

**Oral Roberts University Scorecard Results and the Development of Sustainable  
Campus Operations and Sustainability Education.**

**A Senior Paper**

**Presented to**

**the Department of Biology**

**of Oral Roberts University**

**In Partial Fulfillment**

**of the Requirements for the Degree**

**Bachelor of Science**

**by**

**Makayla Stapp**

**November 2020**

**Dr. John Korstad**

# Table of Contents

	<u>Page</u>
List of Figures.....	iii
Introduction.....	1
Chapter One: Corporate Operations, Campus Operations, and Student Education.....	1
a. What is Corporate Sustainability.....	2
b. Benefits of Sustainability for Companies.....	3
c. Corporate Sustainability and Low Hanging Fruit.....	4
d. Corporate Sustainability and Higher Education Connection.....	5
e. Circular Economy and Green Revolving Funds in HEI.....	6
f. Before Implementing Environmental Education.....	7
g. Using Campus Operations and Coursework.....	8
h. Benefits of Environmental Education.....	9
i. ORU and CityPlex Towers.....	10
Chapter Two: The Scorecard Program.....	11
a. History of Sustainable Tulsa.....	11
b. What the Scorecard Does and How it Works.....	12
Chapter Three: Gathering Information.....	13
a. Scorecard Year 2017-2018.....	13
b. Scorecard Year 2018-2019.....	13
c. Consistencies for Both Years.....	14
d. Overview of the 2017, 2018, and 2019 Results.....	14
Chapter Four: Impact of the Scorecard on Student Involvement.....	16
a. Implementation of a Green "Office".....	16
b. Lecture Series and Sustainability Panels.....	18

c. Compost.....	19
d. Push to Improve communication.....	21
Chapter Five: How to Improve Sustainability on Campus.....	21
a. Policy Implementation.....	21
b. Disclosure of Sustainability Reports.....	24
c. Establishment of a Formal Sustainability Office.....	29
Chapter Six: Continuation of the Scorecard Program.....	32
Summary.....	33
Acknowledgments.....	35
Literature Cited.....	36

## List of Figures

<u>Table No.</u>	<u>Title</u>	<u>Page</u>
1	Scor3card Results from 2017-2019	15
2	Percentage of Waste Produced by Uneaten Food	19
3	Compost (Ibs) Collected from 2018-2019	27

## **Introduction**

Sustainability is a term used when discussing "the long-term viability of a community, set of social institutions, or societal practice" (Meadowcroft 2019). The concept of sustainability developed out of the modern environmental movement. The goal of sustainable practices is to use environmental and economic actions to ensure that the current and future generations have the opportunity to enjoy wealth. The environmental movement had to reject the current system of resource use and waste disposal, which threatens natural ecosystems, and present alternative behaviors. With increasing pressure for organizations to reduce harmful impacts on the environment, the concept of sustainability can be used to determine to what extent current practices can be kept and which ones need to be replaced (Meadowcroft 2019)

The purpose of this paper is to explain how the Sustainable Tulsa Scorecard program has impacted Oral Roberts University. It will explain how the ORU Scorecard team has gathered the information for the program and how the team responded to the results. The paper will explain how concepts of corporate sustainability apply to Higher Education Institutions. It will also discuss actions that can be taken to improve sustainability efforts and the future use of the Scorecard program. Throughout the paper, the terms Scorecard and Scor3card may be used interchangeably. The reason for this was when the Scorecard reached its third anniversary, "Scor3card" was used as the logo for the Sustainable Tulsa Program.

## **Chapter One: Corporate Operations, Campus Operations, and Student Education**

## **What is Corporate Sustainability?**

Corporate Sustainability "recognizes that corporate growth and profitability are important, it also requires the corporation to pursue societal goals, specifically those relating to sustainable development- environmental protection, social justice, and equity, and economic development" (Wilson 2003). Three concepts that Corporate Sustainability requires to work effectively are sustainable development, corporate social responsibility, and stakeholder theory (Wilson 2003). These three concepts work together to strengthen the triple-bottom-line, which is the impact a business has on the economy, society, and the environment (Kenton 2020). If one of these areas is not working correctly, then the other two areas will eventually collapse.

The first concept of Corporate Sustainability is Sustainable Development. Sustainable development requires a balance in economic growth, environmental protection, and social equality. For sustainable development to occur, the efforts cannot only come from a governmental body but also corporations (Wilson 2003). Corporations are the drivers for economic development, and in the process, have become a key player in unsustainable conditions. However, they can address the issues.

The second concept is Corporate Social Responsibility (CSR), which "deals with the role of business in society (Wilson 2003)." This concept provides the basis that corporate managers are responsible for considering both society's needs and shareholders. The issue with this concept is to what extent managers are responsible for society's needs and can be debated by using four philosophies, social contract theory, social justice theory, rights theory, and deontological theory. The social contract theory states that society's interactions are contracts made between individuals, organizations, and institutions. Corporations are part of the contracts

because they must exhibit good behavior for them to operate and use community resources and goods. The social justice theory focuses on how resources are distributed in a society based on fairness. This theory supports all members of society should have needs met. So, in application to CSR, corporate managers need to consider how to distribute goods in society so that everyone has their basic needs addressed. The rights theory is primarily concern with human rights and property rights. Human rights should override property rights. So, in application to CSR, shareholders of a company have property rights, but employees and the community have rights that override the shareholders. The last theory is the deontological theory, which states that everyone is responsible for caring for others, even corporate managers (Wilson 2003).

The last concept involving Corporate Sustainability is the Stakeholder Theory. According to Freeman (1984), a stakeholder is "any group or individual who can affect or is affected by the achievement of the organization's objectives." When the corporation focuses on building a positive relationship with the stakeholders, it can meet the demands of economic stability, environmental protection, and social justice. If the company works to meet the stakeholders' demands, the stakeholders will help the company meet its objectives (Wilson 2003).

### **Benefits of Sustainability for Companies**

One of the most impactful actions of our society on the environment is production. To help corporations develop better sustainability practices, the United Nations implemented a plan in September 2015 called "*Transforming Our World: The 2030 Agenda for Sustainable Development*." This government plan contained 17 Sustainable Development Goals (SDGs) to respond to global climate change, social inequality, and environmental degradation. However,

companies tend not to participate in sustainable practices if they do not see the operation benefits. Suggested reasons for why companies adopted SDGs as part of operation standards include: "Reduction of finance and labor costs, reduction of risk, gaining competitive advantages, access to markets, production differentiation and developing a positive reputation, stakeholder management, maintaining or increasing legitimacy, or creating mutually advantageous or shared value outcomes." Other drivers for corporate sustainability may be found in the United Nations Global Compact from 2000. Motivators that companies have reported for joining the compact are stakeholder pressures, reputation management, participation in a learning network, and the company's ethical sensitivity. When a company decides to change its operating practices to be more environmentally sustainable, it may not be driven solely for protecting the environment, but because of economic and social benefits. Some companies still have not changed their operations practice because they fear former practices will be exposed and result in criticism or lawsuits. However, Corporations can create a balanced system of caring for the environment and benefits operations if done correctly (Van der Waal and Thijssen 2019).

### **Corporate Sustainability and Low Hanging Fruit**

Lately, businesses have been incorporating sustainability practices into their operations. However, their transformation does not happen overnight. Typically companies start with what is known as the "Low hanging fruit." An example is Walmart. In the early 2000s, Walmart was attacked with bad press and multiple lawsuits for injustices ranging from labor to environmental problems. The CEO at the time, Lee Scott, became tired of the threats to the companies triple bottom line. So, Scott hired the owner of Blu Skye, Jib Ellison, to be Walmart's environmental consultant. For Walmart to start its transformation process, Ellison started with the low hanging fruit (Humes 2011).



