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COVID-19: FORCING A TOUGH DECISION FOR THE OFFICE OF DECISION SUPPORT AT THE UNIVERSITY OF SOUTH FLORIDA¹

Can we ever be prepared for an **unexpected event**, a "**Black Swan**", and can a tough decision define an academic institution?

Dr. Garcia was on track with scheduled planning for the 2020-21 academic year as her team of analysts prepared analyses, dashboards, and other analytical materials for constituents across the university. Mid-March 2020, an unexpected turn of events occurred, the "Black Swan" event, COVID-19. Government bodies reacted to the pandemic, implementing tactics to control the spread of the virus. As spring classes shifted to online for the remainder of the semester and summer classes were transitioned to only online, USF leadership was challenged with pivoting decision-making while considering the best interest of the community.

Dr. Garcia and her leadership team were faced with many complex issues as the spring semester neared completion and summer was scheduled to start. One of which was deciding how ODS would report and analyze enrollment and student success related data for the summer and fall term of 2020. Given the external factors forcing the shift of the student body from traditional face-to-face instruction to fully online, Dr. Garcia and team had to address the implications of reporting both internally and for state and federal reporting. Following the stay at home orders due to the pandemic, analyses in the spring and summer semesters had to be altered to be more real time given the importance of understanding downstream reporting implications and ways to support the university. COVID-19 proved to disrupt numerous facets of daily operations in ODS, particularly in terms of data analyses.

The other major disruption the pandemic caused, and Dr. Garcia had to address was the impacts to data and information governance which was very important to maintain an engaged USF during the COVID-19 crisis. Changes to student behaviors, enrollment patterns, and student success metrics all resulted in new data sources and access to data of interest to the university community.

Dr. Garcia needed to know what reporting implications there would be because the student body was moved to online classes. How would Dr. Garcia formulate a decision regarding monitoring and reporting of enrollment numbers for fall 2020? Would the decision be influenced by federal and state officials input on reporting guidelines? Would the decision be constrained to just a short-term issue to solve or a long-term policy to monitor?

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The Industry Called Academia

"The University of South Florida, a preeminent state research university, located in the heart of Tampa Bay, was designated by the Florida Board of Governors" (University of South Florida, About Page, 2019). Established in 1956, USF was a leader among young universities. (University of South Florida, About Page, 2019). In 2018, USF reached the top 25 public universities for research expenditure and 42nd in the nation overall among public and private universities. With total research expenditures of \$592 million in 2017-2018, USF was at the forefront of cutting-edge research of medicine, science, engineering, the arts and more.

"Public colleges and universities receive more of, and rely heavily on, state funds than private schools. Tuition for a public university or college will cost significantly less than a privately funded university or college if you attend a college in your state" (Colleges In Florida, 2020). Attending a public college in a different state of a student's residency, can cause a student to lose the in-state tuition benefit (See Exhibit 4). "Public universities lean towards being considerably larger than private institutions. Some public colleges may have over sixty thousand undergraduate students enrolled. These larger numbers can mean that classes will have more students, however, the student body usually had more classes to choose from. Public colleges and universities tend to have a plethora of degree options as well" (Colleges In Florida, 2020). Colleges and universities across the U.S. have been affected by COVID-19 (See Exhibit 1).

"Private universities and colleges receive funding from tuition, alumni, friend donations, and endowment. Most tend to cost significantly more than a public institution, but the tuition cost will vary depending on the university or college. Generally smaller than a public institution, a private college or university will have smaller classes and fewer courses offered. The institution will likely offer only a few degrees, often in a specialized area" (Colleges In Florida, 2020).

At last count, 4,235 higher education institutions across the United States had been impacted by the coronavirus pandemic — affecting an estimated 25,798,790 students, according to a visualization from Entangled Solutions (Kelley, 2020).

COVID-19: America Locked Down

In mid-May of 2020, President Trump, along with unanimous agreement from all fifty Governors' of the U.S., mandated that the citizens of the U.S. take precaution and practice social distancing, and implemented stay-at-home policies. The "Safe-at-Home" approach was a method that created a self-quarantined populace and was required for all the U.S. population not classified as essential workers. Students across the country from kindergarten through the university level were forced to transition to remote instruction until further notice. Workers across many industries were laid-off or furloughed. Workers that had the capability to work remotely were forced to do so. COVID-19 had a global and U.S. impact (See Exhibit 3). COVID-19 caused an unprecedented response that had never been seen.

