

# EMPOWERING

Training Manual



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# **Chapter One: History – The Inception of Empowering U**

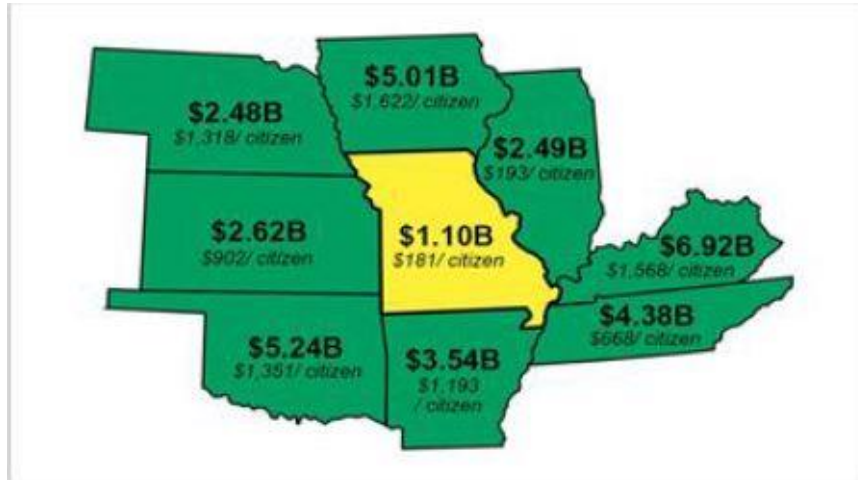
## **Background**

In the summer of 2013, Missouri Southern State University (MSSU) faced a budget deficit of \$2.3 million for the 2013-2014 fiscal year. Understanding that our reserves were being depleted and Southern was on a non-sustainable financial course, then interim President Alan Marble formed the Financial Stability Committee. The committee, charged with putting MSSU's finances on a sustainable path, was made up of two representatives from the University's Board of Governors, two members of the University's administration, two faculty, and two staff.

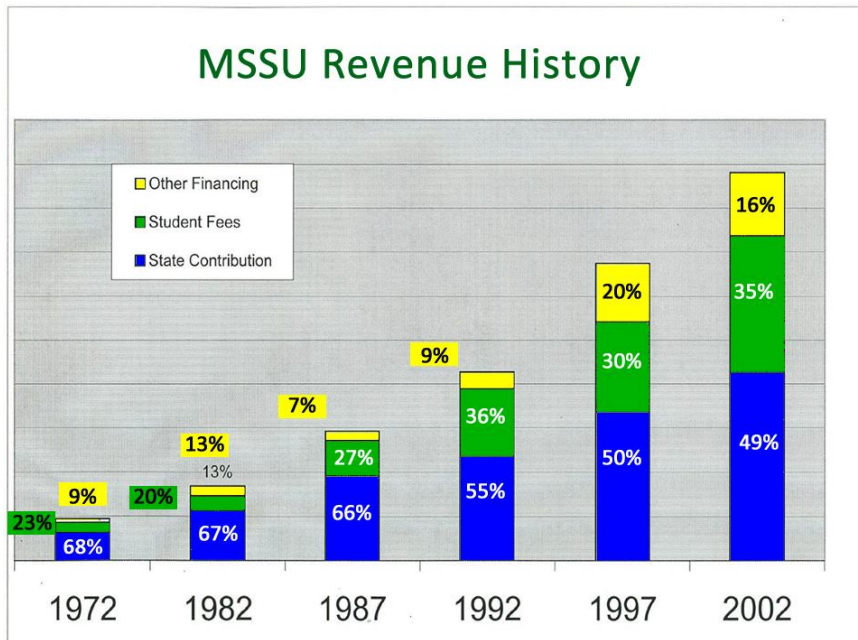
The dire financial situation the University was facing was the result of several factors. First, state funding of higher education had been declining overall and was not expected to change. In 1972, state appropriations accounted for 68% of MSSU's revenue. By 2002, those state appropriations were down to 49%, but were still significantly higher than tuition and fee revenue. In 2011-12, tuition and fees were greater than state appropriations for the first time in university history. Second, when the state passed into law Senate Bill 389 (SB389), they restricted MSSU's ability to raise tuition faster than the rate of inflation without incurring a penalty. The third factor that has impacted the University's ability to increase revenue is the decreased number of high school graduates in our enrollment area, a number that is not expected to increase in the foreseeable future. In short, Missouri Southern has been forced to move closer to a private school financial model as the state of Missouri continues to spend considerably less on higher education per citizen than any of our neighboring states. The map in Figure 1 demonstrates that the state of Missouri provides lower higher education appropriations on a per capita basis than any surrounding state. Figures 2 and 3 make clear that tuition and fees have

become a larger proportion of MSSU's operating budget over time, and that in 2011-2012, tuition and fees surpassed state appropriations, a trend that has never been reversed.

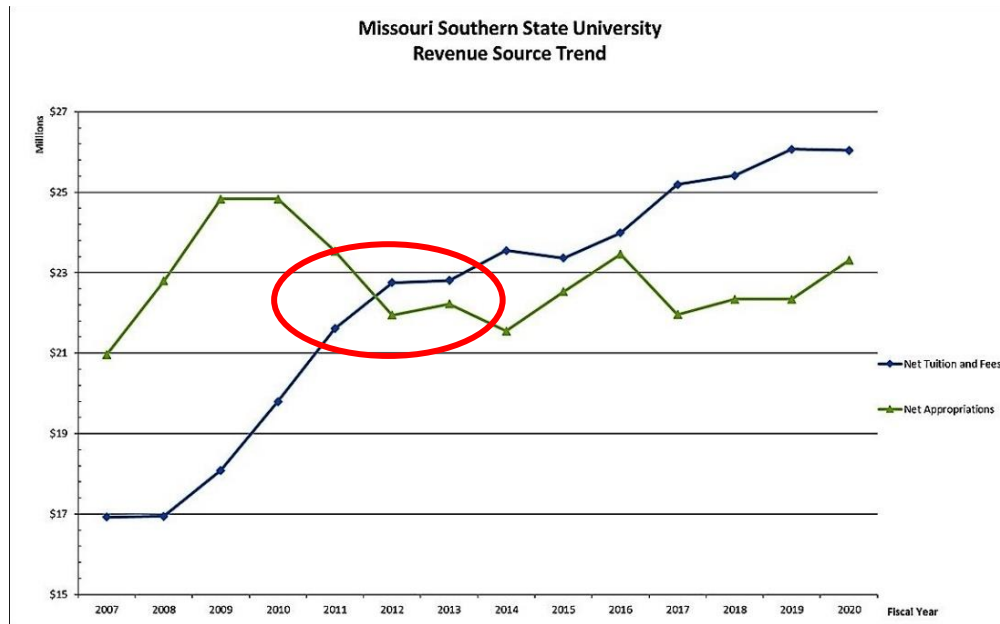
**Figure 1: 2015 Per Capita Higher Education Funding by State**



**Figure 2: MSSU Revenue History**



**Figure 3: MSSU Revenue Source Trend, Appropriations vs. Tuition and Fees**



After analyzing the University's financial situation and considering several alternatives, the Financial Stability Committee came up with the idea of applying an open-book management system, using The Great Game of Business® (GGOB) as a guide. GGOB President Rich Armstrong and his associate, Rhonda Chapman, were instrumental in helping MSSU begin implementing an open-book management system based on the book *The Great Game of Business* written by Jack Stack. We are grateful to GGOB, Armstrong, and Chapman for their assistance in starting us down the road to this groundbreaking initiative in higher education.

Throughout our implementation of open-book management at MSSU, we discovered that the system developed by The Great Game of Business® required extensive adaptation to be applied to the context of higher education. Some examples of the challenges we have faced include:

- Institutions of higher education often have multiple strategic objectives beyond financial concerns, which were the sole focus of GGOB. At MSSU, our mission is to "educate and graduate knowledgeable, responsible, successful global citizens."
- MSSU employees have several employment options, with some having 10-month contracts, making it difficult, if not impossible, to ensure participation over the summer months.
- Higher education personnel have high standards for "proof" of hypotheses. GGOB claimed "proof" of some assertions without sufficient evidence, causing a lack of interest and skepticism. Even when starting on the path of GGOB, we knew that empirical analysis and confirmation would be a cultural difference between higher education and other sectors.
- Many of the critical academic metrics in higher education are only measured once a semester or academic year, making the implementation of a 3-month minigame design difficult. As we implemented the GGOB initiative, we found a wide range of academic metrics that could be measured, with some being more dynamic (i.e., change more or less often through time) than others. The key is that many of the most critical metrics tended to be relatively static.
- Some campus employees have been put off by the game-based nomenclature of GGOB, stating "higher education is not a game." This view was another essential cultural difference between the companies successfully implementing GGOB and the academic environment. Some employees were more encouraged by the initiative's open-book management aspects, but did not care for the gamification elements. The opposite was also true for some employees.

Additionally, decades' worth of Gallup research measuring employee engagement indicates engagement in academic institutions within the lowest quartile and faculty are less engaged than staff across the board (Jaschik and Lederman, 2015). As a result of these differences, and the fact Missouri Southern had not fully implemented its open-book management initiative, we decided it was in our best interests to end our partnership with GGOB. This move allowed the University to fully adapt the concept of open-book management to fit higher education and pursue the Empowering U (E.U.) system's marketing to other institutions once it has been fully implemented.

Financial transparency is one of the fundamental concepts in open-book management. We have worked hard to translate MSSU's official, state-required financial reporting into something all employees can understand. This level of transparency allows campus personnel to explore how they can impact critical financial and student success metrics. The translating of financial reports involved developing a University Dashboard showing the University's financial status as a whole and within each unit on campus: academic, support, and auxiliary. These dashboards are now available to all employees.

Our training materials help ensure that each employee understands the University's finances and how their jobs impact those finances and other critical student success metrics. This understanding is where Process Improvement Challenges come in. Each academic and support unit on campus is empowered to determine how they can improve their critical metrics and develop challenges and dashboards that track their progress toward achieving these goals. We have an Empowering U Process Improvement Challenge subcommittee that aids in developing effective challenges, including incorporating Six Sigma process improvement methods. Units



which achieve their goals and improve their critical metrics through challenges may be selected to receive recognition and rewards. When we have everyone on campus working to improve our critical metrics, great things happen, including the Lion's Share. Based on our open-book management initiative, MSSU improved its financial health, which led to the University administration's provision of the Lion's Share, cash stipends to qualified full- and part-time employees in 2017, 2018, and 2019. Achieving financial stability was Stage One of the Empowering U initiative.

### **Further Development: Stage Two**

Given this improved financial health, and after developing the University's new strategic plan and mission to "educate and *graduate* knowledgeable, responsible, successful global citizens," the emphasis of Empowering U has moved to Stage Two: Student Success.

Every unit on campus has been asked to adopt the critical metrics expressed in the University's strategic plan sub-goal 1a: *Update and implement the strategic enrollment management plan to yield 2,000 freshmen and transfer student headcount and a 66% fall-to-fall retention rate by 2023*. In fall 2019, the University achieved a 67% fall-to-fall retention rate and continues to strive for increased retention. Also, campus units were asked to select three additional sub-goals from the strategic plan and measure progress toward achievement. Campus units chose or developed processes and initiatives linked to achieving their strategic sub-goal. This progression is ongoing until the strategic plan's objectives are met, and new goals are determined.