Ellison describes low hanging fruit as "simple, inexpensive, easily identified moves that would reduce waste and save money." The first low hanging fruit Ellison addressed was the toy's packaging. He noticed that these boxes had more material than needed to protect the product, so he suggested to decrease the box sizes. With this one action, the company made 497 fewer shipments and saved \$2.4 million, 4,000 trees, and one million barrels of fuel. Not only did Walmart reduce its impact on the environment, but it also increased its profit margin. For every sustainable practice Ellison wanted to implement, he had to create a business case. For the executive team to approve the change, Ellison first had to demonstrate how it would improve the businesses' bottom line. Otherwise, it would be considered a waste of time or resources. As Walmart made progress with their efforts, they saw that as much as 90% of their environmental impact came from the supply chain. They began to encourage the suppliers to cut back on their waste, which produced benefits for both the supplier and Walmart. As Walmart took part in corporate sustainability, they reaped the rewards in the economic, social, and environmental sectors (Humes 2011).

### **Corporate Sustainability and Higher Education Institution Connection**

The process in which Walmart used to transform its operations also work for schools, especially in Higher Education Institutions (HEI). Education Institutions have a structure that is similar to a corporation. Thus, if corporate sustainability practices are applied correctly, the practices may help the institution significantly improve their environmental impact. First, the institution will need board and administrative support for significant changes to be implemented quickly and effectively, just like how Walmart had to have corporate involvement for sustainability efforts to be implemented in individual stores. Second, the institution will need to gather support from organizations that supply the institution with materials. For Walmart to

further reduce its negative environmental impact, it had to encourage the suppliers to do the same. The institution will need to work with the supplier to implement a two-step process to reduce its waste. First, the supplier will need to create a more efficient packaging and processing system to reduce waste. Second, the institution will need to recognize that instead of dumping used items into landfills, it can be reused, and its value can be restored. (Humes 2011). Also, the education institution will need to create partnerships in the local community for accountability. The HEI is not expected to change its entire campus operations overnight. However, the institution can start with the low hanging fruits just as Walmart did.

### **Circular Economy and Green Revolving Funds in HEI**

As Higher education institutions participate in sustainability efforts, they may receive the same benefits as corporations in all three aspects of the triple-bottom-line. One financial benefit the institution may develop is a circular economy. A circular economy is built off of "the reuse of materials and products for the longest possible time in closed-loop biological and technical systems in order to boost resource productivity and system sustainability" (Mendoza et al. 2019). As the institution finds ways to reduce waste by reusing materials, they create a circular economy. The circular economy and sustainability practices go hand-in-hand with each other for both to be successful (Mendoza et al. 2019). The monetary returns from the circular economy will allow the institution to build a Green Revolving Fund. A Green Revolving Fund (GRF) is "a special account designated for investment in on-campus projects that improve energy efficiency, decrease resource and material use, reduce operating expenses, and cut environmental impact." The funds that are saved through sustainability investments can then be used to fund other projects. When implemented correctly and accounting for the institution's restraints, benefits of a GRF are boosting return of investment (ROI), short payback period, initiating new

mindsets in faculty, staff, and students, a protective barrier against rising energy prices, and advancement of education goals. GRF can be used to invest in any project. However, the two most common are energy and water (Flynn et al. 2012), which are the two most common resources used by faculty, staff, and students. So, these two categories have the fastest return of investment. When the institution plans out its sustainability practices to meet the needs of campus operations, the institution may create a circular economy that results in the development of a green revolving fund.

### **Before Implementing Environment Education**

Higher education institutions are in an interesting position to help promote sustainable development. First, they can demonstrate their support for sustainability by reducing their activities impact, which can be done through managing campus operations, campus planning, design, construction, and rehabilitation of buildings and infrastructures, purchasing policies, and being involved in the community (Ramisio et al. 2019). Second, they can help students develop the skills necessary to work in corporations with sustainability as part of their operations values (Novak and Dautremont-Smith 2017).

Before the institution can implement environmental education campus-wide, it first must identify its current sustainable practices, develop a rationale of the initiatives, and determine an approach for further development. As the institution identifies the current sustainability practices, it must also determine the "type and extent of their environmental, social, and economic impact." The institution will not want to go outside of its means and abilities for a project, or the project may become a failure. The institution first needs to determine how it can most effectively increase initiatives without compromising available resources. The second

thing the institution must do is to develop a rationale behind the initiative. In this process, the institution will want to identify possible failures, the difference between commitment and accomplishment, and if the initiative is appropriate for the institutions' reality. If the institution does not have a clear vision of how sustainable development programs will impact campus operations and student education, the program will become ineffective. The third thing that needs to be determined is how to develop sustainability efforts further (Amaral et al. 2019), which includes both campus operations and student education.

### **Using Campus Operations and Coursework**

Two aspects will influence the outcome of students' understanding of sustainability concepts. The first is by how the university demonstrates sustainability practices through campus operations. The second is by how the institution incorporates sustainability into course standards. For the former, the university may choose between two approaches with implementing sustainability policies. The first is the Top-down approach, which is where the administration and board members implement policies that the faculty, staff, and students must follow. The issue with this approach is that the community may not easily adhere to the new policies. The second is the Bottom-up approach, which is where the faculty, staff, and students push for the administration and board to create sustainability policies. This issue with this approach is that there tends to be a lack of funding for projects. The suggested approach is a combination of administration, faculty, staff, and students working together (Amaral et al. 2019), all unified under a Sustainability Office (Ramisio et al. 2019). The institution can use this as an opportunity for environmental education. As administration, faculty, and staff decide how sustainability efforts will be orchestrated and supported, students may learn processes that businesses will use when deciding how to participate in sustainability efforts. In this process, students will learn

how their future employer would identify its current sustainable practices, develop a rationale for the initiatives, and determine an approach for further sustainable development (Amaral et al. 2019). For the latter, the institution will need to determine if it will implement education standards through a built-on or built-in approach. With a built-on approach, the institution will provide courses and degrees that are specific to sustainability concepts. With a built-in approach, the institution incorporates sustainability ideas into all courses and research projects (Ramisio et al. 2019). The education institution can enhance students' knowledge of corporate sustainability by having students involved in sustainability practices Through the operations offices and the classroom setting.

### **Benefits of Environmental Education**

There are three types of benefits for environmental education in higher institutions—the first being job security. The second is a stronger on-campus community. The third is campus operations efficiency. When the intuition educates students on environmental issues and teaches sustainability practices, they prepare students for successful careers. It is becoming essential for students because sustainability is a growing concern for many corporations. It would be beneficial to the student if they have a background in adhering to sustainability policies so they know how to complete their work effectively. The second reason for an institution to implement sustainability practices is that it promotes the on-campus community. As businesses are growing in their sustainability efforts, students are looking for institutions to build their skills in resolving environmental issues. Quality staff and projects will help attract, retain, and motivate students. It will also attract and retain faculty and staff who are passionate about environmental issues and teaching. These students and staff will build relationships due to their common interest, promoting a stronger community in the institution. Lastly, the institutions' operations will

benefit from incorporating environmental education. By promoting sustainability research and education, the institution can train students in solving community issues by first helping the institutions solve their challenges. By involving the students in studying the institutions' operations and creating a sustainable development plan, they can help accelerate improvements in the institutions' sustainability practices (Novak and Dautremont-Smith 2017). The incorporation of environmental education is essential for helping students develop skills needed to open dialogue across science, industry, and society to implement sustainable development in the community (Ramisio et al. 2019) and corporations.

