Lessons Learned During Turbulent Times to Weather and Thrive in the Storm of COVID-19

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Abstract

This article describes the lessons learned by our university during the global healthcare crisis of COVID-19. It highlights the agile solutions employed to continue learning under extraordinary circumstances. While we have captured the stories that allowed our students to power through this tumultuous period if they so desired, these lessons may also provide guidance to other higher education institutions not only for the current turbulent times, but also enhance their ability to pause and pivot by utilizing agile management to weather this and future storms.

Keywords: Agile management; higher education; COVID-19; strategic partners; future business

1. Introduction

1.1 Background

The University is a four-year regional institution that sits in a rural northwest area of the state of Louisiana. It and all its assets relating to the agile management process which is a business within the University system and its role to the students (future business leaders), our business partners, and the town. The classes are our product, and the students are our customers. The strategic partners, our advisory boards, provide the latest skills and technology needed, which puts our students at the top of the hiring pools. The ongoing relationship with these partners helps our students obtain employment after graduation (Prejean, Liao, Aldredge, Parker, & Kilcoyne, 2020).

1.2 Problem Statement

During the COVID-19 pandemic, universities were forced to continually pause and pivot to meet the demands of the university - the class, the students, the employers, the frontline workers (our faculty) (Jackson, 2020a). How can universities achieve this goal during the turbulent times while facing uncertainties and fast changes? As many businesses have already embraced agile to meet their customers' demands from a fast-changing market, universities can also weather and thrive the storm of COVID-19 through agile management.

2. Literature Review

2.1 What is Agile Management

Agile management is about adjusting to any situation quickly using teams to provide innovative` solutions to problems. Agile management relates to the quick response between business, industry, and education to the many challenges and changes daily in the corporate climate. The concept is used in organizations by identifying three core characteristics: the law of the small team, the law of the customer, and the network (Denning, 2018). Livorsky (2016) stated that agility at a leadership level is a mindset that facilitates rapid growth and the adoption of key business strategies giving leaders the ability to adapt to change while remaining resilient and learn from their experiences. In this reality, education and industry must work together to provide the right talent to enhance the workforce (Prejean, 2017).

It can be "an approach, a method, a practice, a technique, or a framework," depending on the situation where it is used (Project Management Institute, 2017). Since agile teams run more efficiently, there is more time to work on quality defects and low-value product features, which increase revenue (Rigby, et al., 2016, Prejean, et al., 2019). Surveys by Deloitte and McKinsey show that more than 90% of senior executives give high priority to becoming agile, while less than 10% see their firm as currently highly agile (Denning, 2019). In a recent poll by Gallup, a global analytic and advice firm, eighty stakeholders and other leaders in industries were interviewed to identify agility aspects, which helped employees identify their organization with the term agile. They also interviewed 5500 American 4,000 European workers to determine their perception of agility in their organization. (Nink, 2019). The results identified eight factors driving skill in business as follows:

Figure 1. Factors That Drive Agility (Nink, 2019, p.1)

Most companies use scrum teams, Kanban, and work sprints for discrete projects and seldom employ the concept in the company's overall management. The Gallop Poll survey concluded that the cultural and process fundamentals needed to support agile frameworks are scarce in many companies (Nink, 2019). An Economist survey found that 90% of managers interviewed believed that agility was important to performance today (Barrows & Neely, 2019). The authors propose a four-step process called the Fast Cycle Performance as follows:

> Step 1. Modeling Performance Transform strategic planning into a dynamic process referencing Michael Porter's 1996 process of the activity map to show how business activities relate to each other.
> Step 2. Managing Projects: Create clear business cases for the project linking to strategic objectives and manage them efficiently with accountability.
> Step 3. Measuring Progress. Leaders need to summarize project plans, critical objectives, and review critical milestones with leaders regularly – ideally monthly to improve organizational agility.
> Step 4: Make rapid decisions based on improved processes developed in steps one through three. (Barrows & Neely, 2019).

