, elite cues, motivated cognition, disconfirmation bias, or reinforcing spirals, each of which explain how citizens selectively accept information that reinforces—or reject information that challenges—their existing political beliefs. It appears, then, that the relatively high level of climate change skepticism among Right-identifying US citizens results from top-down and bottom-up processes, an assertion supported by recent experimental results.”^{lii}

Given the politics around sustainability noted in the above quote, the UI Project Team find this student response very optimistic to our final question very encouraging – our findings suggest notwithstanding the political positions coloring perceptions of climate changes in the broader population, MCC’s student body has a pragmatic appreciation of the problems and prospects of climate change that bodes well for the implementation of the MCC sustainability plan.



In addition to their belief in climate change, the survey asked students to describe how they feel about climate change in one word. Below is a word cloud that incorporates all the responses. Responses that are bigger and in a darker color were repeated multiple times, while lighter and smaller words were unique to individual responses.

Figure 15:



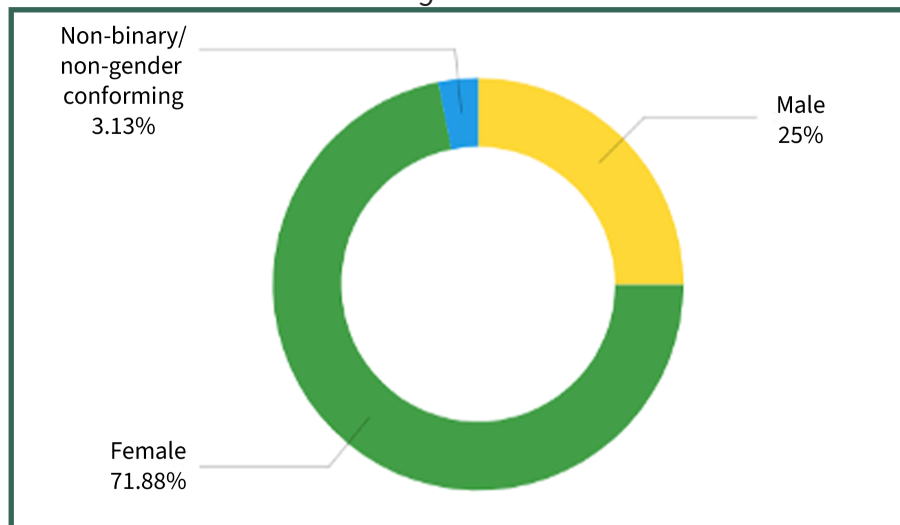
The UI Project Team found that these responses indicate that the student sample that responded to this question are quite alarmed by the current climate crisis. Adopting the sustainability plan is a method to address the students' concerns.



MCC Faculty/Staff Survey

The faculty/staff survey was completed by 33 MCC employees between March 21st and April 4th. The response rate was 41.7%. Faculty/staff who identified as female made up 71.88% of the responses, while those who identified as male made up 25.00% of the responses. The last 3.13% was made up of faculty/staff who are non-binary, non-gender conforming.

Figure 16:



Thirty faculty/staff indicated their ages in ranges that were predetermined in the survey. The ranges were as follows: 20-29, 30-39, 40-49, 50-59, 60-69, and 70+. Below shows the distribution of age for faculty/staff. The UI Project Team found a normal distribution from those who completed the survey.

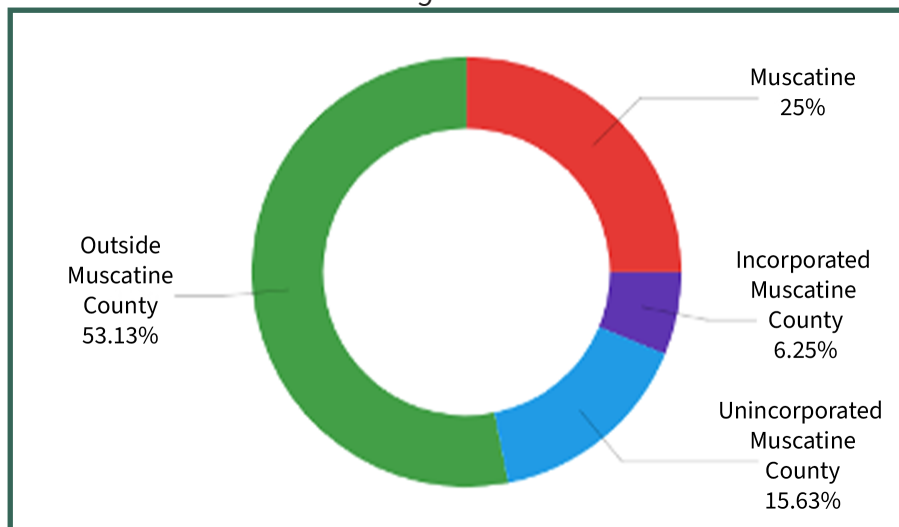
Figure 17:



Our demographics section also asked where faculty and staff lived: within Muscatine, incorporated city in Muscatine County, unincorporated in Muscatine County, or Outside of Muscatine County. Of all the survey respondents, 32 faculty/staff answered this question. The majority (17 of 32) respondents live outside Muscatine County. The second largest category of student respondents live in the City of Muscatine (25.00%). Last, 5 respondents (15.63%) indicated they live Muscatine County in unincorporated areas and 2 respondents (6.25%) live in other incorporated cities within Muscatine County.

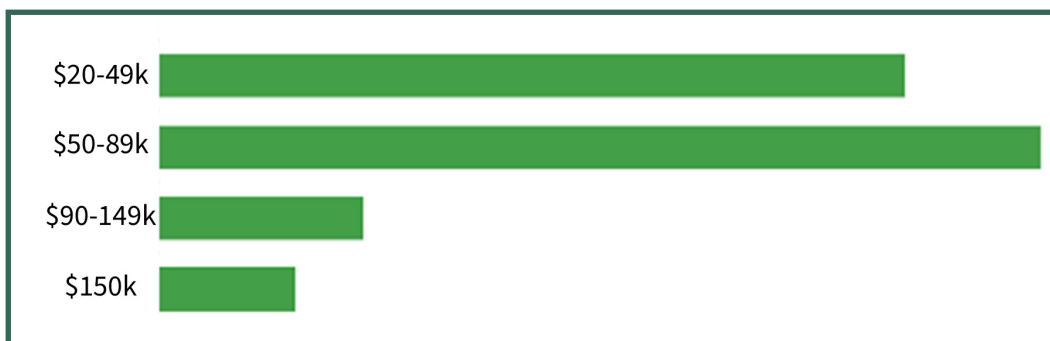


Figure 18:



Staff were asked to indicate their income level to understand the socioeconomic background of the respondents. Below shows the distribution of the 29 faculty/staff who answered.

Figure 19:

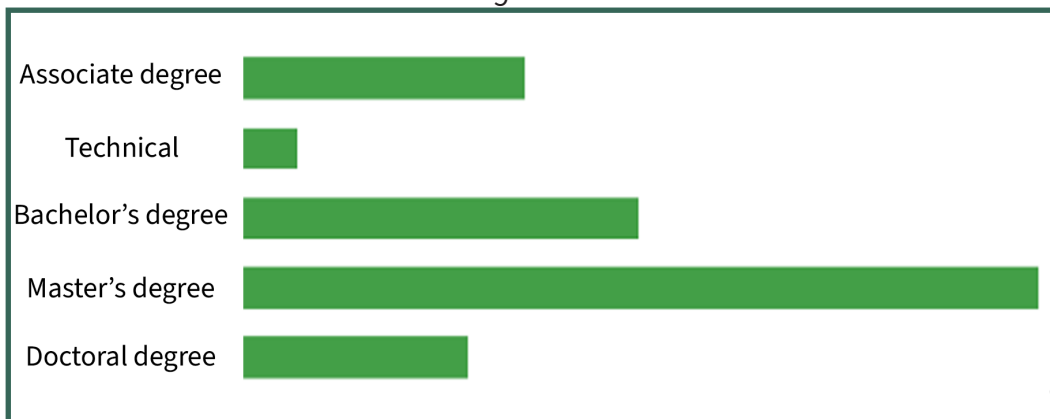


No faculty or staff that completed this question earns less than \$20,000 per year. The most common answer (44.83%) was between \$50,000 and \$89,999, closely followed by the range of \$20,000-\$49,999 with 11 faculty/staff (37.93%) in this category. The top two salary categories had 3 (10.34%) and 2 (6.90%) respectively. In addition to the salary range, respondents were asked to indicate if and which social welfare programs they receive including Medicaid, SNAP, housing assistance, general assistance from local non-government agencies, or WIC. One respondent indicated they receive both Medicaid and Snap.