Many Colleges and Universities already had on-line class capabilities, but many classes included labs and other applied classes that needed to be face-to-face. Also, many undergraduate students sought the onsite campus life and the personal touch that face-to-face classes offered. COVID-19's impact on colleges and universities was multi-layered and complicated. In the area of enrollment applications and admission processes, including tuition, student loans or instruction, COVID-19 made a significant, and lasting impact on the academic world. Urban commuter schools were thought to be best positioned to survive the many challenges caused by COVID-19. Gil Gibori, CEO and founder of The House Tutoring Lounge, stated "Living at home while attending schools with limited-sized classes may become a much more

palatable option for parents afraid to send their children to live in densely populated campus dorms" (Colleges In Florida, 2020). With all of the changes to the academic policies, it was expected to see that many of the students that were excited to be accepted to their college or university to elect to take a gap year in their academic career (DePietro, 2020).

The college long-term admissions process was more complicated, due to online tests, online schooling, and changed to conditions. Parents were in tougher positions, for example, affording tuition fees due to having been laid off or furloughed. "On the other hand, history showed that there was a tendency for the number of student enrollments to go up in recession times as they try to 'wait it out' so to speak with a hope that once recession is over, the job market will look much better" (DePietro, 2020).

The mandatory change to online learning had been challenging for many colleges, particularly those college campuses that boasted an emphasis on an intimate college experience. "With campus closures, colleges had lost the opportunity to engage with potential students through on-campus events, such as open houses. Given the large number of international students who attend U.S. colleges and universities, there are many unknowns planned for the fall semester. Time zone differences for many international students affected how they were able to participate in online classes in real time" (DePietro, 2020).

International students tended to pay a higher tuition costs than students that were American citizens. Enforced Visa restrictions for international students made it so that they were not able to come to campus or attend class. Their nonattendance meant a loss of tuition revenue. "While some schools might choose to offer a delayed start to those students, the students' ability to return will depend on whether the State Department starts accepting routine visa appointments. Even if the State Department did start accepting visa appointments, there was no guarantee those students would still choose to come to the U.S" (DePietro, 2020). Many international students typically paid full tuition and many institutions came to rely on the revenue generated by the international student base. If these international students are prohibited from entering the United States they may be hesitant to even try to come the United States and many colleges and universities can lose substantial tuition funding (DePietro, 2020).

COVID-19 had changed the complexion of fundraising for numerous colleges and universities. The most affluent donors would not feel fiscal burdens as much as others, but there would be a decline in gifts from alumni and parents who tend to make smaller contributions. The twenty-five dollar and one hundred-dollar donations, albeit smaller amounts, when combined, those smaller amounts total to millions of dollars and can account for upwards of five percent of an institution's annual revenue.

There was criticism against large endowments, because endowments can grow, and people sensed that this meant that there were billions of dollars on hand to reimburse the loss of tuition, housing, donations and other resources of revenue. "That meant colleges and universities will have to work harder to educate their constituents about how endowments work, why they are not the same as savings or emergency accounts, and what the long-term dangers are of pulling too much money out of them too quickly" (DePietro, 2020).

Office of Decision Support (USF)

The USF Office Decision Support (ODS) operated under the leadership of Dr. Ralph Wilcox, Provost and Executive Vice President of Academic Affairs and Dr. Theresa Chisolm, Vice Provost for Strategic Planning, Performance and Accountability. The office had been led by Associate Vice President, Dr.

Valeria Garcia. Dr. Valeria Garcia, AVP for the Office of Decision Support (ODS), at the University of South Florida (USF), a member of the Academic Affairs leadership team and has been involved in academic and student success continuation planning.

The Student Success Research & Analytics unit (SSRA), which fell under ODS, provided campus-wide support by providing wide-ranging, all-inclusive information about USF. "SSRA collaboratively monitored and supported the core vision of USF through the collection, analysis, and dissemination of data for use in institutional planning, policy development, governmental reporting, and strategic decision-making processes (See Exhibit 5). SSRA would strive to ensure accuracy, reliability, and validity in data that is easily understood, informative, and accessible" (USF_IRA, 2019). The SSRA unit provided integral support for the university Data Governance program co-led by Dr. Garcia.

As lead for one of USF's central support units, Dr. Garcia's priority was to continue to advance a campus culture of analytics, data, and information at USF. Second, Dr. Garcia led a unit that served as a core service unit that supported a successful consolidation process, ensuring efficiency and integrity in data reporting and timeliness of deliverables. Finally, Dr. Garcia had helped to establish a robust Information and Data Governance program at USF, alongside key partners, that had helped to shape the culture of data and analytics at USF.