Expanding on these concepts, it is essential to find all strengths and remove weaknesses in the organization. Ensure that all crucial information of projects is shared daily, keeping the group on schedule, and ensuring cohesion. When organizations need to make quick adjustments to priorities or essential tasks, agile methodology is vital. The agile approach ensures optimal use of all resources and helps you to eliminate issues during the process (Nedelkovic, 2020).

Business agility is a company's ability to adapt and respond to changes. Sullivan (2020) defined agility as:
- Being more than just fast
- Being nimble, flexible, adaptable, and responsive

- Being able to shift direction
- Anticipating a range of possible events
- Dealing with multiple fluctuations simultaneously (churn)
- Shifting direction, focus, and resources accurately (into the right areas)

In order to remain agile, business must continually adopt quickly to every interruption in the normal operations of the business (Yahoo Small Business, 2020). The new COVID-19 environment has changed all of this as companies have had to respond quickly to survive. Now business and education must *always pivot or change* to serve their customers. Education is also a business with students as its customers.

2. 2 Agile Methods and Practices Focusing on Education

Cooke (2010) also stated that the purpose of the agile philosophy was based on the "iterative delivery of business value in short time-frames, with ongoing planning based on the feedback received from key stakeholders at each iteration" (p.1). This is certainly true in business environments, including educational facilities constantly adapting to necessary industry changes to ensure that graduates are prepared for the workforce.

2.2.1 Current Trends in the job market and its impact on higher education institutions

There are uncertainties and dynamic changes in the job market. In many industries and countries, the most in-demand occupations or specialties did not exist ten or even five years ago, and the pace of change is set to accelerate (World Economic Forum, 2016).

According to the Board of Regents (2019, p.9), 96% of Louisiana's workforce is comprised of Louisiana residents who must be prepared for an evolving economy. By 2020, the Georgetown Center projections indicate that 65% of jobs nationally, and 56% of jobs in Louisiana, will require education beyond a high school diploma (Board of Regents, 2019, p.9). "It is estimated that 85% of jobs that will be available in 2030 have not yet been created or even imagined" (The Next Era of Human/ Machine Partnerships, 2017, p.14).   This uncertainty and dynamic change atmosphere supply a mandate for urgent and informed action by developing talent in our state.

How should higher education institutions react to uncertainty and dynamic change? Agile management is critical for us to have fast responses and flexibility. Several papers discuss student engagement in the use of virtual learning systems and on the quality of activities available in AVA's (Action Plans for Self-Evaluation, Periodic Evaluation, and Accreditation,   used in European countries) (Agredo-Delgado, Pinto-Corredor, Collazos, Ruiz, & Fardoun, 2019), which are fundamental aspects of maintaining students engaged in activities proposed by the environment. Controlling the students' testing environment is an essential aspect of maintaining course integrity (Aldredge, DuBois, Mobley, Prejean, & Vienne, 2019).

2.2.2 Current agile practices and effects on higher education

Education and industry are working together to ensure that the classroom's skills are transferrable to the workforce. Higher education institutions worldwide are making changes in educational settings, instruction means, teaching methods, international exposures, and culture to be agile to satisfy the more customized learning demand of the students (Liao et al., 2019). Changes in delivery modes are in use in classrooms today. Classroom instruction in higher education has also changed to a more agile method as a larger percentage of classes are offered online for the convenience of working students and are now provided in face to face and HyFlex (half of the students meet one day and the other classes meet another day, and asynchronous).

Today's classrooms include focused teams working together to review case studies relating to current events, which allows them to adapt quickly to the industry's changing needs. This will enable students to unleash creativity, adapt through fast learning cycles, and iterate towards success. Education and industry are working together to ensure that the classroom's skills are transferrable to the workforce. Experiential Learning Models developed providing real-world analysis of local and global sectors necessary for a quick transition into business; Service-Learning Models showcasing business students' strengths in non-profit arenas crucial.