### **ORU and CityPlex Towers**

Oral Roberts University's mission is "to develop Holy Spirit-empowered leaders through whole person education to impact the world" (General...c2020). The idea of Corporate Social Responsibility aligns with the university's mission; the goal is to care for society's needs. Oral Roberts University acknowledges the fact that they are involved in the local community. Since they depend to some degree on the local community, they can positively impact the lives of its members. The university believes in being the hands of God and ensuring that the needs of the local and global community are met by providing resources and care. One significant way to create a positive impact on people's lives is by affecting their environment. Oral Roberts University is in a position to teach students how to care for the environment, which ultimately impacts three sectors of the world- people, planet, and economics. For students to understand how these three sectors affect each other, the university can incorporate environmental education into course standards and demonstrate stewardship through campus operations.

Currently, ORU has a built-on approach to environmental education, which has helped students, faculty, and staff build relationships due to common interest. These relationships have prepared students to become competent workers in their chosen fields of sustainability. The relationships have also encouraged students to take on leadership roles and initiate movements to help the campus operations better meet corporate sustainability ideas. These students have worked with faculty and staff on the university campus and at the neighboring organization CityPlex Towers.

The university's campus operations have a mixture of Top-Down and Bottom-Up approach for sustainability efforts. However, there appears to be missing support from both levels. The Scorecard team comprises students, faculty, and staff gathering data on the current Corporate Sustainability efforts of Oral Roberts University and CityPlex. The information will be used to help gather support for further sustainable development. They have also been working to identify rationales for the initiative and an approach for further development. To do this, ORU and CityPlex Towers have been using the Sustainable Tulsa Scorecard system to develop a baseline for current sustainability efforts.

## **Chapter Two: The Scorecard Program**

### **History of Sustainable Tulsa**

Sustainable Tulsa was founded by the current Executive Director, Corey Wren Williams. The organization is designed to "provide education, tools, and resources to inform and engage businesses and individuals in the three areas of sustainability: social responsibility, economic vitality, and environmental stewardship." The organization is devoted to helping the city and its businesses become durable and successful while at the same time, protecting the

health of the planet. Sustainable Tulsa began in 2003 as the first chapter of the Oklahoma Sustainability Network. It became a nonprofit organization in 2006 and worked with different projects to promote sustainability, such as the Green Directory and "Green the 918". In 2012, the Business 2 Business series was launched to help local businesses green their practices. In 2017, the first official year of the Scorecard program was launched (Williams 2020).

### **What the Scorecard Does and How it Works**

To help businesses and universities track and assess their current sustainability practices, Sustainable Tulsa created an online database called the Scorecard. The Scorecard allows organizations to collect information on their current practices that involve the triple-bottom-line and determine how to develop sustainable practices in the organization (Williams 2019). In 2017, when the first official Scorecard launched, a group of faculty, staff, and students from Oral Roberts University and CityPlex towers saw this as an opportunity to assess the university's triple bottom line. From there, a grassroots movement developed to promote more sustainable efforts in the campus operations.

The Scorecard from 2017-2019 consists of 143 items that each required a free-response answer of what the organization was doing that related to the question. If the organization were not participating in any efforts that would provide an adequate answer, the organization would not respond to that item. All items were divided into seven categories: Communication and Promotion, Community Stewardship, Healthy Work Environment, Materials Management, Transportation, Energy, and Water. One point was awarded for each item that was found to be a sustainable practice. All points were added to composite an overall score that defined which verification level the organization would receive. There are five verification levels, Participation, Bronze, Silver, Gold, and Platinum. To receive participation, the organization had



to complete some items but not all cornerstones. The rest of the verifications completed all cornerstones, and the type of verification depended on the number of items completed. Bronze level recipients completed 13-30 items. Silver level recipients completed 31 to 75 items. Gold level recipients completed 76-125 items. Platinum level recipients completed 126 to 154 items (Garza J, e-mail message, January 26, 2020).

## **Chapter three: Gathering Information**

### **Scorecard Year 2017-2018**

In the 2017 to 2018 school year, Dr. John Korstad facilitated the research with the help of two head research assistants, Anna Mueller and Elise Adelman. Mueller and Adelman divided the spring semester Global Development and Sustainability class into four groups to help gather data. Each group was assigned a set of questions that they were responsible for gathering data on by contacting faculty and staff in the organization that would have the information. This constituted for a group project grade for students in the class. Each group had a leader who was an officer in the Students for Sustainability and Stewardship (S3) club. The leader was responsible for helping the group gather data, clarify questions, and update Mueller and Adelman (Mueller 2019). David King, the director of energy management at CityPlex was responsible for entering the Energy and Water categories data.

### **Scorecard Year 2018-2019**

In 2018-2019 there were significant changes. The first significant change was that Adelman graduated and was replaced with Makayla Stapp. The second significant change was that the Global Development and Sustainability class did not do a group project but instead did individual projects. Each person was assigned only three to four questions that they were responsible for researching through contacting faculty or staff. If the individual student had an

issue, they could consult Dr. Korstad, Mueller, or Stapp. The third significant change was that Stapp worked as an intern on the Scorecard card program at CityPlex towers. During this internship, Stapp worked with David King's assistant Andrew Brister to gather data, construct responses, and submit the information to Sustainable Tulsa. David King still stayed involved by providing information to Brister about energy and water consumption data. During the internship, Brister and Stapp also created a google email account to create documents that would be sent to contacts, store information, or used by multiple people to work on remotely.

