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"Lean"ing Towards Improvement

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“Lean”ing Towards Improvement

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Abstract

According to Balzer (2010) and Liebtag (2014), Lean Six Sigma is ubiquitous in the workforce, including areas of higher education institutions and accounting firms. Lean Six Sigma is primarily prevalent in areas of healthcare and manufacturing. Having knowledge in Lean Six Sigma can drastically improve the way people think about implementing and evaluating projects and processes. This paper describes research conducted, applied, and executed to help departments within the Division of Student Success at The University of Akron. These departments have significantly reduced the amount of waste and are now producing more revenue due to the Lean Six Sigma processes implemented over the past year. Though these changes are beneficial at the current time, the appropriate department within the University must re-evaluate to make sure they are the most efficient while still providing the most value to the customer. Continuous evaluation and improvement is crucial to today’s ever-evolving society, making Lean Six Sigma a crucial and valuable skill in the workforce.
Introduction

Dating back to the 1500’s Lean has evolved over time. Starting with the simple idea of an assembly line idea used to create boats in Venice, Italy (Lean Enterprise Institute, 2000). In 1890, Frederick Taylor documented travel paths of processes to tie together complex steps and eliminating waste (Lean Enterprise Institute, 2000). In 1902, Toyota Motor Company starts to improve processes, by having a machine automatically stop when it senses a defect. This allowed one individual to look over multiple machines at a time (Lean Enterprise Institute, 2000). In 1908, Henry Ford devised a plan to create interchangeable parts allowing a standard system setup in each plant and supplier (Lean Enterprise Institute, 2000). Skipping ahead a few years to 1941, the United States Department of War develops a standardized way to teach millions of workers. This idea of standardized work eventually became a primary factor in Toyota Motor Company’s thinking (Lean Enterprise Institute, 2000). In the 1960s, Toyota Motor Company “creates a management with a new approach to problem solving, leadership, production operations, supplier collaboration, product and process development, and customer support” (Lean Enterprise Institute, 2000). In 1987, John Krafcik proposes the term “Lean” for the management methods pioneered by Toyota Motor Company (Lean Enterprise Institute, 2000).

Not prevalent throughout my accounting courses, the curiosity surfaced how Lean Six Sigma applied to the accounting field. Research pertinent to Lean Six Sigma principles and research applying Lean Six Sigma to the accounting industry are described within this paper. Two projects, completed within the realm of Lean Six Sigma, focused on a few departments within the Division of Student Success at The University of Akron. These projects are described
in detail within. Section 1 focuses on how the accounting field benefits from Lean Six Sigma principles. Section 2 discusses the motivation behind my honors research project. Section 3 includes the basic principles used when implementing the two projects. Section 4 discusses the two project implementations in detail. Section 5 describes the implications of the projects including challenges, lessons learned and a section on looking forward in my future.

**Field of Accounting Rationale**

As Lean Six Sigma evolved over the last few years, many fields, including accounting, started to incorporate these ideas into the workplace (Balzer, 2010). The Lean Six Sigma seeks to improve processes and add value to the customer (Gilpatrick & Furlong, 2007). Lean is the philosophy about improving efficiency, whereas Six Sigma focuses on the client experience and satisfaction (McCarthy, 2009, p.17). By evaluating processes through Lean Six Sigma, any department can eliminate excess costs and waste, thus generating more revenue.

Two recent articles by Leibtag, in 2013 and 2014, highlight the importance of Lean. Leibtag (2014) discusses how the accounting industry may use Lean Six Sigma and how these “principles can help a firm operate more efficiently and enhance value for clients” (Liebtag, 2014, p. 12). Operating efficiently may be as simple as creating a schedule of when each client’s tax returns are due. Doing so would minimize the risk of overlooking a return and may help to schedule staff overtime more appropriately (Kepczyk, 2014). A firm may also operate more efficiently by having managerial positions delegate work to younger staff members. Allowing the younger, less experienced members gain more experience allows more time for managers to seek out new clients, thus generating higher revenues. Though change may be difficult at first, seeing the change through will more than likely better improve the work. No
one ever said change is easy, but “to do the same thing over and over and to expect that the results will change, is insanity,” as attributed to Einstein (Einstein, n.d. [A]).