3. Case of Agile Management: The University's School of Business (SoB)

In the School of Business at the University, we offer a Bachelor of Science degree with three majors – Accounting, Business Administration, and Computer Information Systems. We embrace analytical thinking, technology, and the tools necessary for our business graduates to compete and succeed in a global economy.

"Change is the only constant in life," stated Heraclitus, the Greek philosopher (Yahoo Small Business, 2020). During the trying events of 2020, the SoB team rose like the phoenix and seized the COVID-19 challenges and created opportunities. Our philosophy was those organizations that refuse to embrace change would not survive.

March 13, 2020 was a day that served as the educational world paused at NSU. At the collegiate level, students and faculty were sent home the following week. COVID-19 left some students stranded at the university due to international flights being canceled. A plan to address their needs was developed within a matter of days. It was developed alongside the plan to ensure that learning continued virtually. Our entire university went from a traditional delivery mode to online in three days. Like the School of Business, some departments already had digital footprints that could handle such a decisive switch because the school already offered most of its classes via the internet. Those not initially offered online classes were transformed to accommodate the new reality of the educational plan.

3.1 The agile management in NSU School of Business

Before the COVID-19 pandemic, each of all our courses had been delivered both face-to-face and online. Our fast response to the COVID-19 pandemic in spring 2020 included transition face-to-face classes online within three days, opening communication among faculty members, students, staff, etc., identifying necessary training and equipment needed, and testing through WebEx meetings. Practically, the School of Business has followed the three agile management laws proposed by Denning (2018) to deliver value to our students and their future employees through small, autonomous, cross-functional teams and collaborating with all stakeholders.

3.1.1 Stakeholders of SoB: who are our strategic partners?

The School of Business is blessed to have several active internal and external stakeholders who diligently work to improve faculty, staff, and students (see Figure 2). For example, the School of Business Advisory Council is made up of prominent alumni and local business leaders to align our stakeholders' needs with our academic offerings. These advisory board members are significant supporters of the SoB and frequently provide financial support and employment opportunities for students. (School of Business, 2019) The School consistently partners with various departments in the university to bring dynamic programming and events to ensure that students know the multifarious avenues of assistance and opportunities that await them around and off-campus. It does not stop there. The department regularly provides events for other schools, the community, and for students to become involved in furthering their education. The Hour of Code, QuickBooks Training, Continuing Legal, and Accounting Education are just a few of the School's outreach programming to achieve this mission of aiding our strategic partners. (M. Kilcoyne, personal communication, March 19, 2019)
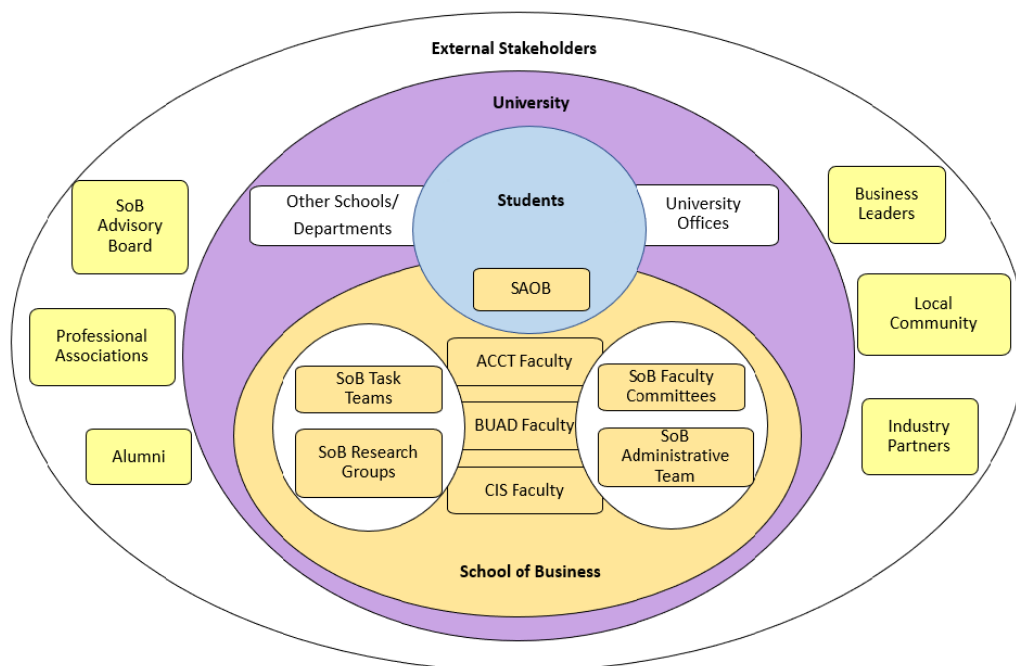