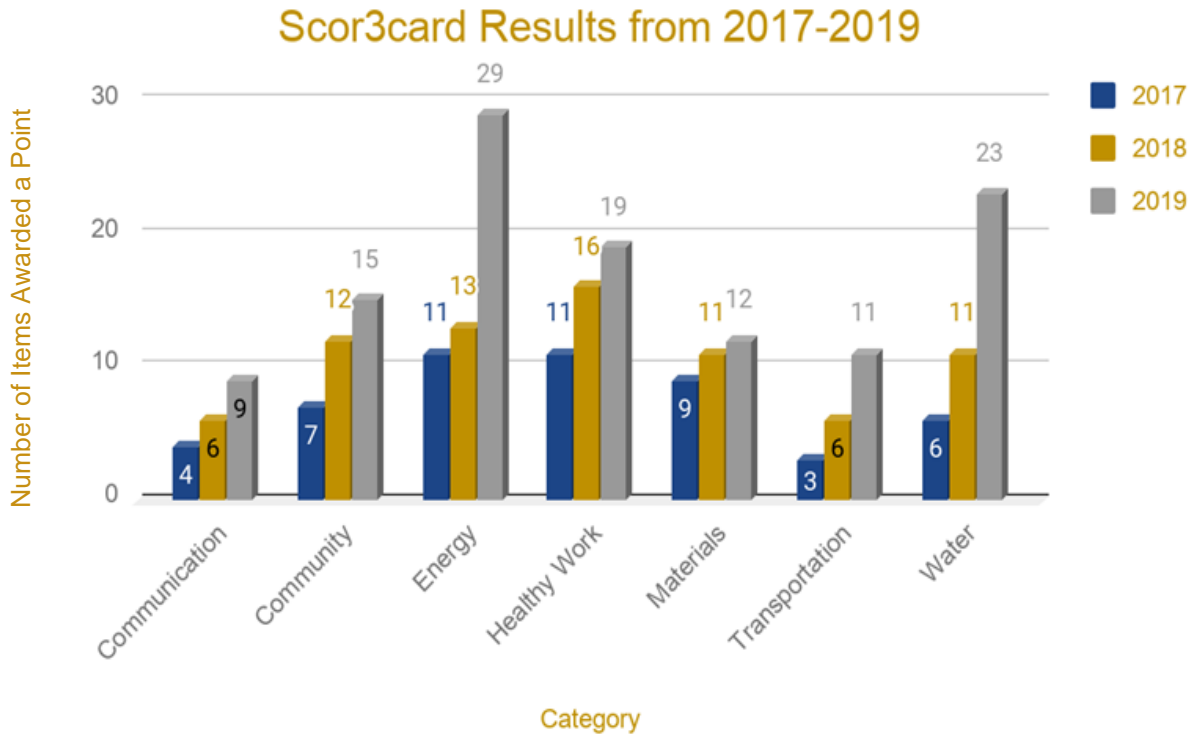
### **Consistencies for Both Years**

Even with major changes taking place each year, there are some consistencies. First, Sustainable Tulsa assigned each organization a Scorecard coach. The coach was responsible for assisting the organization through clarifying questions and ensuring Communication between Sustainable Tulsa and the organization. The ORU-CityPlex towers coach was an ORU alumnus, Joel Garza. The second consistency was the yearly evaluation of the Scorecard results. Before starting to gather information for the year, the team would evaluate the previous year's scores and devise a data collection plan. First, the team identified the items that received a point and did not need to be updated. These items are simply rewritten and submitted back into the Scorecard. The second thing that was identified was the items that received a point but need to be updated. The items are adjusted accordingly. Then the team focuses their attention on items that did not get a point or were not answered in the previous year. These items were saved for last, so the team did not waste time on items that might not have applied to the organization (Mueller 2019).

### **Overview of the 2017, 2018, and 2019 Results**

In 2017, ORU/CityPlex towers were awarded a total 51 items as sustainable, which resulted in a Silver verification. The total items for each category was awarded as follows,

Communications and Promotion - 4, Community Stewardship-7, Energy-11, Healthy Work Environment-11, Materials Management-9, Transportation-3 and water-6. In 2018, the organization was awarded a total of 75 items as sustainable, which resulted in another Silver verification. The total items for each category was awarded as follows, Communications and Promotions-6, Community Stewardship-12, Energy-13, Healthy Work Environment-16, Materials Management-11, Transportation-6, and water-11. In 2019, the organization was awarded 118 items as sustainable, which resulted in a Gold verification. The total items for each category was awarded as follows, Communications and Promotions-9, Community Stewardship-15, Energy-29, Healthy Work Environment-19, Materials Management-12, Transportation-11, and Water-23. As shown in Figure 1, each year, all categories had an increase in the number of items that were awarded sustainable. All categories have gradually increased except for Energy and Water, which had an exponential increase from 2018-2019.



**Figure 1.** Scorecard results of each category from 2017- 2019.

## Chapter Four: Impact of the Scorecard on Student Involvement

### Implementation of a Green "Office"

The purpose of a Green or Sustainability office at an HEI is to assist in the campuses' sustainable development. Institutional framework, Campus operations, Teaching, Research, Outreach/Collaboration, and Assessment and Reporting are ways that an institution may implement sustainable practices. The two most common methods are through Campus operations and institutional initiatives. For the office's efforts to be optimized, it needs to have considerations in building and energy management, obtaining products, waste management, and mobility/transportation. However, these efforts will not be effective if the whole institution is not cooperative (Filho et al. 2009).

There is a difference between a Green office and a Sustainability office. A Green office provides a platform that students typically lead and promotes sustainability practices to be implemented into curriculum, operations, and community. While a Sustainability office is where activities are coordinated, and there is an emphasis on research and teaching (Filho et al. 2009). Currently, Oral Roberts University has an unofficial hybrid of these two offices to promote sustainability efforts. The team consists of students, faculty, and staff that collaborate to implement and promote sustainable campus operations. The students focus on Green office practices by educating the student body about sustainability practices and implement minor projects. Select faculty and staff emphasize sustainability in the curriculum and improve sustainability efforts in campus operations.

After reviewing the 2016-2017 Scorecard results, Anna Mueller and Elise Adelman realized there were isolated groups at the university with a passion for sustainability. If these groups could communicate more effectively, then a sustainable campus operation would be achievable (Mueller 2019). The Students for Sustainability and Stewardship (S3) club was created in the fall semester of 2017 to help with communication between different offices, faculty members, and students across the university campus. This group is primarily student-led under the advisement of Dr. John Korstad. The S3 club works to help promote awareness for sustainability in three ways: providing extracurricular education for students, representing Oral Roberts University through external and internal engagement, and assessing current sustainable practices through the use of the Scorecard program.

While the S3 club has had some success, the task of creating a sustainable movement had challenges not foreseen. However, these challenges are not isolated to the ORU campus. An international survey was conducted to analyze the impact of Green Offices and Sustainability

Office on campus operations. Having these offices has helped address sustainability issues, create new projects, and hold the administration accountable to implement policies and guidelines. However, 49% of the institutions surveyed still indicated that their Green/Sustainability offices lacked funding and adequate administrative support. Other issues commonly reported were institutional bureaucracy and slow decision-making due to administrative and systematic barriers (Filho et al. 2009). The S3 club has experienced some of these limitations, primarily lack of funding and some administrative and student support barriers. However, there have been some great success. Three notable projects facilitated by the S3 club are external and internal engagement, waste reduction through composting, and push to improve internal communication.

### **Lecture Series and Sustainability Panels**

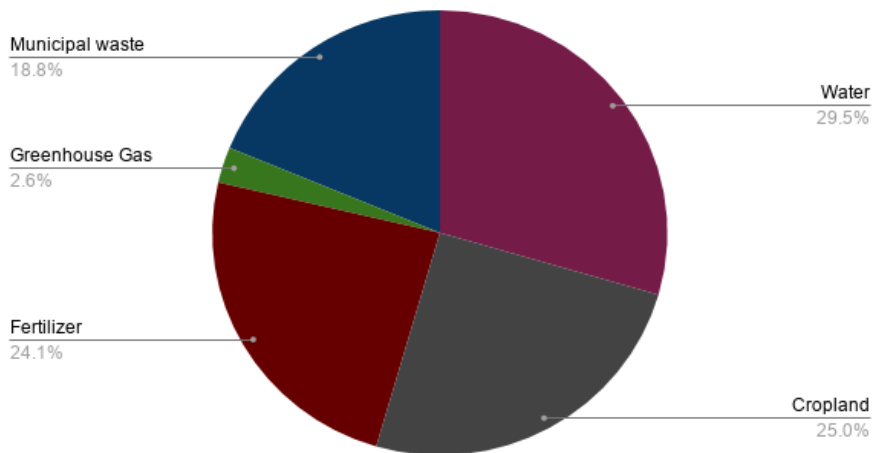
The first task of the S3 club was to gain support internally and externally. To do so, the S3 club developed a series of seminars that would have guest speakers from the Tulsa community present to the student body, faculty, and staff (item C06 in the 2017-2018 and 2018-2019 Scorecards). These speakers came from a variety of fields relating to sustainability, such as Tulsa Zoo, Topeca Coffee, Groggs Green Barn, Tulsa Master Gardeners, The Water Co., etc. There were two noticeable outcomes. First, students discovered new career opportunities and encouraging them to research possible post-graduation jobs that would enhance environmental care. Second, students developed an understanding of the importance of the triple bottom line. Speakers would emphasize how different aspects of environmental care impacted social justice and economic stability in business. S3 club officers have also spoken on panels (UCO Sustainability Summit and TCC 5th annual Sustainability conference) discussing sustainability

practices at ORU (2018-2019 Scorecard item C15). These lectures and panel opportunities have allowed students to connect with leaders in sustainability and gain future project support.