When there is fear of change, some resist the benefits Lean Six Sigma can provide. This was evident in my project with Student Health Services where several individuals were terrified of the interruptions lean may cause. These fears, caused by the thought of losing their job, however, this negativity towards Lean Six Sigma needs to be replaced with the opportunity to efficiently and effectively use processes through Lean Six Sigma principles to reduce waste (Gilpatrick & Furlong, 2007).

In an accounting firm, it is important to always base costs around the client as the client drives the entire business. An Ohio based CPA firm, Rea & Associates, saw the advantages of Lean Six Sigma being used in their clients’ manufacturing plants and “found that the improvement techniques... could be applied to a white-collar setting to eliminate waste, ensure quality and timely service to clients, and boost the bottom line” (Liebtag, 2013, p. 16). Upon implementing Lean Six Sigma, Rea & Associates kept their revenues up, while freeing up capacity of approximately one hundred hours per employee. An advantage during busy season, employees were less stressed about working long hours as improved work processes allowed engagements to run quicker and with fewer employees. Rea & Associates “not only improved its own efficiency, but also has indeed become a role model for how a business in the accounting industry can add value and increase client satisfaction simply by working more effectively” (Liebtag, 2013, p. 16). Client satisfaction is important as it “client satisfaction leads to repeat business, widespread positive word of mouth, and overall business success” (Liebtag,
Client satisfaction will allow the business to continue to thrive and produce better services in the future.

The application of Lean Six Sigma will benefit the accounting profession. Appearing as a strong link of Lean Six Sigma to applicable studies of an accounting student, these applications will likely improve customer satisfaction, reduce waste, and increase their bottom line.

Motivation and Personal Development

Over the past three years while working as a student assistant, I assisted the Division’s Assistant to the Vice President, Fiscal Operations, Susan Beke, my supervisor, with various accounting duties. Allowing me to observe the departments struggling with excess waste, I often listened to the ideas my supervisor suggested to offset these problematic areas. These ideas considered the ideas and principles of Lean Six Sigma. Listening to these ideas about Lean Six Sigma motivated my curiosity for research and a potential project. To reciprocate the generosity, I turned to the Division for help in brainstorming an idea for my honors project that related my accounting degree to a project that would benefit the University’s departments. From the Division, the idea of a Lean Six Sigma project benefiting the a few Division departments originated.

After encouragement from my supervisor, who is certified in Lean Six Sigma and Project Management, I decided to attend one of the UA Solutions’ annual overview sessions on Lean Six Sigma. She insisted this would be a great learning opportunity even if I did not to continue forward with a Lean Six Sigma project. I attended the overview session in September of 2014,
knowing knowledge in Lean may be applied to the Division’s departments later on in the fiscal year.

The instructor, Brain Furlong, presented at the overview session on the topic of Lean Six Sigma. Furlong, the co-author of “The Exclusive Lean Enterprise,” is also the owner and creator of a Lean Six Sigma certification course offered on campus. After the session, I had the chance to speak with Furlong about my idea of using Lean Six Sigma as my Honors Project on campus. Enthusiastic about my determination to get involved in Lean, he offered me the opportunity to take the certification course at the University. Unfortunately, due to my schedule, I was unable to attend the course, which ran one-week long from 8am to 5pm, due to my undergraduate course load. Furlong gave permission for me to complete the on-line version of the course, Lean for Administration (Office), at no cost (personal communication, September 3, 2014).

Requiring approximately forty hours of on-line training, the course concluded with an examination of the material. Upon completion of the course material, I passed the exam and received a certificate from the Process Excellence Systems, Inc. certifying successful completion of the Lean Mastery for Administration course (see Figure 1).
Upon obtaining my certification, I realized Lean Six Sigma may benefit my own life as well as the departments within the Division of Student Success. In order to further develop and enhance my project and knowledge of Lean Six Sigma’s effectiveness in the workplace, my supervisor arranged for the opportunity to observe a local business using Lean Six Sigma to improve their departments. This entailed meeting the Administrative Director for the Center of Operations Excellence at Akron Children’s Hospital, who is in charge of implementing and overseeing process improvement at Akron Children’s Hospital. The Administrative Director allowed my supervisor and I, along with the Director of Student Health Services and the Medical Secretary from the University’s Student Health Services, to observe specific units in action using the ideas of Lean Six Sigma developed specifically for their fast-paced environment. We observed how the unit made their daily conference calls to the other branches of Akron Children’s Hospital; they refer to this as their morning huddle. The morning huddle, designed for this specific unit, discussed any factors of risk that occurred during the prior workday and also communicated to the other branches the types of patients scheduled for the day. Due to
the nature of the unit, staff members start and end their shifts at various points throughout the work day. In order to inform all staff of the information from the conference call, the unit developed the idea to document items of importance on the whiteboards in their break room. With this in place, it is then the responsibility of the individuals starting their shifts to inform themselves of the morning huddle by reading the notes provided. The idea of a morning huddle seemed helpful for the two individuals from the University’s Student Health Services as they struggled with similar issues.