Figure 2. School of Business Stakeholders

3.1.2 How BUAD works with our strategic partners to be agile?

The Business Administration major faculty have worked with strategic partners to be agile. We listen to the needs of the stakeholders and respond as quickly as possible. An example is our Entrepreneurship concentration. Our strategic partners explained how entrepreneurship is needed in Northern Louisiana since many students and businesses believed that they could be successful only if they moved to Southern Louisiana or another state such as Texas or California. The group informed the administration that one of their stated objectives was to develop an ecosystem of entrepreneurs in the region to help create future jobs in the area. Upon hearing this, the Business Administration faculty members went to work upon crafting our very first entrepreneurship concentration to support this initiative. This process was completed within a matter of days. Once completed and approved by another internal partner, the concentration moved to the Registrar's office to be reviewed and deliberated by a select committee. The committee thankfully approved the concentration, and it was offered the very next academic year. This listening and acting process is the same process employed to create the Business Analytics and International Business concentrations for the Business Administration major.

Another partner that the School of Business has is, of course, our students. Our students have an advisory council as well. This council provides feedback to our faculty, Dean, and coordinators. The Student Advisory and Outreach Board are dynamic and work to improve the School and curriculum as well. An example of their effectiveness is that the students reported that it was difficult to locate all the students' services on campus. As a result, the students believed that a fair showcased as many of the auxiliary departments would be beneficial. This initiative was established and entitled "Empowerment."   This event included departments such as Financial Aid, Health Unit, Counseling, Library, and Career Services who were invited to Russell Hall to help the students get acquainted with the support services available to them at the university. (M. Kilcoyne, personal communication, March 19, 2019)

The students decided that they wanted additional lessons from the faculty to enhance their professional development. From that, they requested a segment called "Advisor's Advice." The faculty obliged. The faculty member prepares a fifteen-minute lesson to an hour-long lesson to increase their knowledge. These mini lessons help students from networking, rethinking artificial intelligence, networking, professional dress, and dinner etiquette. Again, an example of our ability to hear and act quickly to implement.

3.1.3 How ACCT works with our strategic partners to be agile?

Feedback from our strategic partners is crucial in determining how we educate our students, particularly in accounting. Industry partners, public accountants, and the School of Business Advisory Council members have all expressed interest in revamping accounting education to include the skill sets and competencies needed in this rapidly changing workplace. These stakeholders have indicated that the skills they desire in accounting graduates have evolved. They now look for much more than technical competence. Employers are looking for:

- Soft or people skills –communication (this is a profession where we need to communicate with clients/stakeholders both orally and written); critical thinking (it is great to have or gather data,

but do you know the appropriate way to analyze and interpret the data); emotional intelligence (the ability to navigate relationships, work as a team, accept constructive criticism and make changes).

- Technology – data analytic skills (what data is available, where and how do we access, secure, verify, manipulate, and visualize it); artificial intelligence (use of machine software to analyze data and complete tasks).
- Continuous learning – ability, and attitude (willingness to embrace change, grow with the changing workforce and redesigned job).