The last demographic data collected was the level education for the faculty/staff. The most common response was master's degree with 14 of 31 (45.16%), followed by bachelor's degree with 7 responses (22.58%). Five of the respondents (16.13%) indicated that they have an associate degree. Doctoral degrees made up the next category with 4 responses (12.90%), followed by technical/trades certification with 1 response.

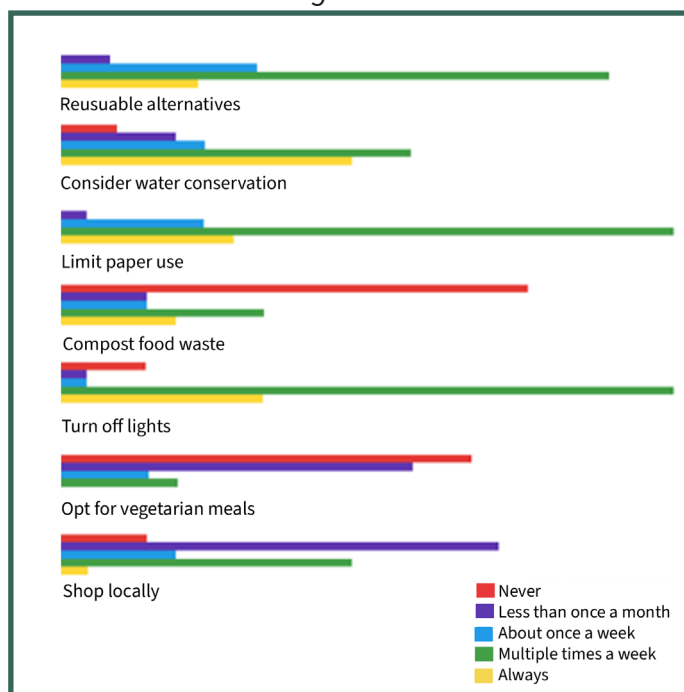


Figure 20:



Faculty and staff were asked about practicing the same sustainable behaviors as the student body.

Figure 21:

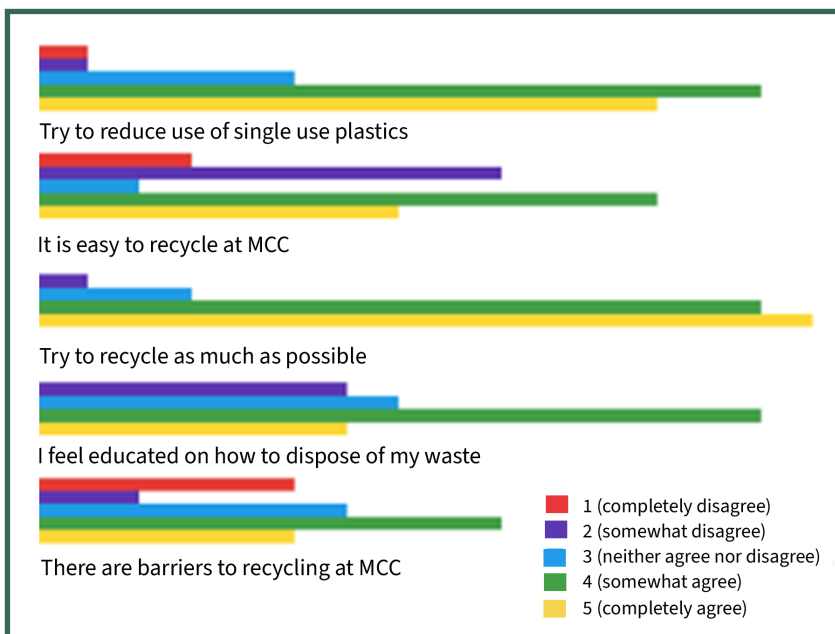


The practice that is most practiced behavior ‘always’ is considering water conservation when using the faucet, shower, etc. with 12 of 33 (36.36%) responses. The majority of respondents selected ‘multiple times a week’ for the following behaviors: use reusable alternatives/limit single-use plastic (57.58%), consider water conservation while using faucet, shower, etc. (36.36%), and limiting printing paper and prefer electronic versions (63.64%). Shopping locally (farmers’ market or local business) over Walmart, Amazon, etc. was the only behavior that the majority of respondents selected ‘less than once a month’ (45.45%), followed by ‘multiple times a week’ (30.30%).

Collectively, these responses were used to determine how often faculty and staff practice sustainable behaviors to contribute to the understanding of the culture at MCC. The UI project team determined that faculty and staff that responded to four or more of the seven behaviors listed with ‘multiple times a week’ or ‘always’ would be considered to regularly practice sustainable behavior. With that definition, the survey found that 18 of 33 (54.55%) respondents met these criteria.



Figure 22



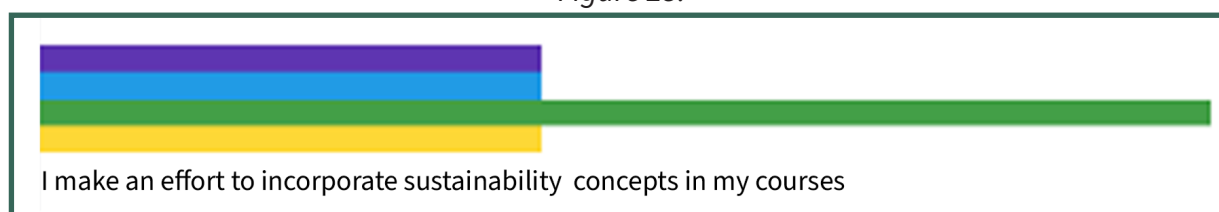
The UI Project Team also wanted to measure how faculty and staff felt about their own understanding of sustainability and if their understanding aligned with their behaviors discussed above. In the next section, the survey asked respondents to rate the following statements from no confidence to extremely confident.

The faculty staff responses indicated that overall, there is a good understanding of sustainability. Survey participants that responded fairly, very, or extremely confident make up 28 of the 33 (84.84%) responses to this statement. Faculty and staff responses to understanding how to practice sustainable behavior are similar, but the majority stated being very confident (43.75%). Confidence decreased when asked about understanding tools that MCC has implemented to promote sustainable behavior, with the majority (39.39%) answering fairly confident, closely followed by little confidence (30.30%). The confidence score increased slightly when asked about understanding sustainability as it relates to their future education or job, with only 27.27% stating they have no confidence or little confidence.

The survey was then divided into three categories based on the respondents' roles at MCC: faculty, maintenance staff, and administration/staff. Faculty members were first asked if they believe it is important to include sustainability in their courses. Of 16 responses, 50% somewhat agreed or completely agreed. There were 6 responses of neither agree nor disagree (37.5%) and 2 responses for somewhat disagree (12.5%).

Faculty members were then asked if they make an effort to incorporate sustainability into their courses. The chart below depicts the responses, with the most common answer being 'somewhat agree' (43.75%) and 'somewhat disagree', 'neither agree nor disagree' and 'completely agree' each had 3 responses each (18.75%).