Empowering U is an essential part of realizing these goals.

Given the unpredictability of state funding and enrollment trends, Southern will always have to work toward maintaining financial stability. Therefore, we will have two critical metrics:

Operating Cash (a measure of economic health) and retention (strategic plan sub-goal 1a). Our new dual emphasis on student success and retention directly impacts tuition revenue and our financial stability. It also connects every unit on campus, and all of their roles and responsibilities, to one of MSSU's critical metrics. Moving to the dual critical metric arrangement is a significant improvement over the principally financially-focused GGOB.

Units have also been asked to select other key metrics and improve those metrics by using process improvement challenges. These unit-level key metrics should have a line of sight to the University's critical metrics, which means they directly or indirectly improve the performance and long-term security of MSSU.

## **Chapter Two: Critical Metrics**

### **Introduction**

The following Chapter focuses on critical metrics, and how they are used to improve University processes and outcomes. The Chapter defines what is a critical metric, explores what MSSU critical metrics are and why these metrics are used, describes where to find these metrics, and then discusses how employees can directly and indirectly impact critical metrics through Process Improvement Challenges.

### **Critical Metrics Defined**

A critical metric is an operational or financial number that represents a weakness or vulnerability that, if not addressed and corrected, will negatively impact the overall performance and long-term security of our University. Critical metrics are important because they provide focus and help you understand the need to increase revenue, contain expenses, and help students succeed, aligning closely with our institution's mission. All critical metrics share the same goal to improve the performance and long-term security of the University. While these metrics may suggest vulnerabilities, they are also areas of strength. Increasing Operating Cash means more cash on hand for infrastructure, additional human capital, educational improvements, better facilities, and competitive compensation and benefits. Increasing student retention leads to higher graduation rates and more successful students. Our critical metrics are the foundation of MSSU's vision, mission, and values. An important part of Empowering U is that we take our collective critical metrics and the critical metrics at the unit-levels and display them via dashboards. These dashboards allow us to track progress and visualize the connection to improvement strategies.

## Selecting Critical Metrics

Critical metrics are dynamic and may be changed by the University as needs and priorities change. The University works through shared governance structures such as President's Cabinet, University Council, Faculty Senate, Staff Senate, Empowering U, and various campus committees to discuss and determine when our critical metrics should change.

As we have developed the Empowering U process, we have discovered it works best in higher education if the University selects two critical metrics- one financial and another student-success oriented. For MSSU, we have determined our critical financial metric is operating cash. You can think of operating cash like a personal checking account. Money flows in and out. At MSSU, however, our cash balances fluctuate due to our enrollment periods, with more cash collected during certain times of the year. Thus, we start a semester with a high cash balance and regularly see it drop as monthly salaries, operational costs, and other expenses are paid. Capital investments, like the necessary spending on infrastructure and building maintenance and updates, also affect cash balances. Because the operating cash balance fluctuates throughout the year, month-to-month account totals cannot be compared; year-to-year operating cash needs to be compared to get a complete picture of the University's finances.

The crucial factor is that our financial reserves (think of reserves as a savings account) have been declining over the past several years. This decline is because the university expenses have often exceeded revenue, specifically because state appropriations continue to be reduced. The University estimates reserves by looking at the low balance that occurs in July or August. Operating Cash will continue to be of great importance to MSSU, as we need a strong financial foundation to carry out our mission.

Our new critical metric, which is student-oriented, focuses on retention, specifically fall-to-fall retention for each cohort of students. This second metric aligns with the University's strategic plan of purposefully growing enrollment and increasing student attainment through graduation. The University set retention as our second critical metric to reflect strategic goal 1a. More importantly, student success is the purpose of our institution. Higher education is not a business in the same way as manufacturing, sales, or service. In a 2018 *Chronicle of Higher Education* article, Freeland highlights the tension between finances and student success. Freeland (2018) notes that George Keller's vision in his 1983 book *Academic Strategy* – that universities could advance their purposes more effectively by adopting a more professional and business-oriented approach to campus leadership – has been widely accepted in higher education. However, this has led to competing and sometimes conflicting notions of higher education. Freeland states (2018),

Higher education faces a dilemma: We undoubtedly need the more sophisticated administrative leadership that George Keller called for so many years ago, including being smart about generating revenue. We also must be true to our roots in educating young people, seeking the truth, helping communities, and preserving the most important values of our culture. We need to find our way back to our academic center of gravity without losing the administrative capacities so crucial to the health of our institutions and the effective pursuit of our missions.

To this end, universities must ensure that their strategies and initiatives are driven primarily by education and social purposes, even as they tend to their financial well-being and administrative

structures. Empowering U attempts to bridge this gap by adding student success to MSSU's critical metrics and making our institution's mission the primary purpose of the initiative.

### **Using Dashboards to Measure Critical Metrics**

To help campus personnel find and measure critical metrics, the University has developed several specific dashboards. Dashboards are visual aids that encompass whatever elements are needed to represent and showcase our critical metric information accurately. The Financial Dashboard was created to help MSSU employees understand the University's finances and track operating cash. This Dashboard provides a breakdown of MSSU's financial statements by department and auxiliary units. More specific information about interpreting the financial Dashboard and the source of the financial data will be provided in Chapter Three: University Finances.

To help employees track student retention, the University created a Priority Enrollment Dashboard. This Dashboard provides the campus with the ability to track departmental enrollment during designated registration periods and track individual student data to see who has or has not continued in a specific academic program. Empowering U uses this Dashboard to track enrollment data over time and compare current enrollment periods to previous periods.

A second academic dashboard, the Retention and Graduation Dashboard, was also developed to aid student retention. This Dashboard is useful in identifying points in a program where students may be compelled to make changes to their major or program of study and identifying historical trends in enrollment and graduation. As the need arises, more University-level dashboards will be created to facilitate the tracking of critical metrics. However, in addition to campus-level

dashboards, an essential part of Empowering U is building unit-level dashboards during Process Improvement Challenges (PICs).

### **Using Critical Metrics to Help the University**

When an individual unit designs a PIC, they will choose a metric with a line of sight to one of the University's critical metrics. A dashboard should be prepared to facilitate progress tracking by the entire unit throughout the PIC. Employees can use these Dashboards to improve critical metrics department by department. By gathering with colleagues and reviewing data to identify areas for improvement, anyone can help the University focus on enhancing the University's critical metrics collectively. After identifying factors that impact one or both critical metrics, departments are then ready to plan a Process Improvement Challenge (PIC). Process Improvement Challenges, which are further explained in Chapter Four, are the primary method through which employees are empowered to improve the University.

## **Chapter Three: University Finances**

### **Introduction**

The purpose of the following Chapter is to educate employees about University finances. A central goal is to provide a broad overview of how the University generates revenue and its expenses. An employee need not be an expert in financial statements to understand the content of this Chapter, and the Chapter is written with the assumption that the reader is not an expert in the University's ongoing financial operations. The Chapter concludes by relating University finances to the University's operational goals, emphasizing student retention and graduating competent global citizens.

### **Revenue and Revenue Sources**

Revenue is the anticipated income the University uses to pay for ongoing educational activity and expenses. The University uses three primary sources of revenue to fund its ongoing educational activities and expenses.

The State of Missouri provides the first source of revenue through appropriations, given the University's status as a public institution. As noted previously, the amount of state appropriations for the ongoing expenses of the University has changed over time. However, recently, the percentage of total University revenue accounted for by state appropriations has declined, as shown in Figures 2 and 3 in Chapter One.

The second source of revenue for the University comes from external sources, both public and private, in grants, philanthropy (private giving/contributions), and investment income. Over time, the University has attempted to generate more revenue from these sources, given declines in state appropriations.



The third source of revenue for the University comes from tuition and charges paid by students who attend classes at the University. Tuition dollars are calculated by the number of student credit hours multiplied by the current tuition rate (as of 2020, the in-state/Lion Pride tuition rate per credit hour was \$248.73). When students enroll in classes each semester, they also must pay assessed charges, which fund services students utilize on-campus. These charges can also be assessed at the academic program or course level. Thus, a student may incur program or course charges in addition to those charges for University-provided student services. Per limits generated by the State of Missouri, public universities are restricted from increasing annual tuition rates above CPI (the Consumer Price Index, also known as inflation). The tuition rates charged by the University are determined by the Board of Governors and vary slightly from academic year to academic year. The University publishes its tuition rates in various contexts, both online and in the Academic Catalog. The University has differing tuition rates, varying by the type of courses a student enrolls in, whether an enrolling student is in-state or out-of-state, and other factors.

### **Important Information about Tuition**

Tuition has become the primary source of revenue for the University. It is essential to understand that tuition and charges vary and can differ from student to student. The University has both undergraduate and graduate tuition rates, as well as in-state and out-of-state tuition rates.

Students living in the Lion Pride geographic area (neighboring and select states) pay the in-state tuition rate. A student pays the tuition rate for their category multiplied by the number of credit hours they are taking. This number becomes the tuition revenue for that student. Knowing the tuition rate a student is charged is critical for understanding student enrollment's effect on tuition revenue.

Now that tuition revenue and its variations have been explained, it is important to note that in practice, students are not always charged the "official" tuition rate for the type of courses they enroll in (undergraduate vs. graduate). Put another way, the tuition rate that the University charges students is influenced by the concept of "tuition discounting."

The University offers a variety of discounts on our published tuition rate. These discounts are generally referred to as institutional scholarships; they reduce tuition for select student populations. There are several types of institutional scholarships. These include:

- **Academic achievement discounts** – students pay a reduced tuition rate given their academic achievement/excellence.
- **Athletic discounts** – students pay a reduced tuition rate given their athletic accomplishments.
- **Lion Pride Discounts** - reciprocal tuition agreements for students in neighboring states.
- **Performance discounts** – students pay a reduced tuition rate given their activities in the performing arts. For example, students participate in activities such as theatre, music, and associated academic disciplines.
- **University employee/dependents discounts** – University employees, spouses, domestic partners, or children have tuition benefits as a part of employment at MSSU.

The purpose of institutional discounts is to reduce the tuition costs for specific students to attract their enrollment at the University. Students who excel academically and athletically have talents and skills that the University values and rewards through institutional discounts.

The effect of offering institutional scholarships is to reduce the tuition rate charged to students enrolled in various courses (undergraduate vs. graduate). Thus, the University has a "sticker price" (officially published tuition price/credit hour) as well as an "actual price" (discounted tuition price/credit hour). Not all academic units at the University offer institutional discounts. Still, all academic units at the University are affected by the reductions in the price paid by students offered institutional discounts to attend the University. The goal of institutional discounts is to incentivize enrollment, with an expectation that tuition reductions will generate more tuition revenue at a lower tuition rate, given increases in student credit hours. These discounts also facilitate the ability of the University to attract the best and brightest students.