(M. Aldredge, personal communication, March 30, 2019)

The literature also supports this needed shift in accounting education, highlighting technology as the underlying factor for change (Landsman & Peasnell, 2018). Siegel et al. (2010) address the use of technology to focus on Artificial Intelligence (AI) as a major skills gap in the accounting workforce. Current research by the AICPA involving the state of the profession indicates that newly licensed CPAs "must not only have a data-oriented, digital mindset but a keen understanding of core business functions as well" (M. Decker, personal communication, January 10, 2020). Agile skillsets are needed by accounting graduates now more than ever if they want to succeed in today's work environment. As a result, the NSU accounting department has revamped its curriculum to build these components into its existing courses. In addition, a new capstone accounting course has been added to the course rotation beginning in the fall of 2020. These changes respond to stakeholder feedback and are intended to provide long-term career success for our graduates (M. Aldredge, personal communication, March 30, 2020).

3.1.4 How CIS works with our strategic partners to be agile?
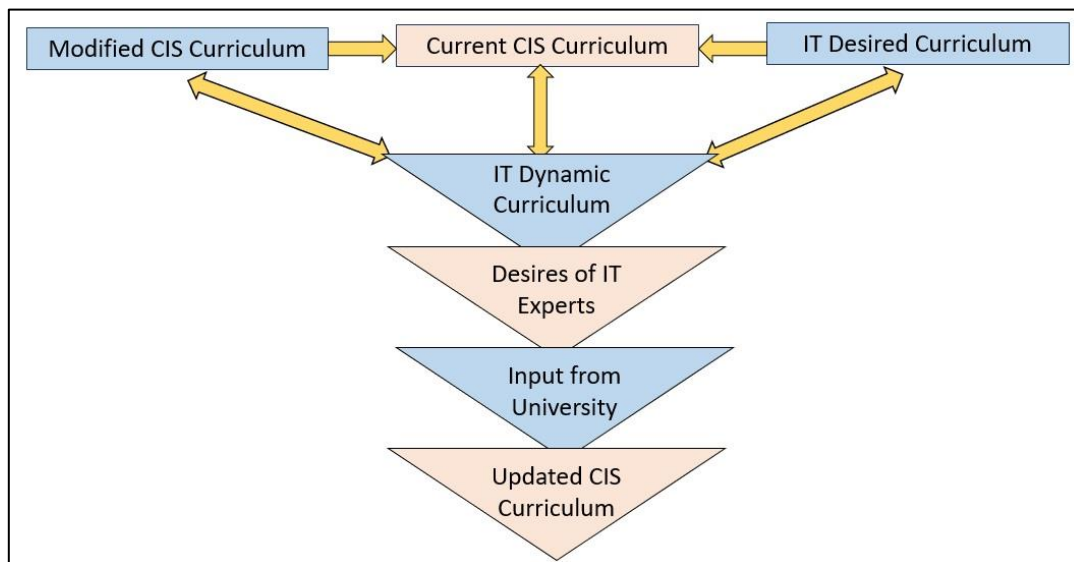

Figure 3.   CIS/IT Assessment Process

Prejean (2017) developed the model in Figure 3 showing how the Computer Information System Department at the University collaborates with their strategic technology partners to ensure that students learn skills that will help them transition easily into the workplace. The steps are described below:

(1) Current CIS Curriculum. Current CIS Curriculum was developed based on the general functionality of IT technology. Current CIS Curriculum at NSU has comparable program with parallel schools.

(2) IT Desired Curriculum. IT Desired Curriculum is seeking for the integration of latest technology into CIS Curriculum. IT Desired Curriculum is based on the latest knowledge & skills for developing futuristic products which are integrated into CIS curriculum systematically. They work with stakeholders to obtain latest development information to ensure employability of their graduates.

(3) Modified CIS Curriculum. Based on Desired Curriculum, modification should take place. Modification should be dynamic and methodical.

(4) IT Dynamic Curriculum. The outcome of above stage is creating a practical and functional curriculum for IT.