Data Analytics & Reporting

Data analytics and reporting underpins the core functions of the SSRA unit. SSRA had provided decision makers with datasets and analytical reports to support planning, as well as developed performance reports relating to accountability measures consistent with the USF strategic plan. The SSRA unit also designed, implemented and/or supported periodic and recurring institutional research inquires. As a part of a central support function, the SSRA unit supported all USF campuses (Tampa, St. Petersburg, Sarasota-Manatee) by collected, analyzed, and interpreted meaningful information for the multi-campus university. A multi-campus university is a singularly accredited university with multiple campuses. The SSRA unit, along with the entire ODS, archived institutional reports, while they also provided various analytical interpretations and reporting for deliverables such as, College Review, Accountability Plan, National Student Clearinghouse (NSC), Graduation, Persistence, Retention, Enrollment Planning and Management reports, and Student Achievement Measure (SAM).

Technology served as a key resource in being able to quickly address the changing dynamics, the decision to transition to online class delivery, and how enrollment and student success analyses would be monitored and analyzed. The normal approach to analyses in ODS is through the establishment of systematic process to be done on a periodic basis depending on the data.

State & Federal Reporting

State and federal reporting is a very important function of the SSRA unit. The SSRA unit responds to state and federal reporting requirements in a timely and accurate manner, while also directing the development, enhancement, maintenance and submission of several state file submissions and reports. The SSRA unit collaborates and coordinates with departments across the university on various efforts. Under the state and federal reporting function, the SSRA unit had developed audit procedures to catch anomalies and established standards. Under the state and federal reporting functionality the SSRA unit reviews file outcomes and trends for reasonableness and accuracy to preserve data integrity. State and federal reporting ensures compliance with federal, state, and university system guidelines.

Data Governance

Data governance, by definition according to search data management, "is the process of managing the availability, usability, integrity and security of the data in enterprise systems, based on internal data standards and policies that also control data usage" (Rouse, 2020). A good data governance process makes sure that data is consistent and trustworthy and does not get distorted. "A well-designed data governance program typically includes a governance team, a steering committee that acts as the governing body, and a group of data steward" (Rouse, 2020)s. Data governance is important to corporations, including academic entities. (See Exhibit 6).

A lack of valuable data governance can cause data discrepancies in various systems across an entity and then, data integrity issues can become pervasive affecting the accuracy of reporting. The aim of data governance was to normalize the data in the USF systems through a collaborative process, with stakeholders from the various academic units participating. A data governance goal was to confirm data was used properly. Ensuring proper use helped to avoid introducing data errors into systems and to helped prevent potential misuse of data. Data governance can provide better and more accurate analytics while also providing sound compliance benefits. Data governance also provided improved data quality, along with lower data management costs. An improvement to decision-making can be accomplished through data governance by giving leaders and managers better information.

A range of people can and should be involved in a data governance program. At USF Dr. Garcia had been integral to establishing a robust Information and Data Governance program, alongside other key partners. The success of the program to date is attributable to deliberate membership of the core team, a structured charter with goals, and university leadership support.

ODS Information & Data Governance Challenge

During the time of quarantine, there were challenges due to the many additional and unplanned support efforts asked of the Office of Decision Support (ODS). Decision-making during times of uncertainty are difficult but necessary. COVID-19 had caused everyone to rethink the work they do and how the work was done, and for ODS, this included the work in establishing and sustaining an Information & Data Governance program that was still in a relative state of infancy. Many times, the beginning or early stages in data governance efforts could be tough because it was typical that different parts of ODS had shifting views of key decision makers regarding the data units. By agreeing on the common data designations and designs, the ODS differences were to be resolved through the data governance process.

The year leading up to the COVID-19 impacts to the world, had been fruitful for Dr. Garcia and the colleagues she collaborated with to stand up the program. They had been successful of being formally recognized and supported by senior leadership, established a standing committee, completed a charter, and had made good headway on various initiatives established. The effects of an Information and Data Governance program at USF during the time of the COVID-19 crisis will be longstanding as we attempt to establish a new understanding of expanding use of data to inform decision-making. With changed student behaviors in course taking and engagement, new sources of data and access to these data sets had begun to be sought after, and presented new challenges for data governance processes.