After seeing how the specific unit incorporated lean processes, my supervisor had suggested I attend one of the Akron Children’s Hospital Rapid Improvement Sharing Event with her. Held bi-weekly, these sharing events showcase areas of Akron Children’s campus utilizing Lean processes to improve health, safety, efficiency, and/or cost-savings. The sharing events are broken down into a presentation of a new implementation of Lean Six Sigma and breakout groups to brainstorm activities for three smaller projects. During these sessions, hosted and organized by the Administrative Director of the Center for Operations Excellence, Akron Children’s Hospital invites local Lean Six Sigma activists to share in the brainstorming part of the session. Helpful for all individuals involved, those outside Akron Children’s Hospital gave a different perspective with fresh eyes. Those inside the departments shared ideas to others on how they may apply them to their own areas and departments. The presentation discussed how a department started using Lean to rotate supplies to avoid expiration before use and developed a method to determine the appropriate time to order new supplies. Other projects addressed weather safety and a standardized way to perform employee evaluations.
I found the breakout session addressing weather safety the most beneficial and practical to implementing Lean Six Sigma on the University’s campus. A few ideas suggested were to give employees drawstring bags to carry tennis shoes and/or boots in when going outside in inclement weather. The idea planned to minimize the risk of individuals slipping and falling when wearing inadequate footwear such as heels and dress shoes. Another suggestion was placing a saltshaker close to the entryways so employees could salt the sidewalks when they noticed a slippery area to prevent others from slipping. An employee from the University’s safety department attended the event and used the ideas discussed to increase the safety of employees and students at the University during inclement weather.

**Lean Six Sigma Principles**

Lean is a concept designed to improve the performance of an organization/department through a controlled and measured means (Gilpatrick & Furlong, 2007). Lean Six Sigma uses elements and ideas that eliminate waste, focus on the customer value, and motivation for continuous improvement within the organization’s members (Gilpatrick & Furlong, 2007). By properly measuring the overall function of the organization, the processes may be statistically improved and rapidly changed in order to allow for better utilization and efficiency. Not only is Lean Six Sigma a way to work on improvements in the organization, but it sheds light on a new perspective and way of thinking. The ultimate end goal of a Lean Six Sigma improvement is to work towards the most efficient means possible. Taking Lean Six Sigma lightly will only amplify the long process. The likelihood of individuals resisting the change from the start is very high. In order to implement changes, the organization should incorporate the change into the company culture (Garvin, 2015).
Part of Lean Six Sigma tries to diminish the idea that “‘the process is OK, but the people are broken’” (Cveykus & Carter, 2007, p. 32). Lean Six Sigma takes the processes in place and develops them in order to create a better utilization of the staff (Gilpatrick & Furlong, 2007). Doing so, shortens and/or improves upon the process while eliminates waste.

To eliminate waste and provide satisfaction for the customer, one must assign a value available to each step of the service. According to Gilpatrick & Furlong, (2007), there are three different types of value assignments: 1) value-added, 2) non-value added, and 3) non-value added but necessary. The value-added assignment requires the customer to directly see the benefit of the service. The non-value added assignment occurs when the customer sees no direct benefit. Lean Six Sigma strives to eliminate non-value added steps. Lastly, the non-value added but necessary assignment happens when the customer sees no benefit, but the step is necessary to keep the organization running (Gilpatrick & Furlong, 2007). “About 50 percent of the costs associated with delivering a service are for things the customers do not want to pay for” (Shaffie & Shahbazi, 2012, p.12). These three categories are significant when looking at the beginning process, as a whole, to define which steps fall into which category, thus creating a value stream map.

Value stream mapping is important to show how the overall department flows. Usually evaluated in the beginning of the project to identify areas that need improvement, the value stream map creates a visual image of the process at hand. When completing a value stream map, it is important to utilize the correct symbols to show information processes described. Figure 2 depicts symbols most commonly used.
Figure 2- An overview of the symbols and appropriate meanings for developing a sound value stream map (Ahoy, 1999).