(5) Testing. The IT Dynamic Curriculum will be tested for maximization of product improvement. (Prejean, 2017; Prejean et al., 2020)

3.2 How NSU SoB is weathering the COVID-19 storm

Initially, the ULS System President met with his leadership team that includes the presidents of all nine universities and a member of the student body to discuss the COVID-19 crisis and determine how they would implement the recommendations from the CDC.   In turn, the Presidents gathered their respective leadership teams to determine how to incorporate these recommendations or establish their own within the existing framework.   Those leadership team members met each of their units to discuss the resources needed to transition from a face to face environment to an online environment.

From that point, the School of Business was able to pause and pivot because our former Dean believed that processes and policies must be proactive and embrace change to survive and thrive in storms, whether economic, natural, or medical. (Crom, 2020; M. Kilcoyne, personal communication. March 30, 2020)

In the early 2000s, online classes were established and created to not have any significant differences in the course content from the face-to-face classes; in fact, the classes mirror one another. When the COVID-19 crisis hit, SoB could weather the storm, because we were already prepared. Once the students were sent home, SoB leadership team zeroed in on efforts to ensure connectivity for both the students and faculty. Further, it became critical to ensure that communication between the faculty and administrators continue unabated. As such, the Dean of SoB established a weekly WebEx meeting to ensure that faculty members were provided updated information and allowed her to check on the professor's and instructors' well-being. (M. Kilcoyne, personal communication, March 19, 2019)

Research continued despite COVID-19. Individuals and teams have met virtually to facilitate business research and prepare to showcase the research for virtual conferences. Most had not delivered information on the various platforms utilized; however, given our commitment to agile management, members of the School simply met the challenge. (M. Aldredge, M. Kilcoyne, personal communication, March 30, 2020)

An additional way we weathered the storm was to continue our commitment to engaging our community stakeholders. Given that several of our supporters are small business owners, the School uniquely positioned itself with the area's chamber of commerce to provide relevant information to help businesses manage the new economic reality of COVID-19. As such, the School and its Advisory Board has a depth of talent and knowledge. These members have banded together to present information on different business topics to give innovative ideas and hope that they can make it. The discussions have been on employee safety, the Paycheck Protection Program, computer security, and exploring their international business potential. These talks have been led by an amazing array of instructors and advisory board members. They have been attended equally by an amazing array of business owners or their representatives. (C. Parker, personal communication, March 30, 2019)

An example of an actual agile management project was our graduating class experiential learning project. As part of the capstone or senior class, business students collaborated with local and national businesses to analyze their overall business position in the marketplace. As part of this effort, they worked with several local businesses enhancing their social media and marketing platforms and other areas. It was a beneficial experience for all, as businesses were forced to change quickly to service the COVID-19 marketplace. It was a great learning experience for all who took part in the project, and their efforts were highlighted in the local newspaper. (Jackson, 2020b, Prejean, E, personal communication, March 30, 2019)

As a result of the pandemic, NSU's accounting department was forced to pause, pivot, and redefine its delivery of course material in the spring 2020 traditional classes. Virtual learning became a reality for many students, even if they had avoided those platforms before. WebEx was used extensively to provide one-on-one assistance to those students needing help. (M. Aldredge, personal communication, March 30, 2020)

NSU will continue to revamp its programs in this COVID-19 era and beyond, all while maintaining the rigor and integrity of its accounting courses. New models will be introduced and the traditional internet sections to meet the health/safety restrictions of the pandemic. When there is not enough capacity for everyone enrolled to be in the same classroom due to COVID-19 constraints, distance learning courses will be offered. These courses will be conducted with a face-to-face component in one room while broadcasting the class lecture in real-time to another room in the same building or an off-campus location. All students will be able to see and communicate with the instructor.