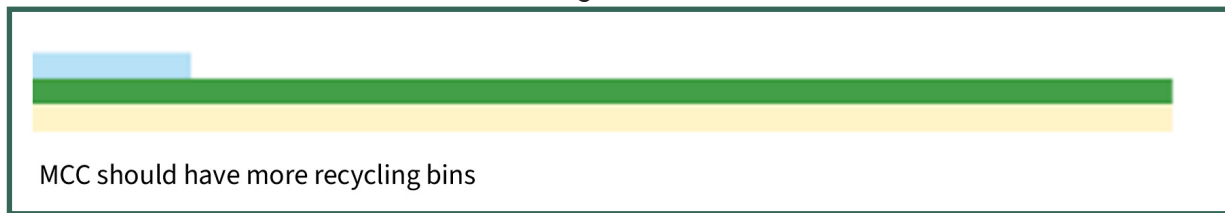
Figure 23:





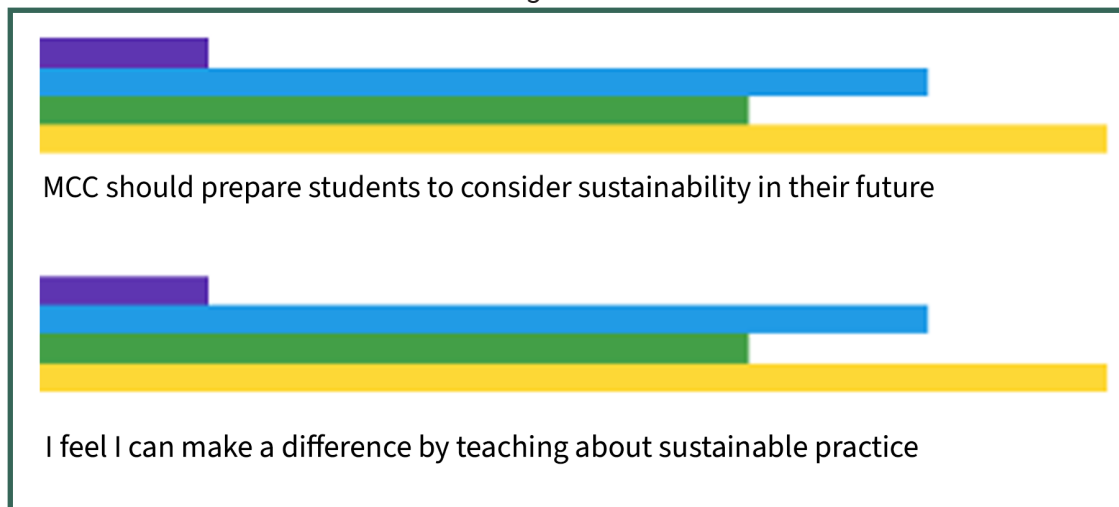
Faculty were then asked if MCC should have more recycling bins. The vast majority (14 out of 15) responses stated they somewhat agreed or completely agreed, with only 1 response stating they neither agree nor disagree.

Figure 24:



The two following questions had the exact same response: completely agree (37.50%), somewhat agree (25.0%), neither agree nor disagree (31.25%), somewhat disagree (6.25%) and no answers for completely disagree.

Figure 25:



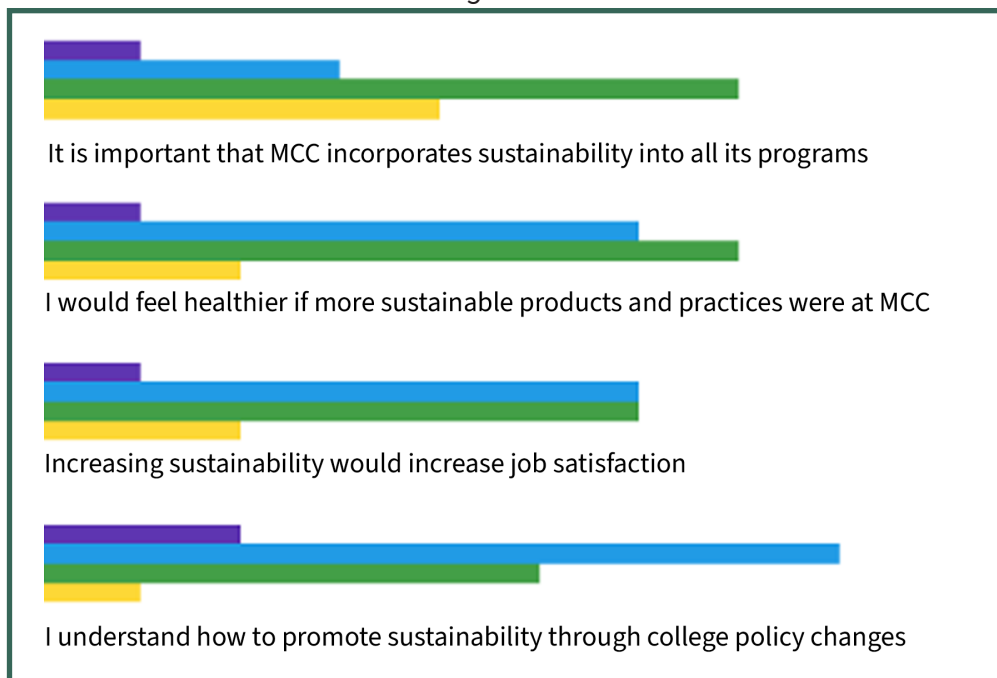
Unfortunately, the survey had a very low response rate from maintenance staff as only one person partially completed the survey and declined to respond to the following statements that were designed to provide insight for the long-term plan:

- MCC should have more recycling bins.
- MCC should spend more on recycling pick-up and less on garbage pick-up.
- MCC should add a recycling dumpster near the campus housing
- I would feel less at-risk and healthier if more sustainable products and practices were used at MCC.
- Increasing sustainability would increase job satisfaction at work.

The administration and staff were asked to respond to different statements than the faculty. The graph below shows the responses to the first four questions. They all had similar responses with 'somewhat agree' or 'neither agree nor disagree'. While this is optimistic that there were no responses that 'completely disagree', it doesn't quite align as strongly with student responses. It should be noted that administration may consider costs or other factors, rather than just belief systems.

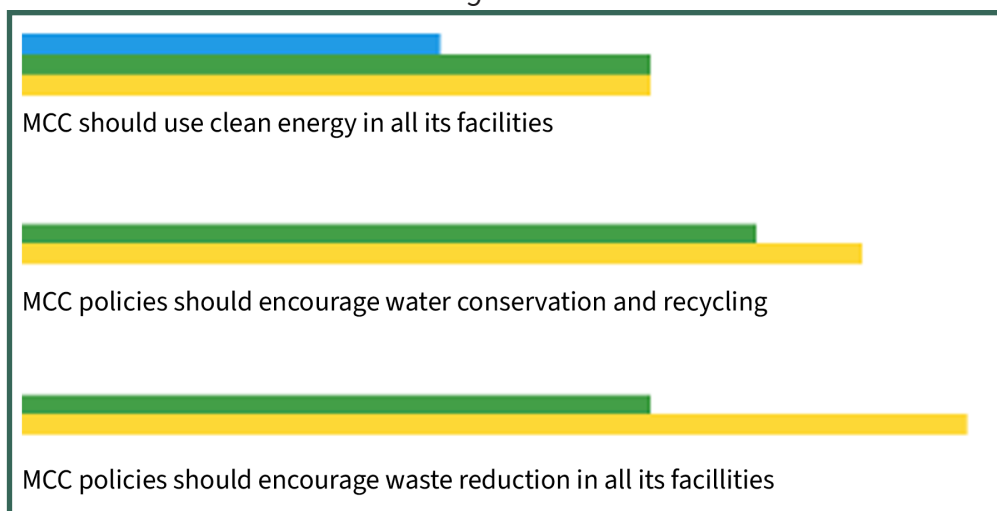


Figure 26:



The second half of the questions for administrators and staff were related to policy changes for a more sustainable campus. The statement that MCC should use clean energy in all its facilities was the only statement that has responses of ‘neither agree nor disagree’ (25%). MCC encouraging water conservation and waste reduction had 100% response rate of either ‘somewhat agree’ or ‘completely agree’. These results are a stronger representation of the interest in sustainability from administration and non-maintenance staff.

Figure 27:



Like the student survey, faculty and staff were asked to describe in one word what sustainability means to them. Of the 33 responses to the survey, 24 survey participants completed this question. Below is a word cloud that incorporates all the responses. Responses that are bigger and in a darker color were repeated multiple times, while lighter and smaller words were unique to individual responses.