When symbols are properly utilized, the images tell a story. In Lean Six Sigma, they accurately tell the story of how the service or department flows.

In order to be successful in evaluating projects, one must properly record and measure the processes, before and after. Proper records may include, but are not limited to, pictures, surveys, and value stream maps. Showing a visual transformation tremendously brings the idea of change to another level. Figure 3, provided by an on-campus department, shows how a value stream map changes from the original process to a condensed and operating efficiently after effect.
Figure 3- A before and after transformation of a process in an on-campus department. The text is blurred for confidentiality purposes (Canzonetta, personal communication, February 23, 2015, adapted with permission).
Another method utilized is as a spaghetti chart. This type of chart shows the movements of a(n) individual(s) through a specific area. “The name ‘spaghetti’ comes from the fact that real world paths are not straight lines. They bend, crisscross, and go back-and-forth between two stations, so the final drawing can look quite messy” (Hebb, n.d.). Each movement from one point to another is depicted using a line. After a while, there are numerous lines going in multiple directions, creating an image of cooked spaghetti (see Figure 4 for an example).

![Spaghetti Chart Example](image)

**Figure 4**- An example of a spaghetti chart recording the movements of a few individuals around the workplace. Each color represents a different employee (Hebb, n.d.).

Properly measuring the outcome is always a crucial to any project, but there are other concepts that exist within the realm of Lean Six Sigma. One of these concepts, utilized during implementation of the projects, is Lean Six Sigma 6S. 6S stands for six words: sort, straighten, sweep, standardize, sustain, and safety (Lean manufacturing, n.d.). Used to improve a process, these six steps, may help relieve stress levels of employees. Removing waste allows for
reorganization of non-waste items in a simple and accessible manner. Figure 6 shows an example of a successful 6S project implementation.

**On-Campus Implementation**

During the fall 2014 and spring 2015 semesters, I organized and participated in two key implementation projects: 1) Commencement Storage Room, and 2) Student Health Services. Detailed below, are these two projects. In order for these projects to fall within the realm of Lean Six Sigma, certain measures need met. For the Commencement Storage Room project, the basis of the project resulted around the 6S principle of sort, straighten, sweep, standardize, sustain, and safety. The project within Student Health Services focused on streamlining the process to see a student and focus all efforts on the student’s satisfaction.

**Project 1- Commencement Storage Room**

My first project started when a staff member from the Office of Academic Affairs, Kim Haverkamp, emphasized the disastrous condition of the Commencement Storage Room (personal communication, September 22, 2014). Frequently unable to find supplies needed for The University of Akron’s commencement ceremonies, she often re-ordered supplies due to the chaos of the room. After hearing her complaints about the room, I asked my supervisor if I could use the Commencement Storage Room as a Lean Six Sigma 6S project as a part of implementing my new Lean knowledge on campus. Approval obtained with ease, as the 6S project would also benefit the Vice President’s Office of the Division of Student Success with ease of finding supplies.
To provide further background on the storage room, this room was once the area used by any department to store items and forget about them. It soon turned into a struggle when the two departments (the Vice President’s Office for Student Success and the Office of Academic Affairs) tried locating supplies within the room. The storage room, shared by two different departments, only had one key kept by an individual in the Office of Academic Affairs. It became an issue when anyone from the Division for Student Success needed to use the room. Getting an extra copy of the key was just a start to improving proper use and efficiently using the room.

The Office of Academic Affairs uses the room for storing all items related to commencement ceremonies, used periodically throughout the year. The Vice President’s office, where the storage room is located, uses the room for storing office supplies and other large items. Not utilized to its fullest, the storage room seemed unsafe. Figure 5 below shows images I photographed of the storage room before the implementation of 6S concepts.
Once proper photographs captured the initial chaos of the room, I developed and distributed a short survey, “Preliminary Survey- Commencement Room.” The five individuals, who completed the survey, use the storage room or are within the suite where the storage room is located. The survey included various matrix questions regarding:

- the safety and conditions of the room
- ease of finding supplies
- proper utilization of the storage room

Four of the five responses indicated “very unsatisfied” with the safety of the room and were unable to find supplies when needed. In response to proper utilization, all individuals surveyed responded, “very unsatisfied” and said they may use the space if free from clutter.