### **Paying Tuition and Other Charges**

Students at the University have a variety of ways in which they pay for tuition and other charges. One of the most common ways that students pay for tuition and charges is using financial aid. Financial aid comes in a variety of forms and from many differing sources. When students utilize financial aid to pay for tuition and charges, a third party (private or public) applies funds to the existing charges a student incurs for enrolling in classes during an academic semester. The monetary amount a student can access through financial aid varies considerably, given the student's demographic/academic background and other factors. Students can also pay for tuition and charges through institutional discounts (academic/performance scholarships). Finally, students can pay for tuition and charges through personal funds and resources provided by family and other persons.

## Revenue vs. Cash

Thus far, we have described how the University generates revenue to pay for its ongoing operating costs. However, it is crucial to distinguish between revenue and cash.

**Revenue** is generated by the anticipated (or billed) tuition and charges students incur when enrolling in classes during an academic semester. Revenue is the anticipated income, but not the actual dollars received, since some students do not pay their billed tuition and charges. For example, a student may drop a course or withdraw from Southern, leaving an unpaid balance. Thus, revenue is not equivalent to actual cash-on-hand.

**Cash** is the University's available money to pay operating costs and is generated as students pay their billed tuition and charges. Notice that the University can estimate its revenue (income), but its actual cash-on-hand to pay operating costs may be less than its estimated revenue.

## Operational Units Within the University

The University operates many kinds of organizational units. These units are generally broken into three categories:

- **Academic Units** – academic units generate student credit hours by offering courses for students to enroll. These are the units that generate tuition revenue, as discussed above.
- **Support Units** – support units do not generate student credit hours, but provide needed resources to students. Support units typically do not generate income for the University. These include the Bursar's office, the Registrar's office, ACTs, etc.

- **Auxiliary Units** – auxiliary units do not generate student credit hours. Instead, they operate by charging students for the services they provide. These include Residence Life, the Bookstore, Beimdiek Recreational Center, and the Willcoxon Health Center.

Students pay separately for the services these auxiliary units provide; thus, the unit's operational costs are not directly paid by the University. Over and above their operating costs, the cash these units generate is added to the operating cash on hand to pay for the University's ongoing operating costs.

The University generates revenue, and eventually cash, by offering student credit hours. As noted before, academic units generate student credit hours by providing courses to students. Only academic departments generate student credit hours; thus, they are the primary source of MSSU-generated revenue (and cash) outside state appropriations. There is much variability across academic units regarding the number of student credit hours they generate. Some academic departments generate more student credit hours than others, as they have higher enrollment programs. When academic departments generate more student credit hours than their operating costs, this produces a revenue surplus. When academic departments generate fewer student credit hours than their operating costs, this produces a revenue deficit. As is common for most universities, academic units that generate more revenue (via student credit hours) than their operating costs subsidize (or indirectly pay for) those academic units that generate less than their operating costs.

Additionally, all academic units subsidize the existence of support units. It is important to note that financing some units with the surplus revenue of others does not mean that these units are not valuable or necessary to the University's ongoing success. Instead, the purpose of discussing

subsidization is to recognize all units' collective activity (academic and support) as contributing to the University's ongoing financial well-being. It is important not to define an organizational unit's necessity by reference to the number of student credit hours it generates. The necessity of any given organizational unit is related to the commitments and operational goals of the University.

Moreover, Empowering U stresses intra-unit improvement and never advises comparison across units as a part of the open-book management initiative. We understand that the University administration needs to evaluate the organizational structure and efficiencies of the various units that make up MSSU, often making tough decisions. However, that process is outside of the normal function of Empowering U, and we generally do not recommend using Empowering U to compare units to each other. Instead, we invite campus-units to reflect on what they can do better, utilizing collective and department-level dashboards, combined with PICs, to create internal efficiencies, improve performance over time, and improve the University's critical metrics. Moreover, we urge inter-unit collaboration, as many campus processes often overlap and require the function of multiple campus entities.

Now that we have explained revenue (income) and identified sources of revenue, we will explain the expenses or costs of operating a university.

### **Expenses (Operational Costs)**

Broadly defined, expenses deal with the operational costs of the University. Much like any organization, the University has ongoing costs to pay for operation and provide its educational goods. Three general areas define the University's expenses:

- **Compensation** – the amount of money spent to pay faculty and staff for work at the University.
- **Benefits** – the amount of money spent to provide employee health insurance and pay for employee retirement.
- **Other expenses** – the amount of money spent on materials and supplies, utilities, contract services, travel, repair and maintenance, advertising and promotion, and other non-compensation and benefits expenditures.

The University's organizational units generate the operational costs of the University. Operating costs vary across these units. It is important to have information at the unit level to understand the University's operating costs, as these are the units that incur costs. The total operating costs of the University are calculated by aggregating the costs of individual units. The University uses the Empowering U Financial Dashboard, available on all campus desktops and via the Empowering U website, to provide financial information (revenue and costs) to personnel. Each unit on campus also has a Financial Dashboard, including all academic, support, and auxiliary units.

The University pays for operating costs with cash-on-hand. When the University's operational costs are less than cash-on-hand, the University generates a budget surplus, meaning there is more cash-on-hand than expenses needing to be paid. When the University's operating costs are more than cash-on-hand, the University generates a budget deficit, meaning there is less cash-on-hand than expenses needing to be paid.

Ideally, the University would like to operate financially where operational costs are less than cash-on-hand. If this relationship between operating expenses and cash-on-hand were to be

realized, budget surpluses would be the norm. The surplus could be a source of savings for the University. Such savings are defined as a source of University reserves. Currently, Southern's reserves target is a minimum of a \$1M increase in the available unrestricted cash-on-hand each year, as reflected in the annual Audited Financial Statements. Generating more significant reserves over time would allow the University to invest resources in new programmatic commitments, infrastructure improvements, human capital, and the Lion's Share. Generating reserves also enables the University to financially protect itself and its ongoing operations if revenue sources and cash-on-hand decline for a given period.

### **The Bottom Line**

In this Chapter, we have discussed the sources of University revenue and expense. We have identified a relationship between revenue and expense that affects University organizational units' operations and the University as a whole. Now let's clarify precisely how revenue and expense relate to one another and the University's financial "bottom line."

To help understand the relationship between revenue and expense, here is a simple example. You work a job and earn \$500 a month for your labor. We could define this \$500 as your total revenue or the total income you earned for your work. You have expenses throughout the month totaling \$400. We could define this as your total cash outlay or the total expenses you have paid throughout any given month. If we subtract your total cash outlay from your total revenue, we will arrive at your total net cash generated, or the difference between your revenue and expenses.

The example looks like this:

$$\mathbf{\$500 - \$400 = \$100}$$

**Where: Total revenue = \$500**

**Total cash outlay = \$400**



### **Total net cash generated = \$100**

While the example is simple, the same logic applies in using University unit financial dashboard information. Starting with individual University units, we can identify total revenue, total expenditure, and net cash generated are identified. As stated above, each unit on campus has a Financial Dashboard with this information displayed. The University's net cash is calculated from the aggregation of each unit's financial information (revenue and expenditure). Once aggregated, the University's revenue, expenditure, and total net cash are displayed in the Financial Dashboard. If employees understand unit-level financial information, then employees can easily understand how integrating that information on a unit-by-unit basis generates financial information for the University as a whole. Every unit's financial information flows into the University's balance sheet, and thus all units on campus can affect the critical metric of operating cash.

### **University Goals and Finances**

Throughout this Chapter, we have reinforced that the University's financial well-being is not necessarily a goal in and of itself. Instead, the University's financial health is necessary as this allows the University to achieve its self-defined goals as an educational institution. If the University's primary goals are to graduate students, an important goal would be to retain students or keep them enrolled at the University until they graduate. If students are retained, they will enroll in credit hours, generating revenue and cash for its continued operation. As students enroll and complete their degree requirements, they will ultimately graduate, helping the University to realize its primary educational goal as an institution. A by-product of retaining and graduating students is the financial health and continuing operations of the University! The same is true for student recruitment, as we need to add new cohorts of students each year.

The goal of this Chapter is to introduce employees to University finances by providing information regarding the sources of University revenues, expenses, and the relation between revenue and expense for the ongoing operations of the University. It is important to emphasize that the University exists to serve particular goals – most notably, to graduate students. A focus on University finances clarifies how the University's financial well-being is related to its existential purpose and helps reinforce the need for the dual critical metric system.

### **Using the Financial Dashboard**

The source of the University Financial Dashboard data comes from Banner and the University's financial statements. On the first of every month, the university accounting department closes the books on the previous month. This closure means that no more transactions are recorded for that month. After the closure is complete and all the transactions have been recorded, that month's information is available for the Dashboard. For example, during the first week of January, the transactions for December are finalized. Once that process is complete, the online dashboard will change to the last completed month. The University's Financial Dashboard is modeled after an income and expense statement. We have already discussed the primary sections of these types of statements above. Figure 5 is an example of the University Financial Dashboard, while Figure 6 is an example of a unit-level Financial Dashboard. When GGOB, now Empowering U, was first created, the Board of Governors established a baseline target for operating cash at the end of the fiscal year to be at least 15% of revenue. This target represents a minimum desired level of reserves – our "rainy day fund." The Financial Dashboard helps us understand what elements of the University income and expense statement impact operating cash.

Earlier, we talked about revenue as the first component of our income and expense statement. The University Financial Dashboard was built to mirror that income and expense statement, so revenue is the first section on the Dashboard. Revenue is broken up by semester and is calculated using the student credit hours formula above. The next line on the Dashboard is the total "net tuition and charges." Remember, students had institutional scholarships deducted from their bills, and net tuition and charges are what we receive after institutional discounts (scholarships) are subtracted.

The second significant section of an income and expense statement is expenses. This section is the same as the university scoreboard. The most significant expense our University has is salary and benefits. Compensations are the same as salary. We spend about 77% of our expense budget on salary and benefits. The major employee categories split the University Dashboard compensation expense, and the separate benefits section also reflects the major benefit categories. The Dashboard also contains the major operating expenses for the University. The Dashboard reflects separate categories for those expenses that equal or exceed \$500,000 in a fiscal year, while expenses that are less than that fall into the Other category.

The lines at the end of the Dashboard represent the aggregate and net numbers from the statement's inputs. Note the Education and General (E&G) Net Cash Generated section of the Dashboard. This line represents all the revenue listed above, minus all the expenses listed above; in the corporate world, it would be called "Net Income."

Now let us look at Auxiliary Net Cash Generated. This line shows the net results of the University's auxiliary operations. Remember, these include the bookstore, residence life, and the recreation center. There is also a separate Dashboard for auxiliary units that feed into the

University Dashboard, just as there is a different Dashboard for all individual campus units. Finally, Total Net Cash Generated is the net revenue from education, general activity, and auxiliary activity, after expenses have been considered.

The Unit-level and Auxiliary-level Financial Dashboard are versions of an income and expense statement broken down by campus units. Rather than present the information for the entire University, it only shows relevant data for a given unit. Units can use these Financial Dashboards to keep track of their revenues and expenses. Most importantly, they can use them to understand how they can impact the critical metric – operating cash. Again, it is essential to remember that not all campus units will have a positive Total Net Cash Generated. First, support units will most always have a negative Total Net Cash Generated, as they have expenses but do not generate student credit hours. It is also true that some academic programs will cost more to operate than the student credit hours they bring into the University. These Dashboards are not designed for intra-unit comparison, and the University recognizes that some units must subsidize others to operate as a liberal arts university.