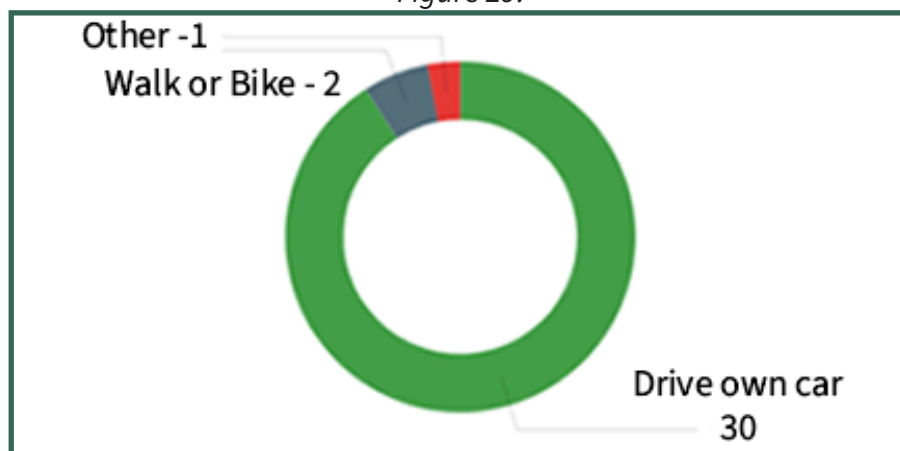


Figure 28:



Another element of campus culture that the survey sought to measure was how faculty and staff most frequently travel to campus. The high percentage of respondents who live outside Muscatine and Muscatine County could have impacted these results. Of the 33 faculty and staff who answered this question, most (30) drive their own or family car to the campus.

Figure 29:

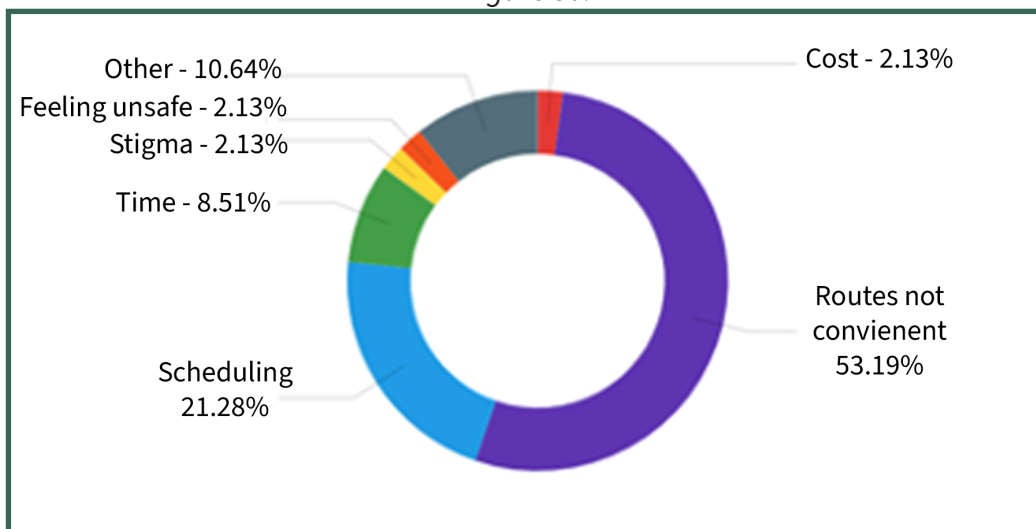


The second most common answer was that faculty or staff walked or rode their bikes, but it only had 2 (6.06%) responses. The only 'other' response was described as driving to bicycle starting point, weather permitting.

As in the student survey, faculty and staff who responded to the previous question what barriers prevent them from using public transportation (unless they answered that they already use public transportation as their primary mode or transit). Below shows what are the biggest concerns that prevent them from using public transportation. Respondents could select all that apply, so some may face multiple barriers. This appears to be the case as 33 respondents produced 47 responses for this question.



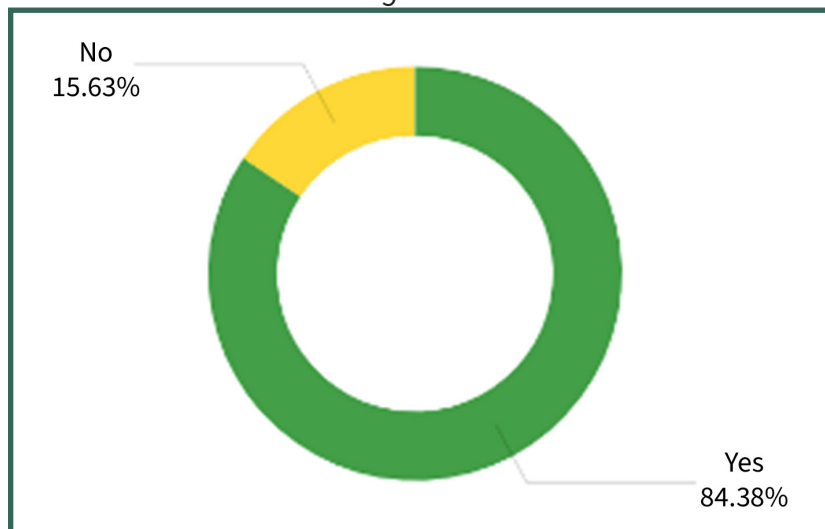
Figure 30:



It is not surprising given the demographic data that the biggest barrier (53.2%) is that the routes are not geographically accessible. In addition, all the 'other' responses all stated that further commutes or living outside of Muscatine was the barrier. Public transportation schedules not aligning with work schedules was the second most cited barrier 21.3% of respondents, followed by taking too much time at 8.5%.

Our survey concluded with asking faculty and staff the following question: "Do you believe that human-caused climate change is happening and will have negative consequences unless society acts immediately?". Of the 32 responses, 84.4% said yes, and 15.6% said no.

Figure 31:



In addition to their belief in climate change, the survey asked faculty and staff to describe how they feel about climate change in one word. Below is a word cloud that incorporates all the responses. Responses that are bigger and in a darker color were repeated multiple times, while lighter and smaller words were unique to individual responses.



Figure 32:





PTK project

On Wednesday, April 20th, the UI project team worked with members of PTK to execute a waste audit at MCC. The contents of the “trash,” “recycling,” and “cans/bottles” bins were taken from two locations on campus, a student commons area and the library, and can be seen in the following images.

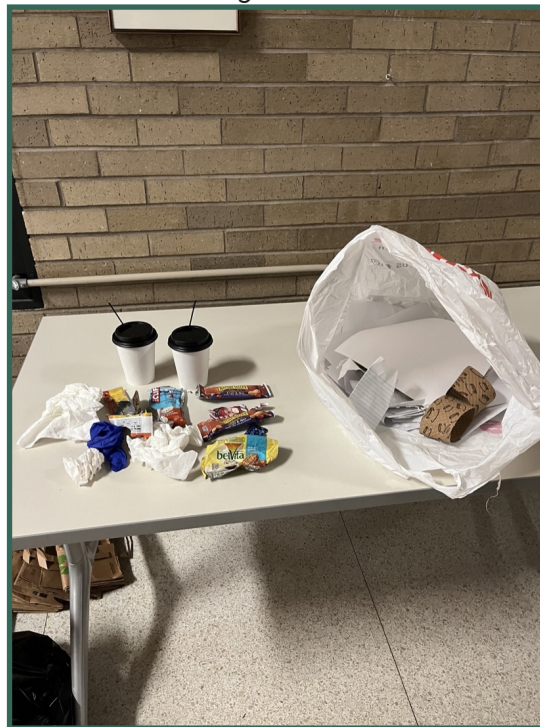
The contents in the library garbage bin were largely correctly placed in the recycling bin. Apart from the plastic part of the pringles container and the drink container without the straw, all the contents had to go into the garbage.

Figure 33:



The recycling bin from the library was highly contaminated, largely with granola bar wrappers, tissues, and unclean coffee containers, as can be seen in the left half of the image. The right half of the image shows all the contents that were correctly put into the recycling bins.