May 2020 Message from USF President

In a statement from the USF President Steven C. Currall, he mentioned that USF had every intention of resuming face-to-face instruction and some activities during the fall, with modifications and precautions

designed to support high-quality academic instruction and student success while maintaining health and safety. These precautions will include but may not be limited to; requiring face coverings, limiting the number of individuals gathered in any one area, enhanced cleaning, and leveraging available testing and contact-tracing resources. We were also likely to continue to provide some instruction or operations remotely (See Exhibit 2).

June 2020 Message from USF President

"It was announced that USF will move into phase I beginning on Monday, June 15. If considered appropriate, USF will monitor information over the next few weeks of June 2020, with the goal of advancing to phase II beginning on June 29. The intention of USF is to reach phase III in time for the start of the fall semester" (Staff, 2020).

USF plans for (phase I) included all course instruction to continue remotely, all individuals who could work remotely, continued remote work. No more than twenty-five percent of employees should be on campus, no events or meetings should have been held in person, and common areas and gathering spaces remain closed.

The plans for the USF campus environment in (phase II) included, all instruction be continued and provided remotely. "Small pilot programs with in-person instruction may be launched in the second part of the summer session. All individuals who can work remotely should continue remote work, there should be no more than 50% of employees on campus. Some small, in-person meetings or events may resume, though most should continue virtually" (Staff, 2020).

The Decision

The decision and details of what fall 2020 instruction would look like at The University of South Florida was still undergoing discussion and analysis. Many influences and variables were in play that had yet to be finalized by leadership across USF.

Decision 1: With changing student behaviors in course taking and engagement, new sources of data and access to data sets had begun to be sought after and presented new challenges for data governance processes. What needed to be done with statistics regarding campus life? On-line classes for all were temporary but there was a shift for all on-line after the Thanksgiving break for the December classes. How was data governance affected regarding statistics?

Decision 2: What new data sources and needs had arisen from the changing behaviors and tracking reacting to the decision of returning to campus and continuation of instruction? State and federal government made some decisions regarding allowing students to graduate in May 2020 with modified school schedules regarding being all on-line. Plus, there was a cancellation of the April and May SAT/ACT exams along with many local cancellations for June. Would this create a data governance challenge as to vetted student credentials for Fall 2020 Enrollment.

Decision 3: Were these data sources to be managed, protected, and provisioned? Many dashboards and analytic analysis were provided to The University of South Florida's executive committee with data sets that now had different meanings and results that they used to have.

Decision 4: How will the university continue to protect data which is one of its most valuable assets? Having to do deeper collaboration with state and federal agencies along with other academic institutions

can create an issue with protecting private information. Will Dr. Garcia's team need to focus resources from different departments now that certain data holds different relevance?

Decision 5: What ethical decisions were to be introduced or required revisiting as part of the data and information governance program? With the SAT/ACT scores not weighed as heavy for the Fall 2020 enrollment, how did The University of South Florida solve tough decisions regarding student acceptance.

Biography



James Farley is a professional in finance and analytics. James has an MBA in finance with over twenty years of experience. James had worked at various Hedge Funds and Investment Banks. James also has an MS in Business Analytics from the University of South Florida and currently works in the Student Success Research & Analytics department at USF. James works on analytics and dashboards and presents data regarding student success. The long-term pursuit for James is a career in academia.

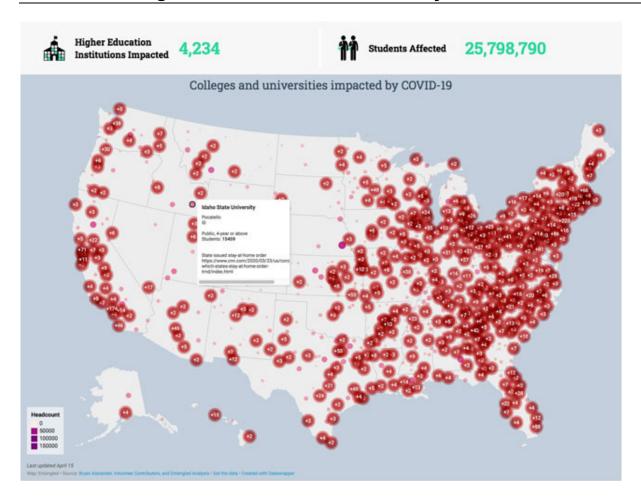
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Acknowledgements