Nevertheless, the Financial Dashboard's purpose is to allow units to see which levers they can pull to increase operating cash and track that progress. If your unit does not generate student credit hours, then focus on expenses. If your unit does generate student credit hours, you can focus on increasing revenue and decreasing expenses. Understanding the University's finances opens the books, allows us to track progress, and helps us know when the University needs to make tough financial decisions. The next Chapter will discuss the primary mechanism Empowering U uses to make a difference in our critical metrics, Process Improvement Challenges (PICs).



Figure 5: University Financial Dashboard (November 2020)

	Current Fiscal Year As of November 2020 Fall 2020, Spring 2021, Summer 2021	Previous Fiscal Year As of November 2019 Fall 2019, Spring 2020, Summer 2020	Complete Fiscal Year 2020 As of November 2020 Fall 2019, Spring 2020, Summer 2020
The Critical Number		\$12,344,484.52	\$11,954,681.00
<b>Revenue</b>			
<b>Fall</b>			
Credit Hours	56,805	63,085	63,085
Tuition Revenue	\$13,634,581.27	\$14,796,873.84	\$14,771,311.93
Distance Learning Charge	\$0.00	\$0.00	\$0.00
Less: Institutional Scholarships	(\$3,384,429.16)	(\$3,086,484.82)	(\$3,110,260.96)
<b>Net Fall Tuition and Charges</b>	<b>\$10,250,152.11</b>	<b>\$11,710,389.02</b>	<b>\$11,661,050.97</b>
<b>Spring</b>			
Credit Hours	38,826	45,563	55,199
Tuition Revenue	\$9,463,621.23	\$10,854,014.09	\$12,925,330.68
Distance Learning Charge	\$0.00	\$0.00	\$0.00
Less: Institutional Scholarships	(\$254,527.30)	(\$218,918.33)	(\$3,117,873.04)
<b>Net Spring Tuition and Charges</b>	<b>\$9,209,093.93</b>	<b>\$10,635,095.76</b>	<b>\$9,807,457.64</b>
<b>Summer</b>			
Credit Hours	10,466	9,598	10,466
Tuition Revenue	\$1,181,889.69	\$2,399,769.72	\$2,684,144.56
Distance Learning Charge	\$0.00	\$0.00	\$0.00
Less: Institutional Scholarships	\$0.00	\$0.00	(\$371,043.88)
<b>Net Summer Tuition and Charges</b>	<b>\$1,181,889.69</b>	<b>\$2,399,769.72</b>	<b>\$2,313,100.68</b>
<b>Net Undergraduate Tuition and Charges</b>	<b>\$20,641,135.73</b>	<b>\$24,745,254.50</b>	<b>\$23,781,609.29</b>
<b>Tuition and Charges</b>			
Graduate Tuition and Charges	\$497,109.60	\$532,636.85	\$607,265.77
Special Course Charges	\$630,101.96	\$728,846.38	\$828,488.80
Other Student Charges	\$734,618.24	\$779,432.05	\$848,766.48
Less: Uncollectible Revenue Estimate	(\$450,059.31)	(\$535,723.40)	(\$521,322.61)
<b>Total Net Tuition and Charges</b>	<b>\$22,052,906.22</b>	<b>\$26,250,446.38</b>	<b>\$25,544,807.73</b>
<b>Other Revenue</b>			
Appropriations	\$8,578,511.00	\$10,149,125.00	\$22,015,306.00
Grants and Contracts	\$20,692.70	\$22,406.43	\$62,108.17
Contributions	\$213,017.60	\$298,683.69	\$878,799.91
Federal Workstudy	\$52,975.96	\$66,535.05	\$170,714.80
Non-Operating and Investment Income	\$90,508.86	\$438,776.30	\$979,278.64
Miscellaneous Revenue	\$0.00	\$0.00	\$0.00
<b>Total Revenue</b>	<b>\$31,008,612.34</b>	<b>\$37,225,972.85</b>	<b>\$49,651,015.25</b>
<b>Cash Outlays</b>			
<b>Compensation</b>			
Faculty Full Time	\$4,821,048.82	\$4,969,192.68	\$14,000,352.81
Faculty Other	\$284,559.45	\$459,067.34	\$1,106,992.07
Administration	\$956,894.91	\$1,053,788.43	\$2,533,698.83
Professional Staff	\$2,335,501.90	\$2,394,627.46	\$5,799,177.22
Classified Staff	\$1,685,884.72	\$1,932,145.49	\$4,738,824.57
Student Workers	\$194,675.56	\$287,136.96	\$707,113.37
Other	\$1,072,575.67	\$1,386,743.42	\$2,054,976.81
<b>Total Compensation</b>	<b>\$11,351,141.03</b>	<b>\$12,482,701.78</b>	<b>\$30,941,135.68</b>
<b>Benefits</b>			
MOSERS Retirement	\$1,509,300.17	\$1,550,630.31	\$3,929,513.79
CURP Retirement	\$176,647.68	\$170,882.83	\$480,854.90
Social Security and Medicare	\$743,124.27	\$808,954.99	\$2,083,910.62
Health Insurance	\$1,658,922.35	\$1,649,759.26	\$3,538,257.61
Other	\$144,779.53	\$130,322.59	\$365,568.18
<b>Total Benefits</b>	<b>\$4,232,774.00</b>	<b>\$4,310,549.98</b>	<b>\$10,398,105.10</b>
<b>Total Benefits and Compensation</b>	<b>\$15,583,915.03</b>	<b>\$16,793,251.76</b>	<b>\$41,339,240.78</b>
<b>Other Cash Outlays</b>			
Materials and Supplies	\$748,999.84	\$1,607,052.58	\$2,550,361.56
Utilities	\$764,665.98	\$821,484.21	\$1,812,753.67
Contract Services	\$1,355,585.27	\$1,520,908.14	\$1,908,422.21
Travel	\$38,527.15	\$375,837.49	\$918,075.65
Repair and Maintenance	\$279,631.81	\$298,626.01	\$623,938.46
Advertising and Promotion	\$139,148.80	\$185,039.31	\$393,093.57
Principal and Interest	\$482,480.00	\$472,751.75	\$517,638.88
Other	\$2,297,961.31	\$1,877,477.63	\$3,119,604.70
<b>Total Other Cash Outlays</b>	<b>\$6,107,000.16</b>	<b>\$7,159,177.12</b>	<b>\$11,843,888.70</b>
<b>Total Cash Outlays</b>	<b>\$21,690,915.19</b>	<b>\$23,952,428.88</b>	<b>\$53,183,129.48</b>
<b>Education and General (E&amp;G) Net Cash Generated</b>	<b>\$9,317,697.15</b>	<b>\$13,273,543.97</b>	<b>(\$3,532,114.23)</b>
<b>Auxiliary Net Cash Generated*</b>	<b>\$1,286,891.86</b>	<b>\$3,074,831.14</b>	<b>(\$1,765,401.75)</b>
<b>Total Net Cash Generated</b>	<b>\$10,604,589.01</b>	<b>\$16,348,375.11</b>	<b>(\$5,297,515.98)</b>

\*See auxiliary operations scoreboard for details



Figure 6: Unit-Level Dashboard (BIO/EH, November 2020)

	Current Fiscal Year As of November 2020 Fall 2020, Spring 2021, Summer 2021		Previous Fiscal Year As of November 2019 Fall 2019, Spring 2020, Summer 2020		Complete Fiscal Year 2020 As of November 2020 Fall 2019, Spring 2020, Summer 2020	
<b>The Critical Number</b>						
<b>Revenue</b>						
<b>Fall</b>						
Credit Hours	5,162		6,393		6,393	
Tuition Revenue	\$1,239,005.52		\$1,499,507.24		\$1,496,916.81	
Distance Learning Charge	\$0.00		\$0.00		\$0.00	
Less: Institutional Scholarships	(\$295,561.81)		(\$296,049.96)		(\$298,358.09)	
<b>Net Fall Tuition and Charges</b>	<b>\$943,443.71</b>		<b>\$1,203,457.28</b>		<b>\$1,198,558.72</b>	
<b>Spring</b>						
Credit Hours	4,218		5,323		5,564	
Tuition Revenue	\$1,028,114.00		\$1,268,044.62		\$1,302,859.47	
Distance Learning Charge	\$0.00		\$0.00		\$0.00	
Less: Institutional Scholarships	(\$27,651.47)		(\$25,575.63)		(\$298,704.34)	
<b>Net Spring Tuition and Charges</b>	<b>\$1,000,462.53</b>		<b>\$1,242,468.99</b>		<b>\$1,004,135.13</b>	
<b>Summer</b>						
Credit Hours	960		975		960	
Tuition Revenue	\$108,409.53		\$243,777.40		\$246,204.74	
Distance Learning Charge	\$0.00		\$0.00		\$0.00	
Less: Institutional Scholarships	\$0.00		\$0.00		(\$33,960.84)	
<b>Net Summer Tuition and Charges</b>	<b>\$108,409.53</b>		<b>\$243,777.40</b>		<b>\$212,243.90</b>	
<b>Net Undergraduate Tuition and Charges</b>	<b>\$2,052,315.77</b>		<b>\$2,689,703.67</b>		<b>\$2,414,937.75</b>	
<b>Tuition and Charges</b>						
Graduate Tuition and Charges	\$0.00		\$0.00		\$0.00	
Special Course Charges	\$103,459.43		\$143,664.16		\$143,289.73	
Other Student Charges	\$0.00		\$0.00		\$0.00	
Less: Uncollectible Revenue Estimate	(\$43,115.50)		(\$56,667.36)		(\$51,164.55)	
<b>Total Net Tuition and Charges</b>	<b>\$2,112,659.70</b>		<b>\$2,776,700.47</b>		<b>\$2,507,062.93</b>	
<b>Other Revenue</b>						
Grants and Contracts	\$0.00		\$0.00		\$0.00	
Contributions	\$0.00		\$955.00		\$955.00	
Federal Workstudy	\$0.00		\$0.00		\$0.00	
Non-Operating and Investment Income	\$0.00		\$0.00		\$0.00	
Miscellaneous Revenue	\$0.00		\$0.00		\$0.00	
<b>Total Revenue</b>	<b>\$2,112,659.70</b>		<b>\$2,777,655.47</b>		<b>\$2,508,017.93</b>	
<b>Cash Outlays</b>						
<b>Compensation</b>						
Faculty Full Time	\$423,500.92		\$460,058.53		\$1,186,607.97	
Faculty Other	\$5,417.75		\$16,700.00		\$29,525.00	
Administration	\$0.00		\$0.00		\$0.00	
Professional Staff	\$0.00		\$0.00		\$0.00	
Classified Staff	\$11,531.37		\$10,204.96		\$27,884.74	
Student Workers	\$2,898.38		\$6,815.90		\$16,386.21	
Other	\$34,666.81		\$35,627.50		\$7,605.25	
<b>Total Compensation</b>	<b>\$478,015.23</b>		<b>\$529,406.89</b>		<b>\$1,268,009.17</b>	
<b>Benefits</b>						
MOSERS Retirement	\$42,894.42		\$39,716.70		\$98,524.92	
CURP Retirement	\$12,214.05		\$15,552.68		\$44,703.21	
Social Security and Medicare	\$28,724.53		\$32,727.36		\$89,798.06	
Health Insurance	\$64,008.81		\$61,193.46		\$154,800.77	
Other	\$6,559.80		\$7,584.47		\$2,734.21	
<b>Total Benefits</b>	<b>\$154,401.61</b>		<b>\$156,774.67</b>		<b>\$390,561.17</b>	
<b>Total Benefits and Compensation</b>	<b>\$632,416.84</b>		<b>\$686,181.56</b>		<b>\$1,658,570.34</b>	
<b>Other Cash Outlays</b>						
Materials and Supplies	\$28,831.53		\$69,112.70		\$132,159.21	
Utilities	\$0.00		\$0.00		\$0.00	
Contract Services	\$238.64		\$7,865.13		\$8,106.10	
Travel	\$0.00		\$100.00		\$1,091.01	
Repair and Maintenance	\$2,121.73		\$2,710.73		\$6,860.46	
Advertising and Promotion	\$0.00		\$0.00		\$1,484.12	
Principal and Interest						
Other	\$4,121.03		\$4,488.00		\$8,558.83	
<b>Total Other Cash Outlays</b>	<b>\$35,312.93</b>		<b>\$84,276.56</b>		<b>\$158,259.73</b>	
<b>Total Cash Outlays</b>	<b>\$667,729.77</b>		<b>\$770,458.12</b>		<b>\$1,816,830.07</b>	
<b>Education and General (E&amp;G) Net Cash Generated</b>	<b>\$1,444,929.93</b>		<b>\$2,007,197.35</b>		<b>\$691,187.86</b>	
<b>Total Net Cash Generated</b>	<b>\$1,444,929.93</b>		<b>\$2,007,197.35</b>		<b>\$691,187.86</b>	