To conclude the survey, open-ended questions allowed feedback on specific areas:
• types of organization to incorporate into the storage room
• benefits to the user’s department with organization and efficiency of the room
• describing the storage room’s purpose at its current state

Responses to the open-ended questions became helpful to determine where certain items move to when re-organizing the room. For example, labels added to the drawers and shelves would eliminate some wasted time. Upon results of the survey, some individuals stated the room was specifically for commencement only supplies. In order to relieve some confusion in the future, separation of commencement and general office supplies was applied during the 6S process. Appendix 1 contains a copy of the survey.

Once the 6S process began, the first step in organizing the storage room required separating the clutter and eliminating any waste in the room. Taking a significant amount of time, the majority of the supplies in the room did not belong to either of the two departments. Time spent moving the supplies out of the room and contacting the appropriate individuals to remove their supplies from the office was a tedious task. Supplies, that were not waste, organized into drawers and cabinets creating a set place, allowed for the placement of labels throughout the room. Labels created to make sure items were orderly and the storage room remained clutter free. The overall appearance of the room now remains in the hands of the individuals utilizing the room.

Removing excess clutter and reinforcing falling shelves, ensured maximum storing capabilities and addressed safety concerns. Figure 6 depicts photographs I took to show the transformation the Commencement Storage Room has undergone in the past year.
Figure 6 – A collection of before (top) and after (bottom) photographs taken at approximately the same angle.

The first set of photographs (far left, before and after) show the transformation of the built-in shelving unit and accompanying cabinets. One can visually see a majority of the
belongings either have been disposed of or been organized into the cabinets. Labels created for each cabinet properly reflect where each particular item belongs. The middle set of photographs (before and after) show the transformation of the back wall of the room. The before photograph provides a visual where one can barely see the set of drawers on the right-hand side. The left-hand side, which contained a countertop area, now homes an armoire to store commencement robes as part of the 6S process. The last set of photographs (far right, before and after) show the transformation of the bookshelf area of the storage room. The bookshelf’s primary use was storing envelopes. Easily re-homed, these envelopes placed on the built-in shelves allowed improvement in distinguishing between sizes and were more visually appealing. The blue wardrobe, moved to the area where the bookshelf once stood, allowed for more space when entering the storage room. Upon completion of the project, my supervisor estimated this project saved approximately $10,000 in hours for employees and excess supply orders, making this a successful Lean Six Sigma project.

Project 2-Student Health Services

The second project involved helping the department of Student Health Services on campus. Student Health Services, located in the Student Recreation and Wellness Center, has recently dealt with operating issues mainly due to waste. As previously mentioned, I attended Akron Children’s Hospital with the Director of Student Health Service and the Medical Secretary to observe how a particular unit developed and thrived from the use Lean Six Sigma incorporation.
After visiting Akron Children’s, Student Health Services created their own time study to evaluate the length of time a student/patient was in their office. Given the responsibility to enter the data into an Excel sheet, I did so in order to easily manipulate the data and create expressions. Upon entering these numbers, I noticed the time study not clearly organized suggested results were inconsistent as each nurse and doctor recorded the numbers differently. Despite inconsistent results, the average length of time for a student/patient to spend in the office amounted forty-one minutes. The wait time for a student determined to be too high, based on similar benchmark studies performed by other universities, needed further evaluation. The Director of Student Health Services, Alma Olson, directed me to create a better way to record the information.

Once the new time study sheets were created, they were deployed within Student Health Services. After a week of the study, I was given the data to re-enter. The data seemed to be more consistent between the different individuals in the office, though the amount of time spent in the office still remained near forty minutes.

Since excess time was not a factor of the time study organization, I followed several medical personnel to create a spaghetti chart depicting how much they move around the office. Examining the spaghetti chart, showed that some furniture needed a new location to eliminate wasted time walking to and/or around certain areas. While creating the spaghetti chart, I observed how the department functioned as a whole. I noticed the supply closets would benefit from a 6S project as well, but obtaining proper approval in time for the completion of this
project was unattainable. Instead, my supervisor and I recommended to Student Health Services to complete in the near future to avoid unnecessary waste.

The observation of the office shed light on the amount of time the staff was entering patient data into the electronic medical record (EMR) system. To improve this process and reflect the same flow if information as listed in the EMR, the patient chart was re-organized. Student Health Services made several changes to the EMR to quicken the steps of the nurses by allowing for more check boxes and providing restrictions on text boxes.