Figure 34:



The cans/bottles bin from the library was also highly contaminated. Items like milk bottles, a coffee cup, and even plastic wrap were found.

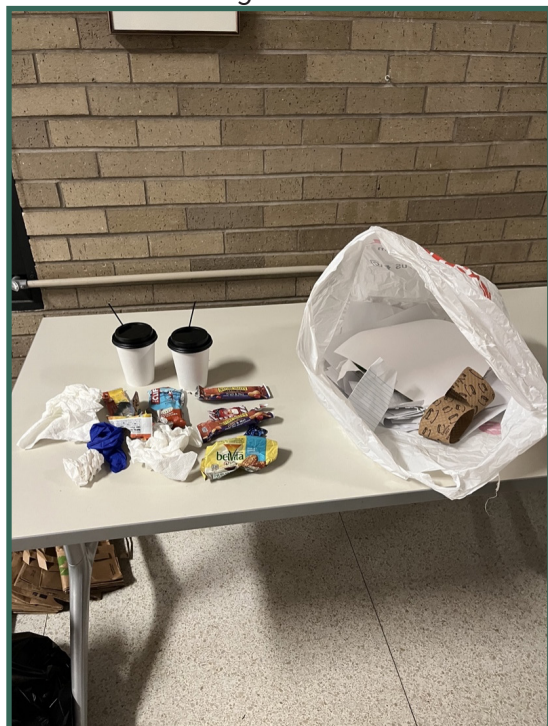


Figure 35:



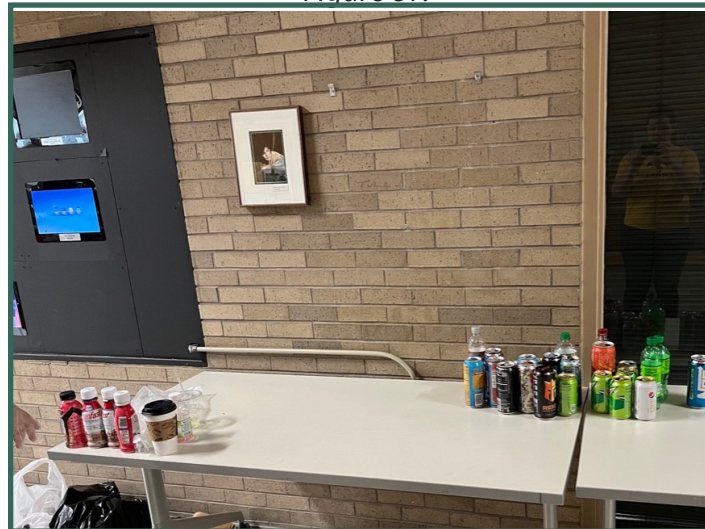
In the student commons area, the garbage was mostly items that had to be thrown in the trash, except for some plastic parts of pringles containers and a yogurt cup.

Figure 36:



The student commons recycling bin was highly contaminated with soft plastics and a granola bar wrapper.

Figure 37:



The cans/bottles bin in the student commons was also highly contaminated with non-redeemable bottles like Powerade bottles, a plastic coffee cup, and a flammable can of spray paint.



Figure 38:



As MCC is a small community college and many students take courses online, there was not a lot of waste in the bins. However, even with the small amount of waste collected, the contamination rates are very high.

In addition to performing the waste audit with PTK, the UI project team met with the head MCC custodian and the person in charge of MCC student housing. The head custodian explained that paper recycling on campus works well. Maintenance staff collects the recycling bin contents and puts them in the proper receptacle that is emptied by the college's waste management contractor, Republic. However, the cans/bottles recycling is not working so well. The former choir teacher and her students used to collect the contents of these receptacles and redeem them for money through the Iowa bottle exchange program. Since that teacher left, the head custodian believes the cans and bottles are simply thrown away.

The person in charge of MCC student housing explained that student housing is at very low occupancy due to the COVID-19 pandemic. They are hopeful student housing occupancy will rise in the coming academic years, ideally back to pre-pandemic levels. However, during this "time of transition," as they described it, waste management has been a challenge. The waste, cans/bottles, and recycling bins were covered in the two entrances, seemingly unusable. They explained that with such low occupancy, it didn't make sense to have waste receptacles in the entrances. They said students are responsible for bringing their waste to the appropriate trash and paper recycling drop-off locations on campus. They also explained they are starting a pilot compost program with themselves and one student resident, in which they bring their compost to a drop-off location near the campus food pantry.

This compost drop-off location was an area of confusion for the UI Project Team, as the head custodian said the compost bin was not being emptied and the head of student housing said the PTK faculty advisor regularly brought the bin to a composting facility. The compost bin is supposed to serve the food pantry, which regularly disposes of large amounts of food as it expires. However, the narrative around the current use of the bin remains unclear.



Peer Institution Research

In the research into the efforts of peer institutions, the UI Project Team found that those efforts were the most comprehensive and ultimately successful were guided by the influence of a committee made up of various groups of institution stakeholders that included students, faculty, and staff. These groups are described in various ways, but for the purposes of this report, these bodies will be referred to as Sustainability and Environmental Responsibility (SER) committees. These committees are responsible for the development and progress of an institution's sustainability efforts, conducting baseline research on the institution, implementing policy changes and projects to counter what they identify as impediments to the progress of sustainability initiatives on campus, and the regular review and reporting of the successes and failures of these initiatives. The SER committee commonly develops a public SER plan that outlines the priorities, projects, and ongoing efforts regarding sustainability on their campuses.

Review and study of SER plans from the peer institutions revealed some similar trends and patterns across all the documents in terms of initiatives that were being followed as well as a common structure to the implementation of the plan. The UI Project Team compared the various elements of the sustainability plans, identifying these patterns, and with careful consideration, flagged certain goals initiatives, and processes that the UI Project Team felt would be particularly helpful to MCC's sustainability efforts. Some goals included as focus areas in the SER plans of peer institutions were not feasible or not applicable to the MCC campus, such as purchasing carbon offsets for air travel, and so they have not been included here.

Using the research that was gathered from the research into peer institutions, the UI Project Team has outlined common and logical processes that are used in developing a campus SER plan, as well as identified best practices to ensure its success.

SER Development Process

1. Student/Faculty/Staff Interest Survey (Completed by UI Project Team 4/22)
2. Commitment from Administration to pursue sustainability plan
3. Establish a College Sustainability & Environmental Responsibility Committee
 - a. Committee should include faculty, staff, and student involvement to promote transparency, accountability and DEIJ concerns
 - i. "The Citrus College Sustainability Committee, consisting of students, faculty and staff, was established in March 2012 to develop the Sustainability Plan and to manage and track its implementation. Over time, members of the committee change, new members are added and some members drop from participation, but the overall management of the plan is relegated to the current members. The Committee meets approximately quarterly to implement the plan and to report progress to the College community."^{liii}
4. Define Charge, Goals, Objectives, Criteria, and Timelines
 - a. Creation of a Vision Statement that can guide sustainability efforts
 - i. Example: "Citrus College will promote an active learning and participatory environment, where students, faculty and staff are immersed in quality education and collaborate with peers and industry professionals to encourage and create sustainability awareness and social responsibility, thereby, fostering the advancement of sustainable practices and conservation of