## **Chapter Four: Process Improvement Challenges**

### **Introduction**

Now that you are familiar with the concepts of open-book management and the basics of university finances, it is time to determine what a unit can do to affect the critical metrics. A unit within the University can choose a procedure within their group that will directly or indirectly affect the critical metric. In other words, they are looking for a process that they can improve upon that will positively impact the University's critical metric(s). They then develop a procedure to enhance or alter the process. An essential part of a PIC is choosing a crucial unit-level metric that changing the process will improve. This metric should also feed into the collective critical metrics (i.e., have a line of sight to operating cash or retention). This proposed change to the process, combined with an exerted effort to choose a metric to measure, set targets, and track progress, is called a Process Improvement Challenge (PIC). It is often the case that a Challenge Leader initiates the process with input from the rest of the group. However, remember that Challenges are a group activity, and even if there is a Challenge Leader, everyone needs to be involved in the process.

This Chapter concentrates on the development and implementation of a Process Improvement Challenge. Developing and conducting a Process Improvement Challenge is a five-step process. Those steps are detailed in the rest of this Chapter.

### **Step One: Choosing a Metric**

Operating cash is an indicator of our financial health and was the University's first primary metric. Operating cash is used to pay our bills and keep the doors open (e.g., payroll, utilities, etc.). Again, the best analogy would be a checking or savings account. Most organizations (and



households) maintain a certain level of operating cash in reserve (savings). Since the University had been using reserves to help keep the doors open, the immediate need or critical metric was to improve our cash situation. Subsequently, operating cash is vital to keeping the University open, there will always be some emphasis on the financial stability of MSSU.

After the first year, when some financial stability had been achieved, a second metric was identified. Since our purpose as a university is to educate students, student success or attaining graduation is key to our survival. For students to graduate, we must retain them each semester until all degree requirements are earned. Since retention is emphasized in our new mission and student success is our institution's core purpose, the need to develop a second metric with an emphasis on student retention was established. As noted above, critical metrics are dynamic, and the University may choose new essential metrics in the future.

Based on the University's critical metrics, units need to choose a metric that they control which feeds into the top-level metrics. Finding a unit-level metric is simple, as every university function feeds into at least one of the critical metrics. Unit-level metrics are often associated with processes that produce outcomes. For example, an academic department's advising process can influence how many students are enrolled in a given major. Enrollment directly affects operating cash and retention through student credit hours and continued persistence. Improving the advising process using a PIC can impact the number of enrolled students and critical metrics. Another example can include unit-level supplies. A unit can design a new approach that reduces the cost of supplies used while retaining quality outcomes — for example, moving the distribution of documents to digital PDF instead of paper printouts. In this case, the unit can

measure the number of supplies used and the cost of those supplies. Reducing the cost of supplies reduces expenditures, which increases operating cash in the aggregate.

## **Step Two: Selecting Goals**

First, a unit should select a goal or goals for the metric. Ideally, the unit has some historical data that can be used to establish a baseline. Baseline data is fundamental in establishing the effectiveness of the Challenge.

Second, the unit should determine multiple levels of improvement that the unit would like to reach. Generally, these marks for improvement should be tiered along an increasing ladder of targets. For example, let's say an academic department was designing an enrollment challenge to increase the number of current students enrolled. Assume that the baseline percentage of students enrolled from the previous semester was 85% of the total. Knowing the baseline, this department might select three tiers of achievement intervals of 2% increases, where the first goal is 87%, the second goal is 89%, and the third goal is 91%.

Third, the unity should create a reward structure. The most important part of the process is to celebrate the team's wins! Determine rewards for the unit for achieving each of the goals set. This structure helps maintain engagement as the Challenge progresses.

Rewards should be experienced together and celebrate the Challenge's success. The incentives should be valuable to those participating in the Challenge, but not overly costly in a monetary sense. Rewards can include a unit lunch, unique group activities, or Southern-branded swag. Reward funding is available from the Empowering U Process Improvement Challenge

subcommittee through the challenge application process. Post-challenge data collection on the chosen metric is also necessary.

In the example above, if the academic department reaches its third-tier goal, they will have registered 6% more students than the previous semester. The Challenge will have increased enrollment in their classes, increased student credit hours, increased retention, and helped shore up operating cash. Moreover, the new process they implemented for registration should carry forward and increase performance long-term (Challenge Impact). Celebrating these wins highlights how Challenges and employee engagement benefit MSSU and how each campus unit can impact the bottom line by participating in activities that facilitate students' success and the overarching goals of our higher education mission.

### **Step Three: Select a Time Frame and Participants**

The participants of a challenge are usually the unit members on campus, but should include anyone who affects the metric to be improved. We also recommend inter-unit Challenges when the function of each unit overlap or share common processes on campus.

Challenges typically run between one and three months. This time frame is enough to determine if the Challenge does indeed impact the chosen metric. However, Challenge duration is inherently a function of the metric chosen to measure and how often that measure changes. In higher education, many of the metrics we want to improve do not change quickly, and thus Challenges that seek to strengthen these measures might need to be longer.

In addition to overall duration, the timing of rewards and goal levels must be determined.

Rewards must be shared and experienced as soon as a goal level has been reached. Therefore, the

development of a Check-In schedule is essential (see below). Check-In schedules are quick and organized assemblies of the unit to distribute information about the metric status in a Challenge. These Check-Ins could be a visual reminder such as a graph or chart on a video call, a quick meeting to go over the dashboard, or even an email update to the participants providing information on the process's status. The key is that campus units continue to assess their metric's status regularly in standard intervals over the Challenge's time-frame and celebrate wins when they occur. For example, if the Challenge lasts six weeks, the groups might decide to meet once every Monday for 5 minutes to report the chosen metric's status. During these Check-Ins, the group would also celebrate any milestones they have crossed along the way.

#### **Step Four: Design a Theme**

Challenges should be fun and engaging. We all know that units are busy and do not always have time for extra projects. However, Challenges are supposed to be targeted at processes we are already doing to make them better. Why not add some fun and excitement to the things we are already doing, and increase employee engagement through gamification at the same time?

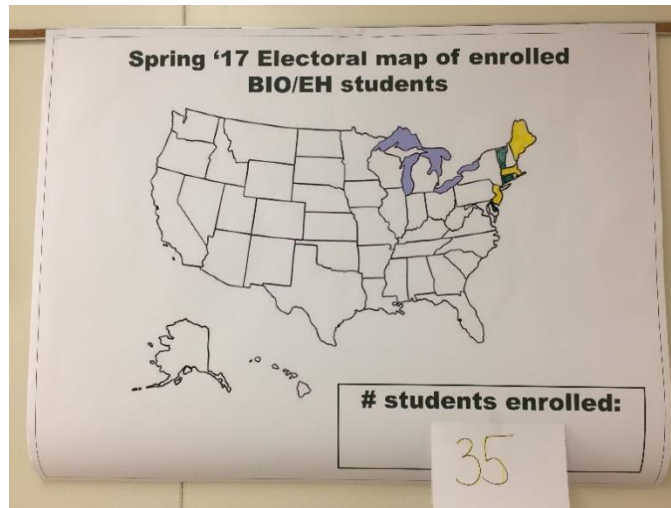
According to Robson et al. (2016), "Gamification—defined as the application of game design principles to change behavior in non-gaming contexts—is a tool that, if crafted and implemented properly, can increase engagement." Research shows that gamification can increase emotional investment in one's work, which increases engagement in the process (Kumar and Raghavendran, 2015; Robson et al., 2016). Gamification can also enhance teamwork and collaboration. This part of Empowering U is designed to be fun, create a game-like experience, and enhance essential processes to create efficiencies. Therefore, a Process Improvement Challenge should have a creative theme that pertains to the Challenge. Themes can improve engagement and accountability by providing a sense of fun. A theme-oriented dashboard in

either electronic or physical form should be created by the unit and prominently displayed during the Challenge's duration. The Dashboard serves as a constant visual reminder of the Challenge and the progress toward each goal.

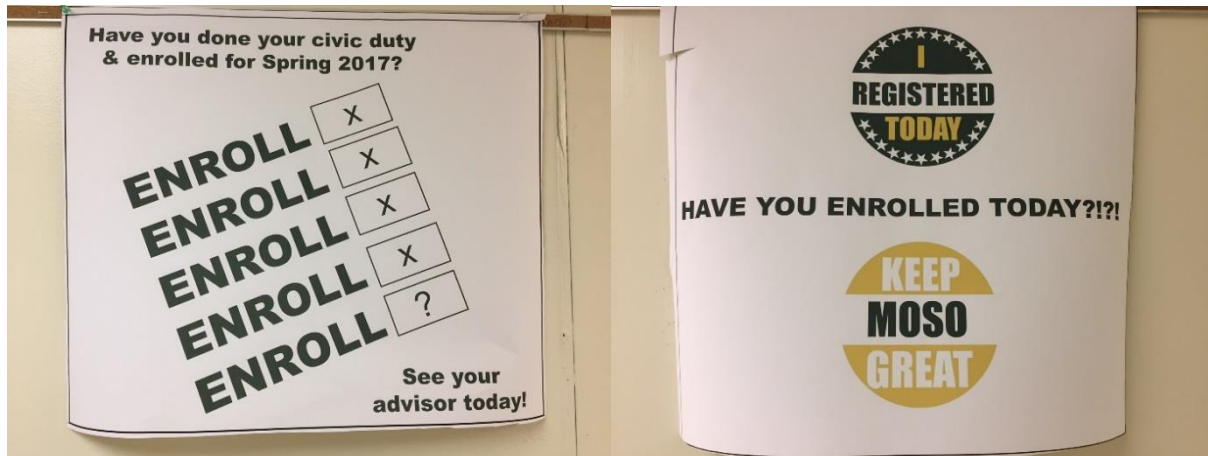
For example, in 2016, the Biology and Environmental Health (BIO/EH) department designed an advising Challenge entitled "I Registered!" The goal of the Challenge was to improve enrollment in the department. They set the top tier goal to a 90% combined enrolment rate for their academic units. They had a two-tiered goal structure with 82% as the first goal and 90% as the second goal. They also established their line of sight to the retention and operating cash. The theme of the Challenge centered around the presidential election, and their dashboard was an Electoral College Map, on which states would be filled in as enrollment increased. They created "I Registered" stickers for the students and hung signs that said "Enroll This Way" and "Have You Enrolled Today," playing on the voting theme.