### **Compost**

The second project was composting. This project's first objective was to decrease the environmental impact of student food waste (Mueller 2019). Each year in the United States alone, around 40% of food is wasted. There are various environmental issues connected to food waste such as water waste, overproduction of cropland, water pollution caused by excessive fertilizer use, an increase in greenhouse gas emissions, and an increase in municipal solid waste (Gunder and Bloom 2017). The percentages of food waste impact in these areas are shown in Figure 2. Food waste does not only impact the environment; it also produces waste in the institution's finances. On average, pre-consumption food waste will account for 4-10% of the food purchase. If an institution purchases \$1 million in food products and food waste is 10%, then \$100,000 of that food purchase will be wasted (Lean Path Inc 2008). If the institution can reduce food waste, there would be positive environmental and economic effects. To do so, the institution can conduct a food waste audit and create a reduction plan. After implementing a reduction plan, the institution can develop a composting system to capture any food items still wasted (Gunder and Bloom 2017).

### Percentage of Waste Produced by Uneaten Foods



**Figure 2.** Uneaten foods contribution to waste.

Sodexo staff and officers of the S3 club determined that the most efficient way to reduce food waste from the Hamill Center was to create a composting system focusing on pre-consumed food waste (Mueller 2019). Pre-consumed food waste is any waste disposed of under the supervision of the food service provider (Lean Path Inc 2008). The pre-consumed waste was composted using the Manual turn-over method, also known as passive composting (Graves et al. 2000). This method is a mixture of materials in a pile that is turned over periodically to rebuild porosity. The recreation of this porosity allows for the necessary aeration and materials to break down properly. This method's advantages were that it required minimal labor, equipment, upfront cost, and only had to be turned over periodically (Graves et al. 2000). According to records from spring 2018- spring 2020, 7,638.6 pounds of pre-consumed foods were diverted from landfill (2017-2018 and 2018-2019 Scorecard item M12). However, there is no current data on how much ORU has saved on food disposal fees because of the composting program. Also, current progress on the project has been halted due to COVID-19 but plans are being made to continue this project in the near future.



## **Push to Improve Communication**

S3 officers have continued to build communication between different faculty and staff members through the use of the Scorecard program. Each spring semester, officers from the S3 club have assisted Dr. John Korstad and David King (Director of Energy Management at CityPlex) to gather data and construct responses for the Scorecard program. Each year, the methods that the students use to communicate with different departments have changed but have been able to identify individuals in different departments with a desire to create a sustainable campus. While communication across departments is still not optimal, steps can be administered to improve consistency. As indicated by item C03, In the 2016-2017 and 2017-2018 Scorecard year, faculty, staff, and students involved in communicating sustainability efforts on campus were indicated. However, the mode and how often was not. The 2018-2019 Scorecard stated that meetings took place at least monthly and more often through emails, phone calls, and text messages. However, significant progress can still be made to improve the communication gap between students and operations management. At the beginning of each school year, students, faculty, and staff from several different departments should meet to develop goals and create a plan for what sustainable development initiatives they would like to achieve. Second, the task should be distributed to the person or persons who can initiate that function. Students should be assistants in completing tasks, gathering data, and monitoring progress.

## **Chapter Five: How to Improve Sustainability on Campus**

### **Policy Implementation**

For sustainable development implementation, there must be both a bottom-up and top-down approach, which can be provided by a policy framework. The policy framework is affected by the context, values, and interests of the community outside and inside the institution. The

vertical policy (also known as the top-down approach) integration describes "coherence between policy frameworks at supranational, national, regional, and local levels." Essentially, one policy at one ranking can affect another policy of another ranking within the community, in this case, the HEI. There are three dimensions of vertical policy integration, comprehensiveness, aggregation, and consistency. Comprehensiveness expresses the issues that are found in different levels of policies. Aggregation is the number of levels that a specific policy is found. Consistency refers to how a policy is incorporated in each policy level (Vargas et al. 2019).

The study conducted by Vargas et al. (2019) found that campus and operation policies were where mildly present at the organizational level. The authors suggest that implementing sustainable development in campus operations would improve the organization's development in other areas. These areas could include, but not limited to, staff development, outreach, partnerships, education and research, and teaching and learning policies. First, the institution must clarify the purpose of participating in sustainable development for the policy framework regarding sustainable operations to be supported.

In the last three reports, the ORU Scorecard team provided a statement (Item C01) describing ORU's commitment to sustainability. In the 2016-2017 report, the university recognized "the importance of being good stewards of creation" and provided learning and research opportunities to globally address triple bottom line issues. In the 2017-2018 and 2018-2019 reports, the statement was repeated word for word.

In the 2016-2017 report, the Scorecard team responded to the company policy item (C02), describing that all "Representatives of ORU must practice honesty and integrity in fulfilling their responsibilities and comply with all applicable laws and regulations." According to the rest of the statement, the university wants to provide a safe and transparent work

environment to resolve any conflicts within the university first instead of seeking outside resolutions. However, this response was not awarded a point because it does not specify a policy specifically for ORU sustainability practices. The 2017-2018 and 2018-2019 Scorecard report did not respond to this item because there was no policy identified by the Scorecard team. The company statement describes that ORU is committed to caring for God's creation (or secularly would be described as sustainable development); however, there are currently no policies identified that provide a framework for campus operations to fulfill this commitment. Two examples are the recycling in the Graduate Center (item M02) and Sustainability progress updates for staff (item C04). The recycling material in the Graduate Center was gathered and recorded by an employee on their own time and will (item M02). There is no policy mandating that recycling be collected and separated in the daily cleaning process. There is currently no policy regarding updating internal stakeholders on the sustainability initiatives on campus. Item C04 in all three Scorecards indicate that updates are being sent out via email. However, these updates have declined over time. A policy requiring periodic updates would help ensure internal stakeholders are aware of sustainability initiatives.

For ORU to fulfill a commitment to sustainable development, the university will need first to identify what policies, if any, are currently in place regarding sustainable campus operations and sustainability education. If any are identified, they will need to be assessed for effectiveness and adjusted accordingly. If none or areas are areas without one, then the university should consider creating policies using the three vertical policy dimensions. This would assure that all external community, including international and national, and internal community factors are considered when developing sustainable policies. This is particularly important because all aspects of the triple bottom line are dependent on each other, not just

within the individual community but internationally. If one policy is in place and acted upon, it will affect the internal and external community's function. Policies with enforcement would assure that sustainable projects such as composting and recycling would remain consistent.

While there are reports of policies throughout the Scorecard, these policies are not implemented by the university but by collaborating organizations. For example, item M03 discusses Sodexo's Foodservice policy. Sodexo complies with the Global Sustainable Supply Chain Code of Conduct, which ensures that all products and services are in standards that are accepted socially, environmentally, and ethically. While these policies help to promote sustainable campus operations, these policies are controlled by the external organization. For ORU to ensure campus operations will be sustainable, they will need to develop their own policies.

### **Disclosure of Sustainability Reports**

Demands from investors and consumers for sustainability reports from organizations have been rising. Around 85% of S&P 500 companies have implemented sustainability reporting one way or another. However, many have expressed concerns that the motivation for reporting is marketing and not stakeholder accountability (Gaetano 2019). This process is known as greenwashing. Greenwashing is when an institution provides misleading information or impressions about how the product or service is environmentally sound (Kenton 2020). This influences the organization's stakeholders' view without the organization having to change any of its practices (Papoutsi and Sodhi 2020). One reason for this is, unlike financial reporting, sustainability reporting is generally voluntary, and the organization can choose what information is disclosed. According to Alan White (Co-founder of Global Reporting Initiative), a governance structure would help ensure accuracy in reporting. Also, Charles H. Cho stated that

without the process of monitoring and enforcement, any standards set would have "no weight or authority" (Gaetano 2019).