- resources for the College proper, community, and nation as a whole.”^{iv}
- b. Creation of goals and priorities for the college regarding sustainability
 - i. Energy efficiency
 - ii. Recycling
 - 1. Create waste reduction goals
 - 2. Maximize waste programs offered by contractors
 - 5. Select and Prioritize Implementation Programs/Projects
 - a. Activities that may be necessary:
 - i. Waste Audit
 - ii. Energy Audit
 - 1. Facility prioritization
 - 2. Comprehensive audits
 - 3. Energy efficiency grants
 - iii. Water Use Audit
 - iv. Calculate Institution’s Carbon Footprint
 - b. Employment of sustainability professionals as needed
 - 6. Develop and articulate projects included in Sustainability and Environmental Responsibility Plan
 - a. Energy Efficiency
 - i. Creating an integrated Energy Master Plan^{iv}
 - ii. Efficient lighting and lighting controls
 - iii. Energy management systems
 - iv. Energy saving features for appliances and computers
 - b. Recycling
 - i. Improve recycling program
 - 1. Source separation of paper, plastic, bottles cans, hazardous waste
 - 2. Work with community orgs on sorting.
 - 3. Collect and sell recyclable material
 - 4. Green waste and composting
 - c. Transportation/ Commuting
 - i. Encourage and enhance public transport and rideshare
 - ii. Encourage bicycling options
 - iii. Enhance student distance learning
 - d. Campus Farm/Garden
 - e. Green Purchasing Practices
 - i. Recyclable materials – office products, paper products, custodial and cleaning materials.
 - ii. Socially responsible procurement practices – local vendors
 - f. On-site energy generation
 - i. Solar
 - g. Creation of Green Student Orgs
 - i. Sustainability sub-committee in academic senate
 - h. Water/ Sustainable Landscaping
 - i. Water conservation strategies



- ii. Native, sustainable, water conserving flora
- i. Commitment to reducing GHG
 - i. Create Climate Action Plan
- 7. Implement Sustainability & Environmental Responsibility Plan
- 8. Regularly Monitor and Report Progress

Common Best Practices found in peer SER plans

Formation of Sustainability and Environmental Responsibility Committee

Many institutions considered peers of MCC in terms of size and instruction that have developed a plan to move toward campus environmental sustainability through reducing carbon and waste begin the process by forming a Sustainability and Environmental Responsibility Committee (SER). Made up of students, faculty, staff, and community stakeholders, these committees lead sustainability efforts on campus conducting waste, energy and water use audits to develop a baseline to guide their plans going forward. This committee will be responsible for the development and implementation of goal initiatives that are laid out in the SER plan that they will go on to create.

Hiring a sustainability consulting firm.

An aspect of many campus SER plans is the consideration to hire an outside environmental sustainability firm that can conduct environmental remediation support, decarbonization efforts, and minimizing social impacts on their surrounding communities. Consultants of this type can lend their expertise to clients and help the SER committee develop a path toward zero-waste and climate resiliency.

Developing a long-term SER plan.

Once a campus SER committee has been formed and necessary audits developing an SER plan that establish policies and procedures regarding various sustainability topics such as energy efficiency, recycling, and green purchasing practices that will help the institution reach its decided sustainability goals. Goals included in the long-term plan should be designed to be realistic, attainable, and involve different groups of stakeholders to hold the committee accountable to its sustainability efforts.

While some of the plans were executed in an extremely short amount of time (Riverside Community College District's timeline from start to finish only taking place over one year) we recognize that MCC may not have the capacity and resources to accomplish so much in such a short amount of time. Our proposed long-term plan will be outlined in the following section. Some options may not all be applicable or feasible for implementation through MCC's SER plan but should be considered through the lens of what is discovered from regular waste and energy audits conducted on the MCC campus.



Recommendations

Establish a SER Committee

The first recommendation is for MCC to create a SER committee made up of representatives from MCC administration and faculty, members of the student body, and community leaders. This committee is responsible for the development of the SER plan and the implementation, review, and reporting on the progress of its goal initiatives. Bringing together a wide variety of stakeholders to be a part of this committee is important so that all perspectives are brought to the table. Due to their initiative, leadership, and commitment to sustainability at MCC, the UI Project Team suggests that PTK have a permanent seat on the committee, perhaps held by the chapter's president to ensure consistency and resonance with the organization.

Once assembled, the committee should first draft a vision statement that will guide the sustainability efforts in the years to come, an example of this sort of vision statement is included here from Citrus Community College District:

- “Example: “Citrus College will promote an active learning and participatory environment, where students, faculty and staff are immersed in quality education and collaborate with peers and industry professionals to encourage and create sustainability awareness and social responsibility, thereby, fostering the advancement of sustainable practices and conservation of resources for the College proper, community, and nation as a whole.”

Establish Baseline Emission Data

The second recommendation is for SER committee to research and benchmark their emissions so they can accurately set their goals. MCC can use this benchmarking process to find their carbon, waste, and energy emissions, and use this information for the determination of their sustainability goals. Baseline data will guide the projects that MCC can pursue such as energy-efficient lighting, appliances, and computers, and will possibly reduce costs through those initiatives. To complete this baseline data, there are many free online calculators such as the ones provided by UC Berkeley and the EPA, so this step should not be cost prohibitive.

Links to these tools:

- [UC Berkeley CoolClimate Calculator](#)
- [EPA Simplified GHG Emissions Calculator](#)

University of Northern Iowa's Resilient Iowa Communities program can also be a great resource for calculating MCC's carbon footprint. Contact Cassandra Sonne (cassandra.sonne@uni.edu) for more information.

Develop Long-term SER Plan

The third recommendation is for the SER committee to create a comprehensive long-term SER plan that articulates and guides all sustainability efforts.

A sample format for an SER plan could be designed in 4 phases:

1. The first phase should include visioning and the establishment of priorities and recommended focus areas and goals
2. The second phase should be focused on determining and documenting the short-term, mid-term and long-term initiatives needed to meet goals, and cost of ownership models
3. The third phase is the implementation of the plan
4. The final phase is the regular monitoring and reporting of progress of goal initiatives.



SER Development Process

- **Phase One – Visioning/ Values, Setting Priorities and Goals**
 - Create vision statement
 - Assign workgroup roles
 - Establish workgroup rules/norms
 - Set priorities, guidelines, and explore funding opportunities
 - Seek expert assistance from sustainability professionals
 - Student/Community Engagement
 - Use findings from the MCC Surveys to show support for cause and garner student interest
 - Complete and Articulate findings of baseline emissions data
 - Research and analysis
 - Campus Building Profiles
 - Identify Assets
 - Classify Assets
 - Prioritization and Goals
 - Recommend focus areas for proposed SER projects
 - Funding Analysis
 - Goal Setting
 - Action Plan and Implementation
- **Phase Two – Action Plan and Implementation**
 - Articulating Goals Initiatives
 - Document long-term vision and goals
 - Identify short-term, mid-term and long-term initiatives to meet goals
 - Develop total cost of ownership cost models for each goal
 - Present Draft of Deliverables
 - FINAL Sustainability & Environmental Responsibility Plan
- **Phase Three – Implementation**
 - Begin implementation of the SER committee’s decided projects
- **Final Phase – Implementation/Regular Monitoring and Reporting Progress**
 - Continue implementation of SER committee’s decided projects and conduct review and reporting on their progress.

Phases One and Two are focused solely on the visioning and the establishment of the SER committee’s priorities, focus areas, and goals. These steps give MCC the opportunity to develop a plan that will be tailored specifically to the campus’s specific needs, address concerns that arise from the information audits, and design the plan so that projects and policy changes are implemented inclusively and equitably to all members of MCC’s community of students, staff, and faculty. The first step to achieve Phase 1 and 2 of MCC’s long-term plan is securing support from the MCC community (students, faculty, and staff).

Without significant buy-in from these stakeholders, any undertaking would not likely be successful. The SER Committee can use data from the MCC School Survey which indicated significant interest and desire to pursue more sustainability practices at the MCC campus. It should be a priority of the SER Committee to build on this interest and keep members of MCC involved and engaged. In addition to community members, the administration must also support the work of the SER Committee and



endorse the SER plan. This institutional support is crucial for the success and continuation of the plan throughout the coming years. Phases 3 and 4 focus on the implementation, regular monitoring, and reporting of the SER committee to the campus body on its ongoing efforts. It is important to note that in implementing these changes, the SER committee may encounter new information, roadblocks, and resistance from the MCC community.