The BIO/EH Challenge is an excellent example of how a Challenge can be fun and engaging. Not only did they meet their goal of 90% enrollment, but they also discovered ways to enhance their enrollment process into the future.

**Figure 7: Dashboard Example with Voting Theme**



**Figure 8: Thematic Signage**



## Step Five: Evaluate and Celebrate

All participants win or lose together, and all wins should be celebrated! Upon completion of the Challenge, a unit should take the opportunity to celebrate the milestones reached. Units should also evaluate what they learned and share ideas of ways to improve continually. If your unit didn't reach all of its goals, determine why the goals were not achieved. What needs to be addressed? The most effective Challenges will conduct a postmortem or debriefing that analyzes the parts of a process improvement that should be kept or might be discarded (see the final Chapter on assessing progress for more information).

Most importantly, reflect on your team's accomplishments and celebrate the difference you made for the University. Highlighting our collective successes and continuing to strive toward our common goals is what makes Empowering U unique. Likewise, the failure to meet a targeted goal in the Challenge is okay. Challenges are low-stakes initiatives that can lead to fantastic innovation and accomplishments. But failing to meet targets is only a minor setback, and Challenges should be conducted often as we continue to strive toward our goals. Some Challenges will make significant process changes, and others will help us learn what might not be practical process improvements. The real reward happens as we grow as a team and learn how to make our University mission come alive!

Once funding is obtained for rewards from the Process Improvement Challenge subcommittee, a Challenge Recap Form might be requested, which allows the subcommittee to update the Empowering U challenge database and share lessons learned.

## Step Six: Check-In Schedules

As noted above, brief meetings with colleagues to monitor a metric's progress are an essential part of the Challenge process. These Check-Ins occur during a Challenge and are designed to keep everyone informed of progress and strategy. When creating a Challenge and choosing a time-frame, select a regular time interval and manner for your unit to meet and discuss progress on the metric. While you might have someone who is a Challenge leader, he/she should not be the person who always reports on the progress. During Challenges, different team members should be ready to report progress in their area, tell a story behind the progress, and celebrate any improvement. Some units may choose to update the thematic dashboard at the Check-Ins.

For example, in 2018, Social Sciences designed an enrollment Challenge. The Social Sciences department has several majors under the same umbrella, including History, International and Political Affairs, Sociology, and Anthropology. The dashboard was a simple Excel spreadsheet that kept track of the percentage of total advisees enrolled by each major. The department held Check-Ins once a week during advising, and for each week, a person from each major was chosen to report that major's progress on enrollment numbers. The Check-Ins lasted no more than 10 minutes, and each point-person updated the metric (as the Challenge leader entered their progress into the dashboard). Each point-person also told a story about why the metric went up or plateaued. The department relayed information, such as the percentage of students who had a hold on their account or had not made an appointment with their adviser, and then proactively worked to get these students registered. They traded tips on increasing enrollment and contacting students. This Check-In process facilitates the Challenge and keeps the team informed.



Remember, these are *not* unit "meetings." They are not long discussions. Instead, Check-Ins are quick get-togethers where the numbers are updated, storied behind the numbers are told, and wins are celebrated.

### **The Process Improvement Challenge Subcommittee**

Now that Process Improvement Challenges have been explained and the process defined, the next step is for the university employees to determine what Process Improvement Challenges can be established to better the University's position and affect one of the two critical metrics.

Empowering U has a Process Improvement Challenge Subcommittee that will help develop these Challenges and provide valuable information regarding the process. It serves as a source for questions and examples of other departmental challenges. Be sure to reach out for help designing your Challenges and securing resources for rewards.

## **Chapter Five: Measuring Progress: Assessing Empowering U**

### **Introduction**

As discussed throughout this manual, improving and measuring progress toward critical metrics is an integral part of the Empowering U initiative. This Chapter will focus on how Missouri Southern defines and measures the efficacy of Empowering U. Just as the University chooses critical metrics for the campus to improve via Process Improvement Challenges, MSSU must also track and improve the health of MSSU's workplace culture. We also want to evaluate the robustness of Empowering U over time by testing what we call the "Challenge Impact." The Challenge Impact asserts that when a unit participates in a Challenge which improves upon a given process and increases progress toward our critical metrics, that behavior and its effects will persist after the Challenge is complete.

The first section of this Chapter will discuss how metrics are selected on campus and help you understand how you can choose useful metrics for your Challenges. The rest of the Chapter will examine how Empowering U assesses its progress and how units on campus can help with our ongoing research. Our research on Empowering U includes assessing the Challenge Impact, measuring employees' affective response to Empowering U, and tracking workplace engagement on campus.

### **Choosing What to Measure**

One of the most significant elements of Empowering U is the Critical Metric. MSSU's first metric was Operating Cash, as discussed in the Chapter on finances. Operating Cash is the University's capital on hand - sometimes called reserves - not earmarked for other purposes. We started with this metric because our University cannot effectively carry out its mission without

stable finances. The University's financial position will always be central to the Empowering U system.

Student success, however, is the primary function of our University. MSSU's Mission statement declares that we will ". . . educate and graduate knowledgeable, responsible, successful global citizens." In 2019, our campus chose retention as a parallel Critical Metric to run alongside Operating Cash. Therefore, when deciding what to measure, campus units can choose metrics that target either Operating Cash or Retention.

Critical Metrics are dynamic in the Empowering U system, which means they can change as different objectives become important to MSSU. Based on these Critical Metrics, it is up to campus units to choose specific unit-level metrics that improve upon these targets. We call this having a "line of sight".

### **Lines of Sight**

Having a "line of sight" refers to the idea that metrics chosen for Challenges have a discernable impact on the Critical Number. A unit-level metric can have a direct line of sight, meaning that an improvement in the metric clearly affects the Critical Metric. For example, suppose the chosen Critical Metric is Operating Cash, and a unit designs a Challenge to reduce overhead costs by using less electricity. In that case, cash savings can be tied directly to Operating Cash. The budget savings at the end of the fiscal year will contribute to increased Operating Cash.

Unit-level metrics can also have an indirect line of sight. For example, let's say an academic unit has decided to design a Challenge to recruit students into their program. They choose to create a recruitment process that reaches out to local high schools to distribute information about their

program at MSSU. The goal is to make meaningful connections with potential students and recruit graduating high school students. A Challenge such as this can have many measurable metrics. Still, its primary goal is to increase enrollment at MSSU, which increases tuition, which then feeds into Operating Cash, and potentially improves retention. Thus, the Challenge's objective has an indirect line of sight to one of the Critical Metrics, thus improving the University's overall net position - financially or in terms of student success.

The Empowering U system allows units to design Process Improvement Challenges centered upon virtually any unit-level metric deemed to improve the broad-based Critical Metrics. We encourage campus units to be innovative in the unit-level metrics they choose to improve or develop. While there is an application process to initiate a Challenge, this is mostly for University record-keeping and the distribution of money for Challenge incentives (see the Chapter on Challenges for more information on incentives and incentive structure). However, Empowering U does have some suggestions on choosing potential unit-level metrics.

### **Selecting Unit-Level Metrics**

When selecting a unit-level metric, it is a good idea to have a baseline. A baseline is a minimum starting point used for comparison purposes. The goal of a Process Improvement Challenge is to alter a system, or devise a new system, to produce a positive outcome, measured in terms of the unit-level metric. For example, an academic department might change the way they advise their students. Or a support unit might institute a process that improves efficiency. To measure whether or not the process improvement produced the desired change, we must measure the metric before (the baseline), during (the Challenge), and after (the Challenge Impact), the Process Improvement Challenge.

This type of research design is sometimes called the one-group pretest-posttest design (or one-shot case study). There is no control group for comparison. There is no randomization of the treatment (process improvement) between a control group and a treatment group (an experiment). Instead, we measure the same group at different points in time. Without an initial baseline for comparison, it is hard to tell whether the Challenge made the desired improvement. Empowering U encourages units to choose metrics where a benchmark or baseline is present.

It is also important to keep consistent records of the unit-level metric over regular periods when participating and designing a Challenge. The time intervals for data collection will be a function of the length of the Challenge, dynamism of the chosen metric, and should correlate with your Check-In Schedule. Recall, the Check-In Schedule is your chosen meeting structure where Challenge participants report on the process of the selected metric. If the metric is dynamic and often changes, collect data at more frequent periods. Units developing the Challenge will make these decisions in the design phase.

The chosen metric should also be valid and reliable. Validity refers to whether a metric quantifies what it claims to measure. Once you have selected a goal for your Challenge, it is crucial to choose a metric that measures the chosen goal. Metrics need to be a proxy (representation) of the area you are trying to improve with a Challenge. Reliability refers to the consistency of a given measure or metric. A metric should be consistent over time (test-retest reliability), across items or units (internal consistency), and different data collectors/researchers (inter-rater reliability). Challenge leaders need to measure the unit-level metric the same way over time to maximize reliability. For these reasons, units should keep accurate and consistent

records of the selected metric. Campus units should also choose metrics with baselines that meet these criteria.

We know that sometimes meeting these criteria might not be possible. There will be instances where baselines are not available or previous data were not reliably collected. The Empowering U process does not always reflect a well-crafted research design. There will be instances where process improvement ideas will require the collection of new data. Whenever possible, we encourage the best practices discussed above that will maximize the efficacy of a Challenge. But we also understand that practical decisions are essential, and units will do the best they can with what they have. Groups should not be discouraged from designing Challenges just because previous data are not available. A great benefit to Empowering U is that units can identify metrics they should measure via Challenges and then proceed to improve upon our measurement practices over time.

### **The Research Subcommittee Can Help!**

The Research Subcommittee is an integral part of Empowering U. Its primary goal is to track Empowering U's progress in several areas. Another function of the subcommittee is to help campus units track the progress of Challenges. The Empowering U subcommittee structure also includes the Training Subcommittee, Challenge Subcommittee, and Communication Subcommittee. Those on the Training Subcommittee design and distribute training materials, such as this manual. Those on the Challenge Subcommittee can help you design unit-level Challenges and track the various Challenges running on campus. Those on the Communication Subcommittee reach out to the campus community, keeping us aware of Empowering U's

initiatives. Those on the Research Subcommittee can help you choose metrics, test for Challenge Impact in your area, and help find campus data (including baseline data for Challenge ideas).