Alternatively, some courses will move to a HyFlex instruction method (Sowell, Saichaie, Bergman, & Applegate, 2019). Students in a HyFlex course will participate in online and face-to-face learning during the semester. Virtual participation in a HyFlex course differs from that in a traditional, online system. Students are required to "attend" the live class in the virtual environment on the same day/time each week and can, in real-time, engage with the instructor and/or other students. For example, if a course was initially scheduled to meet every Monday and Wednesday of the semester, in the HyFlex mode of delivery, the course would be split into two parts:

- Half of the students would participate in person every Monday and virtually every Wednesday.

- Half of the students would participate virtually every Monday and in-person every Wednesday. (Parker, C., personal communication, March 30, 2020)

According to Dr. Curtis Penrod, the Senior Coordinator of Business Programs at College of Business and Technology of the University, students were able to complete their experiential learning projects in our capstone learning courses Computer Information Systems 3900 and Computer Information Systems 4600. Students transitioned to the online environment and used online collaboration tools to create an application for a business. Students still worked together to bring the project to completion. (Curtis Penrod, personal communication, August 20, 2020)

4. Conclusions and Implications

In conclusion, Figure 4 shows a typical agile process for all three programs in SoB to improve the curriculum. This agile process in SoB continues to weather the storm adapting most recently to a devastating hurricane in the State of Louisiana, working with students individually and collectively to provide an excellent academic experience. Students helped in all parts of the state with clean-up, delivering supplies, and other service projects, making a difference for the community.
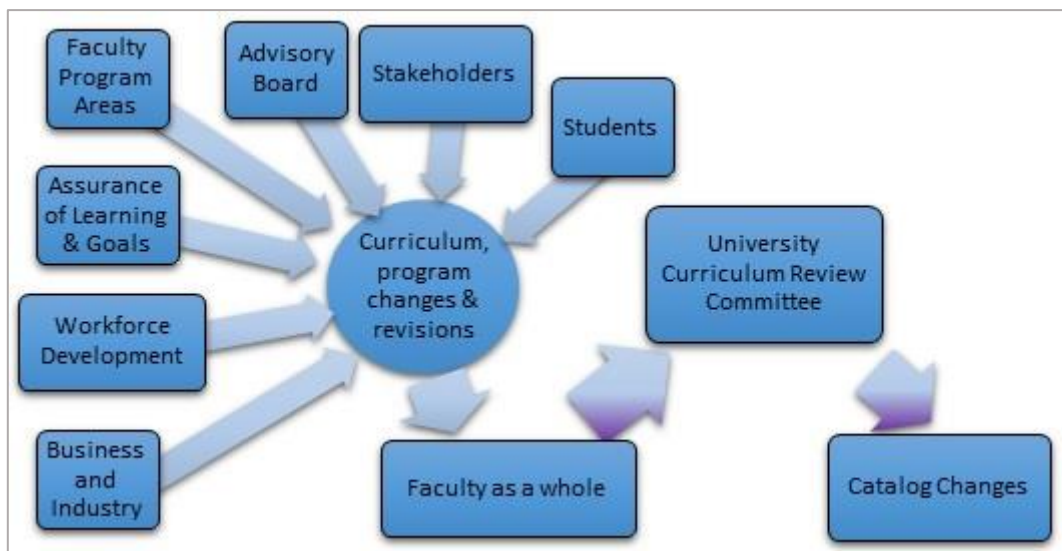

Figure 4. A Typical Agile Process in SoB to Improve the Curriculum

This research has practical meaning to other schools and businesses as they also thrive in the storm of life, pausing, and pivoting to deal with each situation. Our university has used the pause and pivot method of agile management to inspire our students to do the same in their work.　In fact, some of the management students are currently developing a Sustainability and Disaster Plan after the last hurricane to help the area in its quest to become more efficient, moving the agile process again to the community. Others are working on individual projects with a local Entrepreneurial Accelerator Program. This gives the students a chance to understand responsive in turbulent times.　This learning opportunity will combine personal and business development and community development to continue the changes using an agile process.

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