It would be extremely beneficial for MCC's SER committee to engage with and hire a sustainability firm that will be able to offer expertise in choosing initiatives that will push MCC towards their sustainability goals. While the SER committee may not have intimate knowledge of how to carry out energy audits and implement efficiency projects, a sustainability consultant will be able to offer best practices and guidance of these projects. An example of sustainability consulting firms that serves the greater Muscatine area is Iowa EHS and Sustainability Consulting which is based out of Bettendorf, Iowa. Additional firms may be found in Environmental Professionals of Iowa's directory. As well, MCC should join the Association for the Advancement of Sustainability in Higher Education (AASHE), an organization that will be able to similarly give MCC access to some of the tools that they need to achieve their waste and emission goals but at a lower cost than the hiring of a sustainability consulting firm. Membership at AASHE for MCC would be \$310 annually based on type and enrollment of the institution.

Phases 3 and 4 focus on the implementation, regular monitoring, and reporting of the SER committee to the campus body on its ongoing efforts. It is important to note that in implementing these changes, the SER committee may encounter new information, roadblocks, and resistance from the MCC community.

Highlighted Goals Initiatives

- Hire a Sustainability Firm and/or Join the Association for the Advancement of Sustainability (AASHE)
 - Sustainability Firm: will be able to offer best practices and guidance of these projects
 - Iowa EHS and Sustainability Consulting^{lvi} which is based out of Bettendorf, Iowa
 - Additional firms may be found in Environmental Professionals of Iowa's directory.
 - Association for the Advancement of Sustainability in Higher Education (AASHE)
 - Give MCC access to some of the tools that they need to achieve their waste and emission goals but at a lower cost than the hiring of a sustainability consulting firm
 - Membership at AASHE for MCC would be \$310 annually based on type and enrollment of the institution.^{lvii}
- Improve the MCC Waste Management System
 - Switching to single-stream recycling with MCC's current contractor, Republic would be beneficial to MCC so that plastics, Bottles, cans and hazardous waste can be separated.
 - The management system would also be improved with new recycling lids that have openings for more items than just paper as well as increased communication about waste management plans.
- Increase Sustainability education in MCC curriculum
 - 80.4% of respondents in the school survey either completely agreed (48) or somewhat agreed (38) that it is important that MCC incorporates sustainability education into all its programs. Company leaders increasingly see sustainability as one of their top three priorities in the hiring process.
 - The UI Project Team suggests that MCC uses the current "diversity rich course" design to implement a new designation that highlights a sustainability focus for certain courses that professors can voluntarily opt-in to. This will avoid creating an additional requirement, and therefore a potential barrier to graduation.



- Encourage Low-Carbon Transportation
 - Though it was discovered through the focus group that bicycling is not a great option for the MCC campus in terms of accessible routes and weather, it would be beneficial to work with the city of Muscatine to improve MuscaBus and bike accessibility for MCC commuters.
 - The MCC SER committee should meet with the Muscatine Transit Supervisor to discuss routes and see if there can be any room for improvement to make public transportation more accommodating to the MCC community.
- Create a Campus Farm or Garden
 - While a Campus farm or garden may not be the best option for reducing carbon emissions, the idea should be explored to connect students to sustainability practices and mindsets through behavioral engagement.
 - The main growing season is during the summer while most students are not taking classes, so the SER committee should explore involving local summer interns of local companies that are living in student housing and the payment of MCC students to maintain the garden.

Additional Goals Initiatives

- Ensuring energy efficiency through efficient lighting and lighting controls, energy management systems, and the use of energy saving appliances and computers.
- Improving MCC's recycling program with source separation of paper, plastic, bottles cans, and hazardous waste, meeting with community organizations to assist with sorting, collecting and selling recyclable materials, and pursuing green waste and composting. The waste audit and meetings with campus staff revealed high contamination rates in paper recycling bins and a lack of understanding of where bin contents were going.
- Encouraging low carbon transportation options including public transportation, rideshare, bicycling options, and enhanced distance learning.
- Creation of a Campus Farm or Garden products of which can be distributed to students, staff and faculty who may be food insecure.
- Changing to Green Purchasing Practices so that office products, paper products, custodial and cleaning materials are made of recyclable materials and using local vendors whenever possible.
- Installation of on-site energy generation through implementation of solar and wind power generation.
- Encouraging the creation of Green or sustainability-focused student organizations.
- Implementing sustainable water use and landscaping strategies that conserve water as well as the use of native and water-conserving flora.



Funding

The UI Project Team has several suggestions regarding the funding of the goals initiatives that the SER committees decides on pursuing:

- HNI Foundation – This foundation run by the largest employer in the city of Muscatine provides up to \$100,000 to local Muscatine area non-profit organizations each year and gives under the focus areas of Education, Health and Human Services, Civic and Community, and Arts and Culture. The SER committee should submit a letter of intent to the foundation regarding the implementation of sustainability curriculum or focus on the positive health effects that students will enjoy with the effects of sustainability initiatives.

Additional foundations to approach for grant support: Kent Corporation Charitable Foundation, The Howe Foundation, The New Hope Foundation, John Deere Foundation



Diversity, Equity, Inclusion, and Justice Statement

The UI project team ensured all members of the MCC community had the opportunity to be fully engaged through the school survey, and key stakeholders were involved in project development and decision-making processes to avoid negative impacts on low-income and minority populations.



Conclusion

MCC is at a turning point in terms of its commitment to sustainability and environmental responsibility. Creating a campus-wide SER committee and prioritizing committee projects at MCC will make climate action an integral part of the community. It is apparent that PTK students are committed to mitigating climate change; their passion started this project. The enthusiasm of PTK students and the cooperation of MCC administration have been critical to executing this project; PTK students and MCC administration will continue to carry the project forward. When MCC succeeds in its efforts to make the campus more sustainable, it may well become a model for community colleges across the country looking to reduce their environmental impact and prepare their students to respond to the existential challenge of their generation.



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Appendix

MCC Student Survey

IOWA

Thank you for giving us a few minutes of your time today. We invite you to participate in a survey being conducted by students in the University of Iowa School of Planning and Public Affairs in collaboration with Muscatine Community College and Phi Theta Kappa. For more information, please visit <https://iisc.uiowa.edu/>

The purpose of this survey is to gain an understanding about sustainability at MCC. Your input is very valuable and greatly appreciated! This survey should take about 5 minutes to complete. Your participation in this survey is completely voluntary. All answers will remain anonymous and confidential. Progress is shown on the bar below. If you do not frequent the MCC campus because you take all of your classes online, please feel free to skip questions about on-campus activity that does not apply to you and your experience.

If you have any questions, please contact Noel Mills at 319.939.5225 or noel-mills@uiowa.edu.



How often do you practice the following behaviors?

	Never	Less than once a month	About once a week	Multiple times a week	Always
Use reusable alternatives, limit single-use materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consider water conservation while using faucet, shower, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Limit printing paper and prefer electronic versions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compost food waste	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Turn off lights/unplug cords when not in use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opt for a vegetarian/vegan meal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shop locally (farmer's market or local businesses) over Amazon, Walmart, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



How do you most frequently travel to campus?

- Drive my own (or family) vehicle
- Carpool with classmates/employees
- Use public transportation
- Walk or bike
- Use school provided transportation such as buses from high school
- I take most of my classes online
- Other [use text box to explain]

What barriers prevent you from using public transportation? (Select all that apply)

- Cost of transportation
- Routes are not geographically accessible
- Schedules do not align well with class schedules
- Takes too much time
- Stigma of using public transportation
- Feeling insecure or unsafe on public transportation
- Other [use text box to explain]

Please rate the following statements.

	1 (completely disagree)	2 (somewhat disagree)	3 (neither agree nor disagree)	4 (somewhat agree)	5 (completely agree)
I consciously try to reduce my use of single-use plastics and packaging.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is easy to recycle waste at MCC.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to recycle as much as possible at MCC.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel confident and educated in choosing how to dispose of my waste.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are barriers at MCC to recycling. Please explain. <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do you think MCC could promote recycling more?



This set of questions ask about your understanding of sustainability. Please rate your confidence pertaining to the following statements.

	1 (no confidence)	2 (little confidence)	3 (fairly confident)	4 (very confident)	5 (extremely confident)
I understand the concept of sustainability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand how to practice sustainable behavior.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand the tools that MCC has implemented to promote sustainable behavior.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand sustainability as it pertains to my future education or job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In one word, what does sustainability mean to you?