Boiral and Heras-Saizarbitoria (2019) published a study analyzing assurance statements for sustainability reports and how they impacted stakeholder accountability. In the study, Boiral and Heras-Saizarbitoria collected data from sustainability reports that used the GRI (Global Reporting Initiative) framework from 2006-2015. The organizations were in the mining and energy sectors. They analyzed a total of 337 reports, 153 from mining, and 184 from energy. They used professionalism, the verification process, and the audit outcomes to analyze the assurance that external auditors provide to sustainability reports. Reporting by itself cannot ensure stakeholder confidence in Corporate Sustainability because of the lack of reliability (Cho et al. 2015). Stakeholder assurance can be enhanced by using an external auditor to conduct a verification process on the sustainability report. External auditors' assurance statements should involve three aspects: professionalism, the verification process, and the outcome (Boiral and Heras-Saizarbitoria 2019).

For professionalism, auditors should define their training and expertise to ensure competence on the subject matter and justify their independence. Boiral and Heras-Saizarbitoria (2019) found that only 23% of all assurance statements referred to having a team that is multidisciplinary. Only 10% of statements provided the auditor's qualification, training, or Degree. Only 6% of auditors specified expertise and experience. However, 75% of the mining sector and 64% of the energy sector statements claimed independence from the organization, and 31% of all statements mentioned conflict of interest was absent.

The report's verification should incorporate five main aspects: level of assurance, the responsibility of auditors, scope of verification, and methods. A limited level of assurance was

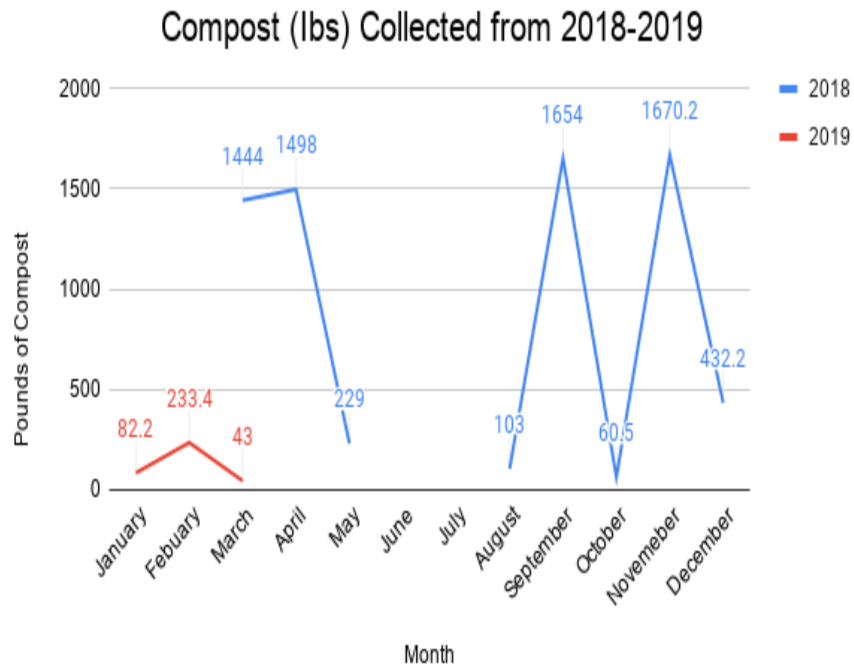
provided by only 8.5% of the mining sectors and 6% of the energy sectors. In both sectors, 13% of the reports did not mention any level of assurance, and 69% provided a moderate level. When it came to providing reliability of data, calculation of indicators, application of GRI framework, or possible information error, 19% of statements denied any responsibility. Also, 29% of statements denied responsibility for how the sustainability report would be used. The scope used for verification rarely identified clearly what specifically was verified on the report. Only 40% of mining and 21% of energy sectors specified the sections of the sustainability report that was verified. (Borial and Heras-Saizarbitoria 2019).

The outcome of the report focuses on the information's materiality, completeness, and responsiveness. The materiality of the mining and energy reports was covered in over two-thirds of statements. However, the issue is that the reports tend to focus on achievements and not failures. This limits the stakeholder's knowledge of unsustainable practices taking place and raises the hyperreality of the report. Completeness refers to the accuracy, reliability, and amount of detail in the report. Around half of the reports mentioned the principle of completeness but did not indicate how it was verified. However, 15% had some expression of the reliability and completeness of the information, and 12% went into explicit detail. Responsiveness involves the company's commitment to stakeholder's interests and opinions. Responsiveness was mentioned in 48% of all statements. However, the stakeholders' concerns were rarely specified, which promotes the question of how the auditors verified the company's response to stakeholder concerns. (Borial and Heras-Saizarbitoria 2019).

For the previous three years, the ORU Scorecard team has demonstrated a limited level of professionalism when reporting who was responsible for gathering information. In the 2016-2017 Scorecard year (Item C03), only a list of names was given and no specifications of titles or

experiences, with the exception of two individuals. In the 2017-2018 Scorecard year, only the student workers had their titles or experiences stated. In 2018-2019 the only individuals that had their title or experiences specified were the Student Body President and Student Body Vice President. To help assure stakeholders that the information on the Scorecard is accurate, the titles and experience of each Scorecard team member should be stated. This would bring awareness to stakeholders of the experience the students, faculty, and staff have with sustainable operations and reporting.

The ORU Scorecard team could also focus more on the report's outcome, particularly in mentioning failures. Two examples in the previous two Scorecards where the team does not mention failures are composting and permaculture. In the 2017-2018 report for item M12 (Reuse: Provide Composting), there is a description of the newly implemented composting program that is entirely student lead. It describes what food waste is composted, method used, how much had been collected, and how students are involved in the process. However, the 2018-2019 report provides updates for the fall 2018 semester but fails to discuss how the composting project came to cease over the spring 2019 semester.



**Figure 3.** The amount of pre-consumed compost collected in pounds from 2018- 2019.

The S3 club also intended to propose a permaculture project on campus, which would meet the requirement for item S14 (Conservation action: tree planting). In the 2017-2018 report, it was stated the ORU landscaping crew had planted more trees on campus and that the S3 club had plans for a permaculture project that would plant multiple trees. However, the 2018-2019 report not appropriately updated that the permaculture project was halted due to the complexity of creating and presenting a proposal to the ORU administration. While the falsity of this information was not intentional, it could have been prevented with the assistance of an external auditor.

For the previous Scorecards, ORU has not had an external auditor to verify the information's accuracy. ORU students, faculty, and staff gathered the information and submitted responses to the Scorecard program. Sustainable Tulsa would then review the responses and



award a point for each response that indicated sustainable actions occurred. Sustainable Tulsa has been efficient in helping identify which actions reported on the Scorecard are sustainable. However, Sustainable Tulsa has not audited the information to verify the accuracy of the information.

An external auditor is advised to enhance the accuracy of the information that stakeholders will use to develop a sustainable campus operation. The auditor would determine the triple bottom line's value and progress compared to a set of performance indices or guidelines (Coyne 2006). To do so, the auditor would have to determine if the audit will be used for internal or external stakeholder use. Depending on who relies on the report, the auditor will want to focus on those stakeholders' needs by providing relevant information (Coyne 2006). In the case of ORU, both internal and external stakeholders would rely on the sustainability report's accuracy. The internal stakeholders would include administration, faculty, staff, and students. The external stakeholders would include anyone or any organization that is impacted by the university. To reduce the credibility gap, the external auditor could provide assurance statements using the process described in the Borial and Heras-Saizarbitoria (2019) study.