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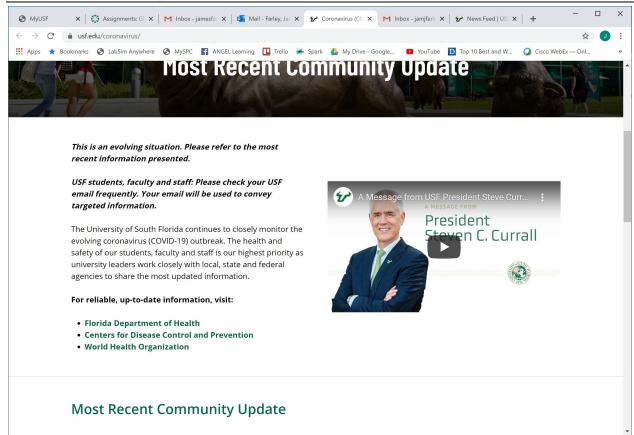
Exhibit 1: Colleges and Universities Affected by COVID-19



Source: campustechnology.com web site

Screenshot of COVID-19 Impact Map, as of April 16, 2020

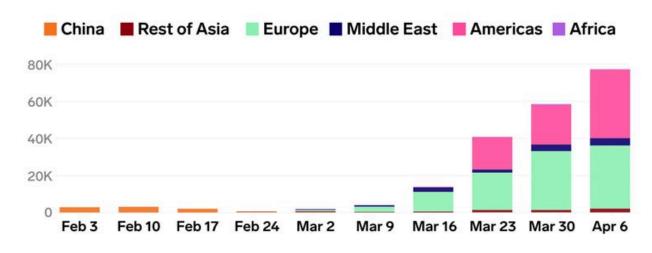
Exhibit 2: Message from President Steve Currall



Source: https://www.usf.edu/coronavirus/

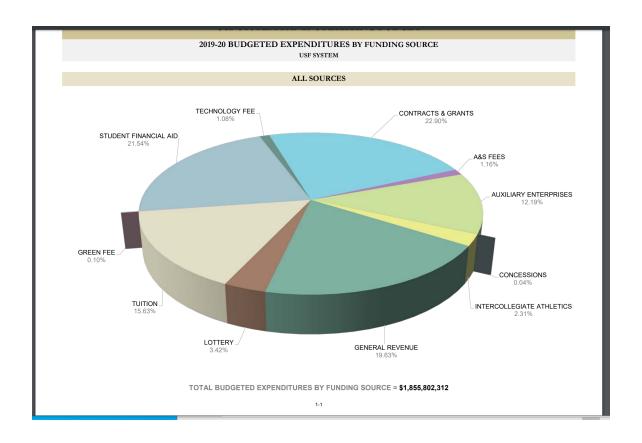
Exhibit 3: Daily COVID-19 Cases Feb. 3, 2020 thru April 6, 2020

Daily new COVID-19 cases



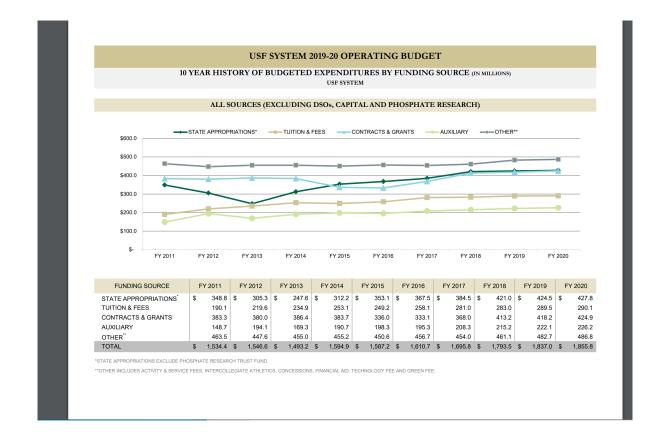
Source: www.businessinsider.com

Exhibit 4: Pie-Chart of USF Budget Expenditures



Source: https://www.usf.edu/business-finance/resource-management-analysis/documents/operating-budget-19-20.pdf

Exhibit 5: USF System 2019-2020 Operating Budget



Source: https://www.usf.edu/business-finance/resource-management-analysis/documents/operating-budget-19-20.pdf

Exhibit 6: Why Organizations Need to Govern Data



Source - https://searchdatamanagement.techtarget.com/definition/data-governance#:~:text=Data%20governance%20(DG)%20is%20the,and%20doesn't%20get%20misused.