The next set up questions relate to your education and career. Please rate the following statements.

	1 (completely disagree)	2 (somewhat disagree)	3 (neither agree nor disagree)	4 (somewhat agree)	5 (completely agree)
I think it is important that MCC incorporates sustainability education into all its programs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have learned about sustainability and its importance in depth in at least 1 class at MCC.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MCC has prepared me to consider sustainability in my field of study or job placement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have learned and understand the consequences of carbon emissions as it relates to Muscatine and Iowa.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



I have learned and understand the consequences of carbon emissions as it relates to the United States and globally.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will consider sustainability goals of companies and institutions when looking for further education or job placement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will look to promote sustainability in my future educational institutions and job placement through my education at MCC.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel like I can make a difference in continuing education or in the future workplace by contributing to sustainable practices and policies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you believe that human-caused climate change is happening and will have negative consequences unless society acts immediately?

Yes

No

Please rate the following statements about your personal attitudes towards climate change and sustainability in general, not just at MCC:

	1 (completely disagree)	2 (somewhat disagree)	3 (neither agree nor disagree)	4 (somewhat agree)	5 (completely agree)
I consciously make decisions to live more sustainably every day.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think my choices to live more sustainably make a difference.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think my generation will be more burdened by the effects of climate change in the future than currently.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In one word, describe how you feel about climate change.



Your gender:

Male

Female

Non-binary, non-gender conforming

Transgender

Other

Your age:

Where you live:

Muscatine

Incorporated City in Muscatine County

Unincorporated in Muscatine County

Outside of Muscatine County

Are you a first-generation student? (Neither of your parents have received a bachelor's degree)

No

Yes

What program are you studying at MCC?

What type of housing do you live in?

Own a house

Live with parents or other family (as a dependent)

Rent off-campus

Live in an on-campus apartment

Other, please explain:

Do you work while in school?

Yes, I am a full-time student and work part-time

Yes, I am a full-time student and work full-time

Yes, I am a part-time student and work part-time

Yes, I am a part-time student and work full-time

No, I do not work

Other, please explain:



Please select all that apply to you:

- I receive need-based assistance to pay for tuition
- I am enrolled in Medicaid
- I receive SNAP (Supplemental Nutrition Assistance Program) benefits
- I receive WIC (Women, Infants, and Children) benefits
- I receive housing assistance from the government (such as Section 8 voucher or living in public housing)
- I receive services/support from a local non-government agency

Please now use [this link](#) to complete another brief survey to calculate your own carbon footprint. These results are for your own reference and are not recorded as a part of this survey.



MCC Faculty/Staff Survey

IOWA

Thank you for giving us a few minutes of your time today. We invite you to participate in a survey being conducted by students in the University of Iowa School of Planning and Public Affairs in collaboration with Muscatine Community College and the Phi Theta Kappa Chapter of MCC. For more information, please visit <https://iisc.uiowa.edu/>

The purpose of this survey is to gain an understanding of the culture and education of sustainability at MCC. Your input is very valuable and greatly appreciated! This survey should take about 5 minutes to complete. Your participation in this survey is completely voluntary. All answers will remain anonymous and confidential. Progress is shown on the bar below.

If you have any questions, please contact Noel Mills at 319.939.5225 or noel-mills@uiowa.edu.



How often do you practice the following behaviors?

	Never	Less than once a month	About once a week	Multiple times a week	Always
Use reusable alternatives, limit single-use materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consider water conservation while using faucet, shower, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Limit printing paper and prefer electronic versions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compost food waste	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Turn off lights/unplug cords when not in use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opt for a vegetarian/vegan meal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shop locally (farmer's market or local businesses) over Amazon, Walmart, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



How do you most frequently travel to campus?

- Drive my own (or family) vehicle
- Carpool with colleagues
- Use public transportation
- Walk or bike
- I complete most of my work online
- Other [use text box to explain]

What barriers prevent you from using public transportation? (Select all that apply)

- Cost of transportation
- Routes are not geographically accessible
- Schedules do not align well with work schedules
- Takes too much time
- Stigma of using public transportation
- Feeling insecure or unsafe on public transportation
- Other [use text box to explain]

Please rate the following statements.

	1 (completely disagree)	2 (somewhat disagree)	3 (neither agree nor disagree)	4 (somewhat agree)	5 (completely agree)
I consciously try to reduce my use of single-use plastics and packaging.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is easy to recycle waste at MCC.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to recycle as much as possible at MCC.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel confident and educated in choosing how to dispose of my waste.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are barriers at MCC to recycling. Please explain. <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How do you think MCC could promote recycling more?



This set of questions ask about your understanding of sustainability. Please rate your confidence pertaining to the following statements.

	1 (no confidence)	2 (little confidence)	3 (fairly confident)	4 (very confident)	5 (extremely confident)
I understand the concept of sustainability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand how to practice sustainable behavior.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand the tools that MCC has implemented to promote sustainable behavior.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand sustainability as it pertains to my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In one word, what does sustainability mean to you?

Please select your primary role at MCC 1) Faculty, 2) Maintenance Staff, 3) Administration/Staff

- Faculty
- Maintenance Staff
- Administration/Staff

Do you believe that human-caused climate change is happening and will have negative consequences unless society acts immediately?

- Yes
- No

Please rate the following statements about your personal attitudes towards climate change and sustainability in general, not just at MCC:

	1 (completely disagree)	2 (somewhat disagree)	3 (neither agree nor disagree)	4 (somewhat agree)	5 (completely agree)
I consciously make decisions to live more sustainably every day.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think my choices to live more sustainably make a difference.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think the next generation will be more burdened by the effects of climate change in the future than currently.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Your gender:

- Male
- Female
- Non-binary, non-gender conforming
- Transgender
- Other

Your age:

- 20-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70+

Please select all that apply to you:

- I am enrolled in Medicaid
- I receive SNAP (Supplemental Nutrition Assistance Program) benefits
- I receive WIC (Women, Infants, and Children) benefits
- I receive housing assistance from the government (such as Section 8 voucher or living in public housing)
- I receive services/support from a local non-government agency

Where you live:

- Muscatine
- Incorporated City in Muscatine County
- Unincorporated in Muscatine County
- Outside of Muscatine County

The next set up questions relate to your role as a faculty member at MCC. Please rate the following statements, and if the questions do not apply to your position, please select N/A.

	1 (completely disagree)	2 (somewhat disagree)	3 (neither agree nor disagree)	4 (somewhat agree)	5 (completely agree)	N/A
I think it is important that MCC incorporates sustainability education into all its programs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I make an effort to incorporate sustainability concepts into my courses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MCC should have more recycling bins.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



MCC programs should prepare students to consider sustainability in their field of study or job placement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel like I can make a difference by teaching sustainable practices and policies to future generations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The next set up questions relate to your role as a maintenance staff member at MCC. Please rate the following statements, and if the questions do not apply to your position, please select N/A.

	1 (completely disagree)	2 (somewhat disagree)	3 (neither agree nor disagree)	4 (somewhat agree)	5 (completely agree)	N/A
MCC should have more recycling bins.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MCC should spend more on recycling pick-up and less on garbage pick-up.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MCC should add a recycling dumpster near the campus housing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

MCC should buy cleaning equipment or products that are sustainable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would feel less at-risk and healthier if more sustainability products and practices were used at MCC.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increasing sustainability would increase job satisfaction at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



The next set up questions relate to your role as an administrator or other staff member at MCC. Please rate the following statements, and if the questions do not apply to your position, please select N/A.

	1 (completely disagree)	2 (somewhat disagree)	3 (neither agree nor disagree)	4 (somewhat agree)	5 (completely agree)	N/A
It is important that MCC incorporates sustainability education into all its programs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would feel less at-risk and healthier if more sustainable products and practices were used at MCC.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increasing sustainability would increase job satisfaction at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I understand how to promote sustainability through college policy changes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MCC should give financial incentives to faculty, staff, and students who walk or bike to MCC.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MCC should use clean energy in all its facilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MCC policies should encourage water conservation and recycling practices in all its facilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MCC policies should encourage waste reduction in all its facilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>