### **Establishment of a Formal Sustainability Office**

To effectively develop a sustainable campus operation, many universities have created a Sustainability office to organize initiatives. Two examples are HAW Hamburg and Bournemouth. HAW Hamburg started their sustainability journey by developing two offices, the 'Competence Center on Renewable Energy and Energy Efficiency' (known as CC4E) and the Research and Transfer Center' Applications of Life Science' (known as FTZ-ALS). The CC4E office focused on energy efficiency and renewable energy. The FTZ-ALS office focused on curriculum and campus greening initiatives. The primary struggle of these offices was

convincing stakeholders of the importance of sustainable development initiatives. However, their projects created a 15 million euro return of investment and increased their academic outputs.

Bournemouth University developed a curriculum to focus on globalization and sustainable development but had to become sustainable in their operations, or else they would be hypocritical. So, their focus first began with energy efficiency, travel planning, and waste management. They continued into carbon management, water reduction, biodiversity management, and sustainable construction. By participating in sustainable projects, they further developed their research and curriculum areas (Filho et al. 2015). Through an established sustainability office, ORU can save on operations cost, train students for a growing environmentally conscious workforce, and develop research output.

The university is a complex organization, and a sustainable office can create a functional structure for sustainable development to occur. Universities have various departments with different decision-making styles, time constraints, priorities, and experiences that make it difficult to have a single place where campus-wide changes are developed. To combat this, the office will first need to work with the "mental models" of the university. The university stakeholders will have to understand that the organization is not an independent institution but relies on the planet's life support system and society. Second, the office will need to uncover the myth of rationality. Universities design their processes and structures based on assumptions that appear to be rational because it supports the university's goal, which the goal is to be rational. However, with a closer look at the system, the processes and structures could be dysfunctional. This prohibits true institutional transformation. The best way to develop sustainability in this environment is to appear rational but operate irrationally (Sharp 2002). Essentially, the plan

must be reasonable within the institutional system but must also be flexible to accommodate the institutional change.

For ORU, the sustainability office should consist of persons from the administration, faculty, and the student body. The administration focuses on taking care of the operational needs of the university. They have access to organizational information and can influence decisions. In a sustainability office, they can assist faculty and students in developing green initiatives by providing organizational information and green revolving funds for future projects. Faculty primarily focus on teaching and research, while few members influence campus operations. To address this, faculty can focus their research studies on the campus system. By doing so, they can simultaneously achieve their goal of teaching, research, and participating in campus operations. Students tend to engage in activities that are short term but raise awareness of specific issues. Administration and faculty can develop student skills by introducing them to system thinking concepts, providing training, and facilitating dialogue. Once students understand how the university operates, they can help develop and implement sustainable projects (Sharp 2002).

For the office to be effective, it will need to incorporate a vertical and horizontal policy approach (Filho et al. 2015). In a vertical policy approach, decisions are made at the top and go down the chain of command. In a horizontal approach, faculty, students, and staff would be given leeway to make decisions based on university guidelines (Leondard 2020). A sustainability office could help integrate these two concepts to ensure that sustainable policies are effective. The office could consult both the administration for the information about current operations and the faculty and students that have experience in sustainability studies to determine how policy changes will impact the university. It is important to have those who (administration)

implement policies and those who carry out the policies (faculty, staff, students) to agree with what is achievable in order for the policy to work. The policies must also be comprehensive. If a person involved in policy enforcement resigns, then the replacement needs to understand how the policy operates for the policy to continue (Filho et al. 2019). Through the collaboration of administration, faculty, staff, and student representatives, the sustainability office could be developed to appropriately meet all stakeholders' needs.

Two things must be kept in mind when addressing environmental issues. First, all areas of campus operations will be changed when implementing sustainable development. Second, the institution's need will continually change. Thus, the sustainable development actions will continually need to be adjusted. As these issues are addressed, the Sustainability office will need to keep in mind that project success does not mean institution transformation. Just because there have been successful projects does not mean the entire campus operations have become sustainable. The office must continue to search and advocate for improvement in all aspects of the triple bottom line. However, the use of projects is important for institutional transformation to occur (Sharp 2002).

## **Chapter Six: Continuation of the Scorecard program**

The Scorecard program has benefited Oral Roberts University, especially in the area of student involvement. It has encouraged Global Environmental Sustainability majors at the university to collaborate and seek implementation of sustainable practices. It has encouraged students to pursue research and has provided students with an opportunity to see how the business sector impacts environmental care. However, the Scorecard has not been an effective tool for promoting change on campus; there are two reasons for this. First, the Scorecard was designed for businesses, not universities. While the university does have a business aspect, other

aspects of the university structure influence the organization's sustainability, which the Sustainable Tulsa Scorecard cannot accommodate. Second, sustainability is not a top priority at ORU. While there are multiple actions that the university takes that is related to the triple bottom line, for example, community outreach (item S02-S10), promoting a healthy lifestyle to employees (items H11-15), and energy reduction (Items E1-24 and E30-34), the motives are not solely for sustainability (environmental care) purposes. The motives may be for various reasons and happen to be classified as a sustainable action.

Dr. Korstad has stated (Korstad J, e-mail message, September 14, 2020) that it has been determined that the Scorecard program should be postponed until further notice. This is primarily because the Scorecard team has decided to redirect its energy. While the Scorecard tool has been useful to assess the current sustainability practices, little has changed due to the Scorecard. The Scorecard team has decided that instead of spending time gathering data, constructing responses, and analyzing score results, it would like to focus on strengthening current initiatives. Currently, the S3 club president has been working on restoring the composting project (item M12) and monarch waystations (item S12). David King will continue to focus on reducing energy and water usage. Dr. John Korstad, along with other professors, will continue to promote sustainability through course content and overseeing student projects.

## **Summary**

Sustainability has been a growing concept promoted by the environmental movement. The purpose is to ensure resources are used appropriately and will be available for multiple generations (Meadowcroft 2019). When an institution begins its sustainability journey, it starts with the "Low hanging fruit." Jib Ellison described the low hanging fruit as "simple, inexpensive, easily identified moves that would reduce waste and save money." (Humes 2011)

For every institution, the low hanging fruit will be different. For ORU, the low hanging fruit is energy and water usage, which has been significantly reduced under the works of David King. Reducing waste can create a surplus in finances, creating a circular economy and green revolving fund. The GRF can allow for the finances used to discard waste to be redirected for other projects that would benefit the university stakeholders. These stakeholders are not limited to the administration and the board but include faculty, staff, students, and all parts of the local community.

For the past three years, the ORU Scorecard team has worked with Sustainable Tulsa to gather information and assess ORU's current sustainability practices. Each year the Scorecard indicated there was an increase in sustainability practices, primarily in water and energy usage. However, the increase in score is not necessarily because new practices were implemented. Some of the reasons may be gathering data on actions the Scorecard team was unaware the university was already doing or inaccurate information due to miscommunication.

While the Scorecard may not have played a factor in most of the changes in campus operations, it has influenced student involvement. Through the Scorecard, the birth of the Students for Sustainability and Stewardship club took place. Which has helped students to collaborate and initiate sustainable actions on campus. Notably, the S3 club has promoted external and internal engagement, reduced food waste through composting, and worked to improve internal communication. There are still many challenges that are being faced by the Scorecard team to create radical change on campus. While the team has decided that it will halt its use of the Scorecard program, they will still pursue initiating sustainable actions in campus operations

## **Acknowledgments**

First and foremost, I would like to thank Dr. Korstad and his consistent endeavor to create a movement of sustainability on campus. He has encouraged me to pursue researching the benefits of sustainable campus operations and how to implement it in my future career as an educator. I also want to thank Anna Mueller and Elise Adelman for mentoring me through the scorecard process. I would like to thank David King and Andrew Brister for allowing me to work in their office, helping me gather information, and for helping with constructing responses. I would like to thank all S3 club officers and students from the Global Development and Sustainability class for helping with gathering information. Most importantly, I would like to my Lord, Jesus Christ and the Holy Spirit for His wisdom and guidance in this process.