Empowering U can help to answer any of your questions or assist with Challenge design choices. We also have access to resources that can help with Challenge incentives. We have a budget for providing rewards for meeting Challenge objectives and a database of previous Challenges that can help design your process improvements. The Research Subcommittee is always looking for units willing to participate in studies assessing the Challenge Impact. Reach out today, and Empowering U will guide you through the process.

In addition to unit-level metrics and Critical Metrics, Empowering U also tracks several elements of the Open Book Management (OBM) culture on campus. As discussed above, MSSU's initiative is evidence-based. Rather than assert the Challenge Impact, we are developing a research design to test our hypotheses. We are also analyzing MSSU's affective response to Empowering U, as well as workplace engagement. The next few sections will discuss these ongoing research initiatives to understand how Empowering U continues to measure its effects on campus.

### **Measuring the Process Improvement Challenge (A Research Design)**

As discussed above, the Challenge Impact is the lasting behavior change that results from participating in a Process Improvement Challenge. A Challenge's function is to modify an existing process or develop a new process that increases operational efficiency and improves – directly or indirectly – MSSU's Critical Metrics. If the Challenge is successful (i.e., the unit-level metric was successfully improved), then the process improvement should lead to sustained

improvement in the metric. During a Challenge, when everyone is working together and focused on a given objective, improvement is likely.

In the social sciences, we recognize that the "Hawthorne Effect" is an issue for measuring a real change in a setting where people are being monitored. The Hawthorne Effect is a change in the behavior of individuals who are being watched, usually in the context of a research study. There is an argument to be made that this logic applies to a Challenge. Those participating in a Challenge are monitoring the behavior of themselves and others. During a Challenge, there is likely to be improved performance, regardless of the process improvement. However, the point of a Challenge is multifold. First, we want to make immediate improvements in the unit-level metric to help meet Critical Metric goals, but we also want to alter processes so that our improvements make a lasting change. To assess the former, we need good baselines, accurate record-keeping, and valid and reliable data. To evaluate the latter, we need to extend data collection beyond the Challenge and compare long-term performance to the baseline and the measurements during the Challenge.

The theoretical framework that leads us to make the Challenge Impact hypothesis is simple. Successful Challenges make changes to vital processes that improve efficiency. During the Challenge, these efficiencies become apparent, but individuals continue the behaviors even after the Challenge is over, which leads to lasting change. The post-Challenge improvements might not be as substantial as during the Challenge, but it should still be superior to the baseline. Over time, as Challenges proliferate, MSSU will reap the benefits of many process improvements that sustain our success towards meeting Critical Metric goals and allow us to shift Critical Metrics to more pressing concerns.



The next section will discuss a type of research design that can test the Challenge Impact hypothesis. While Empowering U has been on campus for several years, the Research Subcommittee has not yet launched a full-scale test of the Challenge Impact. We hope to update this manual soon with results from a pilot study on campus, following the research design below. If a unit has a Challenge idea and wants to be a part of the pilot study, they should reach out to the Empowering U Research Subcommittee.

### **The Interrupted Time Series Design (Quasi-Experimental Approach)**

The initial approach to testing the Challenge Impact will be with an interrupted time-series design. First, we choose a variable (the metric we are interested in changing) to measure. We call this the dependent variable or criterion variable in research design. Second, the variable is measured over a selected time frame. This time frame includes an interruption or intervention that affects the variable we have chosen to measure. We call this the independent variable or predictor variable in research design. As discussed above, it is important to measure the unit-level metric before, during, and after a Challenge. If done correctly, a statistical analysis can determine whether a Challenge created a discernable and substantive impact on the metric chosen. One of the benefits of this research design is that the units of analysis are the same before, during, and after the intervention, limiting confounding influences. The mitigation of all confounding influences cannot be completely assured, but we can achieve some control.

For this research design to work, units must choose a unit of measurement for the time series. The unit of time will depend on the nature of the metric being collected. Will you collect data every week? Every two weeks? For example, an advising Challenge that uses the Priority Enrollment Dashboard, and uses a metric such as the number of advisees registered by an

adviser, could technically check on progress daily. The Dashboard is updated regularly and can drill down by individual advisers. It is vital to choose a unit of time and measure the metric consistently across the selected period.

In general, Challenges should not be too short, but they should also not be too long. When choosing the Challenge's duration, you should consider the nature of the metric, how fast it changes, how long you need to make an impact, and whether you need to set deadlines or targets. Best practices also suggest that the baseline data go as far back in time as the duration of the Challenge. The post-Challenge data collection continues as far into the future as the Challenge duration. The goal is to acquire a series of data points measured consistently over a given period where the intervention/interruption occurs between the baseline and the post-Challenge data. Moreover, it is good to develop a Check-In Schedule that quickly and accurately reports how the metric changes during the Challenge.

During the Challenge, units will celebrate making strides toward the goals, often tiered throughout the Challenge (see the Chapter on Challenges). The initial goal is to reach each tiered goal and eventually overcome the Challenge a unit sets, improving the process. The Research Subcommittee can help units analyze the data once the Challenge is complete to see if the Challenge generated long-term change. Please contact the Research Subcommittee when designing a Challenge to help with data collection and testing the Challenge Impact hypothesis.

### **Evaluating the Process Improvement Challenge**

Empowering U is inherently a data-driven decision-making initiative. The same is true for evaluating Challenges. We want to keep process improvements that positively impact the unit-level metric we value while discarding changes that do not make a difference. When data is

structured, collected, and monitored properly, evaluating a Challenge is simple. Your group will have set a series of tiered goals to meet as the Challenge progressed. Did the group accomplish the goals they set forth at the beginning of the Challenge? If yes, then the Challenge was a success, and the process improvement – at least in the context of the Challenge – was successful. Celebrate this win within the group! However, as noted above, the metric still needs to be tracked into the future to ensure that the improvement continues after the Challenge is over (i.e., the Challenge Impact took effect).

There will also be instances where the group failed to meet its objectives. In this case, the group needs to conduct a postmortem. The postmortem or debriefing meeting is an open forum held after a Challenge, where your team identifies and analyzes the Challenge and what may have gone right or wrong. It is always a good idea to conduct this analysis, even with a successful Challenge. However, when a Challenge fails to meet its objectives, the group must debrief.

Ask some important questions about the Challenge and the outcome. What went right? What went wrong? Was the Challenge too short or too long? Were there ancillary benefits to the Challenge not captured by the metric chosen? Are there ways to tweak the process improvement that may yield better results? Were there exogenous factors that affected the metric chosen that did not have to do with the Challenge? It may be that the group determines that the improvement was useful even though objectives were not met. However, it may also be the case that the process improvement failed to obtain its goal and should be discarded.

The most important part of the process is conducting a basic cost-benefit analysis to determine whether the process improvement is worth retaining. It will be apparent that a difference was made in some cases, and the process should be permanently preserved. In other cases, it might be

clear that the improvement did not work. And finally, in some cases, a more nuanced analysis will be required, as each situation is different. The next several sections will discuss how Empowering U determines how the campus community views the initiative and the health of our campus's workplace engagement.

### **The Feeling Thermometer Survey**

Empowering U measures MSSU employees' feelings toward the initiative annually using a Feeling Thermometer question. Nelson (2008, p. 276) explains that

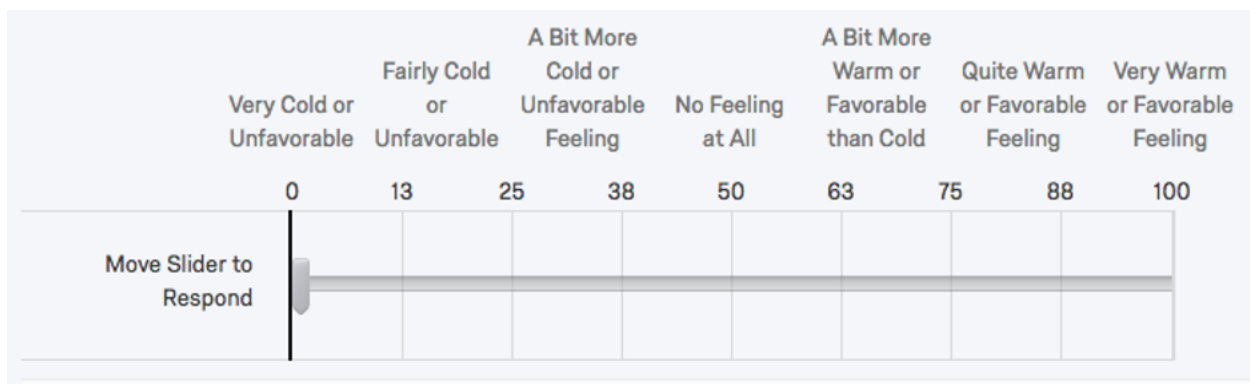
The feeling thermometer is a standard survey tool used by researchers to determine and compare respondents' feelings about a given person, group, or issue. Feeling thermometers enable respondents to express their attitudes about a person, group, or issue by applying a numeric rating of their feelings toward that person, group, or issue to an imaginary scale. Using a feeling thermometer, respondents express their feelings in terms of degrees, with their attitudes corresponding to temperatures.

The feeling thermometer allows respondents to choose a score from 0-100. A rating between 0-50 is cold and indicates that a respondent does not like the Empowering U Initiative. A score of 50 indicates neutrality. A score between 50 and 100 shows a favorable rating of the initiative. The feeling thermometer also allows for more variation than a traditional Likert scale, and its brevity is advantageous given how many surveys employees are asked to participate in per year. The question is as follows:

Using the scale below, we would like to get your feelings toward MSSU's Empowering U initiative. We would like you to rate MSSU's Empowering U initiative on something

called a Feeling Thermometer. Ratings between 50 degrees and 100 degrees mean that you feel favorable and warm toward the initiative. Ratings between 0 degrees and 50 degrees mean that you don't feel favorable toward the initiative and that you don't care too much for it. You would rate the initiative at the 50-degree mark if you don't feel particularly warm or cold toward the initiative.