## Literature Cited

- Amaral AR, Rodrigues E, Gaspar AR, Gomes A. 2019. A review of empirical data of sustainability initiatives in university campus operations. *J Clean Prod.* 250.  
<https://doi.org/10.1016/j.jclepro.2019.119558>
- Boiral O, Heras-Saizarbitoria I. 2019. Sustainability reporting assurance: creating stakeholder accountability through hyperreality? *J Clean Prod.* 243.  
<https://doi.org/10.1016/j.jclepro.2019.118596>
- Cho CH, Laine M, Roberts RW, Rodrigue M. 2015. Organized hypocrisy, organizational façades, and sustainability reporting. *Account Organ Soc.* 40:78-94.
- Coyne K. 2006. Sustainability Auditing Evaluating organizations' progress toward sustainable development. *Env Qual Man.* 16(2):25-41.
- Filho WL, Pallant E, Enete A, Richter B, Brandli L. 2018. Planning and implementing sustainability in higher education institutions: an overview of the difficulties and potentials. *Inter J Sustain Dev World Eco.* 25(8):712-720.
- Filho WL, Shiel C, Paço A. 2015. Integrative approaches to environmental sustainability at universities: an overview of challenges and priorities. *J Int Enviro Science.* 12(1):1-14.
- Filho WL, Will M, Salvia AL, Adomßent M, Grahl A, Spira F. 2009. The role of green and Sustainability Offices in fostering sustainability efforts at higher education institutions. *J Clean Prod.* 232:1394-1401.
- Flynn E, Orłowski M, Weisbord D. 2012. A Sustainable Endowment Institute Report Greening the Bottom line [internet]. Sustainable Endowments Institute; [accessed 2020 March 30]  
<http://greenbillion.org/wp-content/uploads/2012/11/Greening-the-Bottom-Line-2012.pdf>



Freeman E. 1984. Strategic Management: A Stakeholder Approach. Boston (MA): Pitman Books.

Gaetano C. 2019 September 20. Rise of Sustainability Reporting Brings Questions of Motivation, Agenda. The Trusted Professional: The Newspaper of the New York State Society of Certified Public Accountants. [accessed 2020 Sep 14].

<https://www.nysscpa.org/news/publications/the-trusted-professional/article/rise-of-sustainability-reporting-brings-questions-of-motivation-agenda>

General Information About ORU. C2020. ORU: Oral Roberts University; [accessed 2020 Oct 24]. <https://oru.edu/news/oru-general-info-media>

kit.php#:~:text=ORU's%20mission%20is%20to%20develop,education%20to%20impact%20the%20world.

Graves ER, Hattemer GM, Stettler D, Krider JN, Chapman D. 2000. Part 637 Environmental Engineering National Engineering Handbook. Fort Worth, Texas. NRCS National Production Services. [accessed 2020 Aug 31]. <https://www.wcc.nrcs.usda.gov/ftpref/wntsc/AWM/neh637c2.pdf>

Gunder D, Bloom J. 2017. Wasted: How America is Losing Up to 40% Its Food From Farm to Fork to Landfill [Internet]. Natural Resources Defense Council, Inc., [accessed 2020 Aug 31].

Available from: <https://www.nrdc.org/sites/default/files/wasted-2017-report.pdf>

Humes Edward. 2011. Force of Nature: The Unlikely Story of Wal-Mart's Green Revolution. New York (NY): HarperCollins.

Kenton W. 2020. Triple Bottom Line (TBL). Investopedia [Internet]. [Cited 2020 May 24].

Available from: <https://www.investopedia.com/terms/t/triple-bottom-line.asp>

- Lean Path Inc. 2008. A Short Guide to Food Waste Management Best Practices [internet].  
[accessed 2020 Aug 31]. <http://20q52i29ktxt59x5rpy8lwdn.wpengine.netdna-cdn.com/wp-content/uploads/2015/11/A-Short-Guide-to-Food-Waste-Management-Best-Practices-LeanPath-2008.pdf>
- Leonard K. 2020 July 8. What Are the Differences Between Vertical & Horizontal in Strategic Management. Chron. [accessed 2020 Sept 23]. <https://smallbusiness.chron.com/differences-between-vertical-horizontal-strategic-management-24460.html#:~:text=In%20the%20vertical%20structure%2C%20decisions,usually%20based%20on%20company%20guidelines>
- Meadowcroft J. 2019. Encyclopedia Britannica [Internet]. Encyclopedia Britannica, inc; [accessed 2020 March 24]. <https://www.britannica.com/science/sustainability>
- Mendoza JMF, Gallego-Schmid A, Azapagic A. 2019. 9. A methodological framework for the implementation of circular economy thinking in higher education institutions: Toward sustainable campus management. *J Clean Prod.* 226:831-844.
- Mueller A. 2019. Creating a grassroots sustainability movement on a college campus: One student's journey of encouraging a sustainable campus at Oral Roberts University. Oral Roberts University.
- Novak A, Dautremont-Smith J. 2017. Beyond the Right Thing to Do: The Value of Sustainability in Higher Education [Internet]. Asshe.org [accessed 2020 March 25]. [https://www.aashe.org/wpcontent/uploads/2017/10/AASHE\\_2017\\_BeyondRightThingToDo\\_Brochure.pdf](https://www.aashe.org/wpcontent/uploads/2017/10/AASHE_2017_BeyondRightThingToDo_Brochure.pdf)
- Papoutsis A, Sodhi M. 2020. Does disclosure in sustainability reports indicate actual sustainability performance? *J Clean Prod.* 260. <https://doi.org/10.1016/j.jclepro.2020.121049>

- Ramisio PJ, Costa Pinto LM, Gouveia N, Costa H, Arezes D. 2019. Sustainability Strategy in Higher Education Institutions: Lessons learned from a nine-year case study. *J Clean Prod.* 222:300-309.
- Sharp L. 2002. Green campuses: the road from little victories to systemic transformation. *Int J Sustain Higher Ed.* 3(2):128-145.
- Van der Waal JW.H., Thijssen T. 2019. Corporate involvement in Sustainable Development Goals: Exploring the territory. *J Clean Prod.* 252.  
<https://doi.org/10.1016/j.jclepro.2019.119625>
- Varga VR, Lawthom R, Prowse A, Randles S, Tzoulas K. 2019. Implications of vertical policy integration for sustainable development implementation in higher education institutions. *J Clean Prod.* 235:733-740.
- Williams C. 2019. Leading Sustainable Transformation People-Planet-Profit 2019 Annual Summary. Sustainable Tulsa [Internet]. [accessed 2020 May 27].  
<https://www.sustainabletulsainc.org/wp-content/uploads/2020/04/Sustainable-Tulsa-Annual-Report.pdf>
- Williams C. 2020. Mission & History. Sustainable Tulsa [Internet] [accessed 2020 May 27].  
Available from: [sustainabletulsainc.org/mission-history/](https://www.sustainabletulsainc.org/mission-history/)
- Wilson M. 2003. Corporate Sustainability: What is it and where does it come from?. *IVEY Business Journal* March/April 2003. <https://iveybusinessjournal.com/publication/corporate-sustainability-what-is-it-and-where-does-it-come-from/>