**Figure 9: Feeling Thermometer Scale**

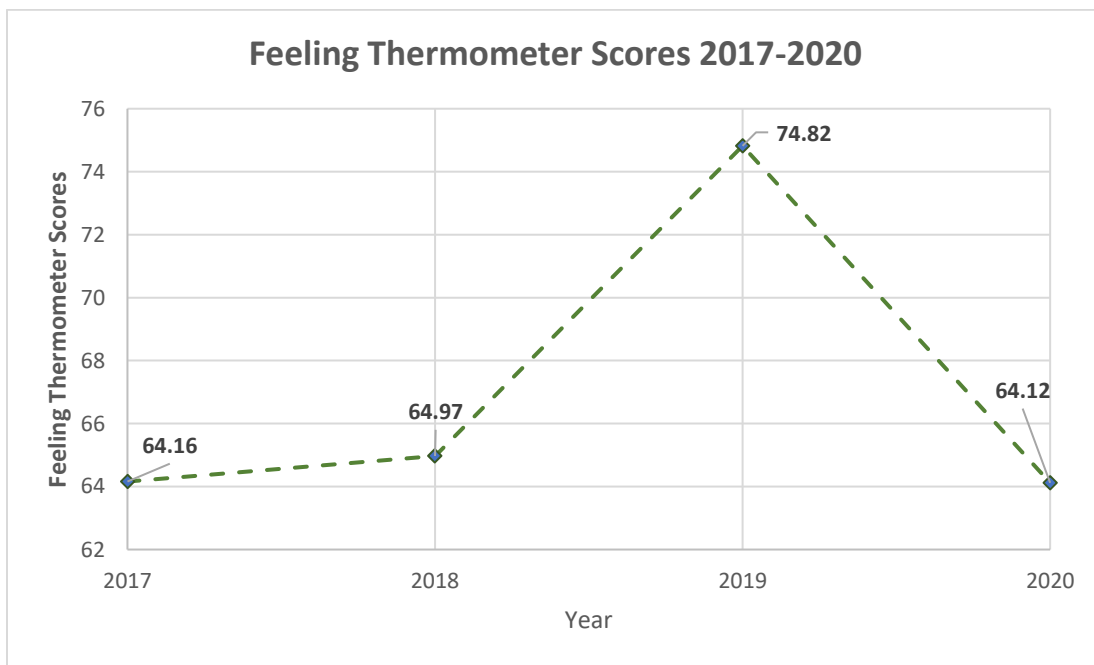


The language for the question comes directly from the American National Election Study (ANES) wording. The ANES initially developed the feeling thermometer in 1964 and continues to use it every two years in each nationally representative election survey. The question has also been used in psychology, sociology, and medical research (Nelson, 2008). The question is valuable because it allows us to gather information about the direction and the intensity of respondents' attitudes and feelings toward Empowering U. Research has also shown that feeling thermometer questions, with more variation in the response, tend to increase validity and reliability (Puhan et al., 2005; Alwin, 1997; Alwin & Krosnick, 1991).

MSSU has been tracking the affective response to Empowering U since 2017. The average score for all employees has consistently fallen within the "A Bit More Warm or Favorable than Cold"

range. However, in 2019, we experienced a 10-degree jump attributed to the successful HLC accreditation, and these levels returned to average in 2020. Figure 2 shows how MSSU has scored on this measure year over year. Each year, the Research subcommittee conducts analysis and generates a public report on MSSU's feeling thermometer scores. The report is presented to the University Council and available on MSSU's Empowering U SharePoint. The Workplace Engagement Survey is another critical analysis we conduct on an annual basis.

**Figure 10: Feeling Thermometer Scores over Time**



### Workplace Engagement

When Empowering U first began, the Research Subcommittee was tasked with four goals: (1) Measure campus knowledge of the initiative; (2) Measure our affective response toward the effort; (3) Measure Workplace Engagement and Empowering U's effect on Engagement; and (4) Test the Challenge Impact Hypothesis. We accomplished task one with a brief multiple-choice

quiz taken after an initial round of training. The feeling thermometer was devised to accomplish task two. We have already discussed the final charge of testing hypotheses drawn from the Challenge Impact framework. We will now discuss the method constructed to accomplish task three, measuring workplace engagement.

After much consideration and research, the Research Subcommittee chose the extensively peer-reviewed Utrecht Work Engagement Scale (UWES), named after the Netherlands city where it was developed. The UWES is a three-dimensional scale measuring the underlying dimensions of Engagement: (1) Vigor; (2) Dedication; and (3) Absorption. The scale is also designed to differentiate Engagement from a concept called "burnout." The scale has been translated into multiple languages and is used in a wide variety of industries, including higher education. It has been shown to be reliable and valid in many peer-reviewed analyses (Schubert-Irastorza & Fabry, 2014; Mills et al., 2012; Extremera et al., 2012; Bakker & Demerouti, 2008; Bakker, 2009; Bakker, 2011; Bakker & Bal, 2010). Although shortened scales do exist, and are often used in research, we chose the full 17-point scale for our assessment purposes.

According to the UWES manual,

Engagement is a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption. Rather than a momentary and specific state, Engagement refers to a more persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behavior. Vigor is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties. Dedication refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm,

inspiration, pride, and Challenge. Absorption is characterized by being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work. (Baker & Schaufeli, 2003/2017)

The full scale used in MSSU's survey is in Figure 3 below. In the same survey, the Research subcommittee also wanted to identify items that may correlate with workplace engagement. Based on additional research, we developed a series of questions regarding participation in Empowering U, management practices of University leadership, securing the materials employees need to work effectively, believing in the mission of the University, and selected demographics. The Research subcommittee analyzes the annually distributed survey, and a report is generated. The report is presented to the University Council and available to the entire campus on Empowering U's SharePoint site.

We currently have three years of Workplace Engagement data. Based on a large internationally normed dataset, including many industries (Bakker 2009; Bakker & Schaufeli, 2003/2017), Engagement levels are broken into the following categories: Very Low; Low; Average; High; and Very High. For the last three years (2017-2020), MSSU has scored High or Very High on all engagement factors (vigor, dedication, absorption, and total engagement). Multivariate analyses consistently show that employees who believe in the mission of the University have higher levels of Workplace Engagement. The analysis also demonstrates that when employees have opportunities to grow and learn in their careers, they have higher engagement levels.



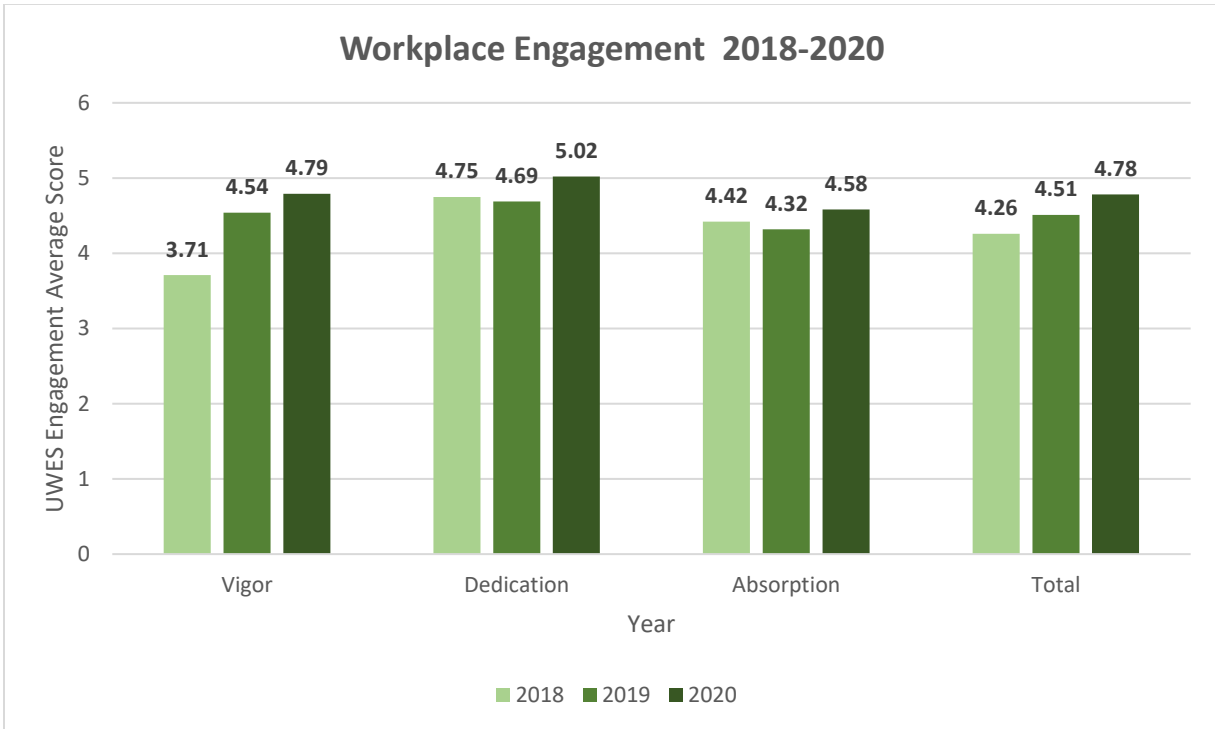
**Figure 11: UWES-17 Scale**

	Almost never	Rarely	Sometimes	Often	Very often	Always
0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

1. \_\_\_\_\_ At my work, I feel bursting with energy\* (*VI1*)
2. \_\_\_\_\_ I find the work that I do full of meaning and purpose (*DE1*)
3. \_\_\_\_\_ Time flies when I'm working (*AB1*)
4. \_\_\_\_\_ At my job, I feel strong and vigorous (*VI2*)\*
5. \_\_\_\_\_ I am enthusiastic about my job (*DE2*)\*
6. \_\_\_\_\_ When I am working, I forget everything else around me (*AB2*)
7. \_\_\_\_\_ My job inspires me (*DE3*)\*
8. \_\_\_\_\_ When I get up in the morning, I feel like going to work (*VI3*)\*
9. \_\_\_\_\_ I feel happy when I am working intensely (*AB3*)\*
10. \_\_\_\_\_ I am proud on the work that I do (*DE4*)\*
11. \_\_\_\_\_ I am immersed in my work (*AB4*)\*
12. \_\_\_\_\_ I can continue working for very long periods at a time (*VI4*)
13. \_\_\_\_\_ To me, my job is challenging (*DE5*)
14. \_\_\_\_\_ I get carried away when I'm working (*AB5*)\*
15. \_\_\_\_\_ At my job, I am very resilient, mentally (*VI5*)
16. \_\_\_\_\_ It is difficult to detach myself from my job (*AB6*)
17. \_\_\_\_\_ At my work I always persevere, even when things do not go well (*VI6*)

\* Shortened version (UWES-9); VI= vigor; DE = dedication; AB = absorption

**Figure 12: MSSU Workplace Engagement Over Time**



MSSU and Empowering U continue to work toward helping our campus achieve higher levels of Workplace Engagement. We know that high engagement levels are correlated with higher job satisfaction and decreased turnover (Bakker & Schaufeli, 2003/2017). We also know that "Work engagement is positively associated with job characteristics that might be labeled as resources, motivators or energizers, such as social support from co-workers and one's superior, performance feedback, coaching, job autonomy, task variety, and training facilities" (Bakker & Schaufeli, 2003/2017). The Empowering U initiative positively impacts all of these areas. We have resources for Challenges that can help make positive improvements in campus efficiency. At its core, Empowering U is fundamentally a motivation and support program built on transparency and open-book management. We know that when the campus comes together and mobilizes its efforts, amazing things are possible.

## Conclusion

This Chapter has introduced how Empowering U handles metrics and measurements. It has also discussed the many ways that Empowering U tracks its success and the health of the initiative on campus. We want to stress that the Committee and all of its Subcommittees are here to help. Empowering U has become an integral part of the shared governance structure at MSSU. Our meetings are open to everyone, and attendance and participation are highly encouraged. Do not hesitate to ask for help and apply for resources. Through Empowering U, we can continue to forge ahead with our mission to "educate and graduate knowledgeable, responsible, successful global citizens."

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