A simple area needing improvement to decrease patient wait time and decrease movement of nurses in the office was a signal for the nurses to know a patient is ready to go to an examination room. Before, the nurses continuously walked to the front of the office to check if there were any charts of students waiting to go back. The department is currently working on installing a simple exam room flag system to signal when a patient is ready (see Figure 7).

![Figure 7 – An example of the exam room flag system which is being incorporated into the department (Medical Office Supplies, n.d.).](image)

Another simple fix Student Health Services plans to incorporate during the summer 2015 semester involves assigning rooms to providers and nurses. This way, nurses and
providers easily distinguish if they have a patient waiting in a room. Though this may seem like an unnecessary change, it will decrease time spent trying to determine which room they should be visiting next.

These are just a few of the Lean Six Sigma ideas examined and implemented into the everyday functions of Student Health Services. During winter break, my supervisor and I had the opportunity to sit down with a few staff members from the University’s Student Health Services. During this meeting, we recorded the process of how a student sets up an appointment to be seen and how the student flows through the office to when they checkout at the end of their appointment. We used this information to create a value stream map and included sub-processes for the department (depicted in Figure 8).
Helping to alleviate unnecessary costs and non-value added steps, Student Health Services has been working to make all processes of their value stream student-centered. Throughout the summer semester, the department is working to improve their processes with fewer students to visit; this allows more attention for Lean Six Sigma improvements. These improvements will “address the needs of their patients in a much more timely and organized fashion” allowing the department to see more students in the same period (Ranpara & Tayal, 2015, p. 39). The department hopes to create and deploy a short survey to provide feedback to the department on the success of these Lean Six Sigma implementations over the past year.
Implications

As I reflect on the improvement to the Commencement Storage Room, I feel have tremendously relieved the stress of the person in charge of organizing commencement. This person continues to routinely thank me about how beautiful and organized the room is now. The organization of the room also helped the suite appearance of the Vice President’s Office during the week leading up to commencement, as all of the materials normally stored in the shared portion of the suite are now easily stored in the commencement room. This allows a safer and easily sustainable environment in the suite, along with a better workflow for commencement activities.

The employees in the Vice President’s Office are now able to easily access office supplies and provide an additional workstation that is outside of the public eye. The additional area amplified the concern of confidentiality within in the Vice President’s Office as projects or sorting of paperwork on the clutter-free countertops may now take place. This improves the department’s efforts to keep personal and/or department information from the normal visitors to the office. Reducing the clutter, not only helped with confidentiality, but also reduced time employees spent looking for a certain item. Clearly labeled shelves, cabinets, and drawers enhanced user workflow and increased efficiency while reducing duplications.

Lean Six Sigma provides for knowledge of seeing how processes change from a different point of view, which may provide one with a new way to think about the world and its processes. While this is helpful, it needs to be used in moderation to prevent changing processes every week. Not following this precaution, may reduce revenue and cause employers to stress having to learn new processes in such little time.
Challenges

The implementation of these processes required tackling some difficult bumps in the road. One area in particular is that departments resist change unless it is their idea. My supervisor and I tried helping Student Health Services highlight the areas in which they needed to see improvement when we met with them to draw up a process map. We hinted at areas that needed improvement, but still saw some resistance in the changes we recommended. Luckily, the Director of Student Health Services was supportive of our changes and wanted to see these changes happen in the department (Olson, personal communication, October 9, 2014). Having support from the top down is a key to successfully implementing Lean Six Sigma into the workplace (Gardner, 2013, p.33).

The Commencement Storage room project caused a disruptive environment for the individuals within the suite as well as the individual in charge of commencement. To reduce disruption, I choose to start the project just after summer commencement (August 2014) with the plan to finish weeks before fall commencement organization would start (roughly November). On the other hand, the project within Student Health Services could not sustain an abrupt change and therefore the implementation of incremental steps was an effective method of improvement.

When completing these projects, each department needed an individual to take responsibility for seeing it through. With the Commencement Storage Room, I took full responsibility and used by downtime during work hours to complete the 6S project. This saved the department time and money of having to hire an individual to complete the project for
them. For the project within Student Health Services, my supervisor and I shared responsibility. My supervisor and I were able to observe this department during mid-day, which seemed most active, expect for lunch hour.

*Lessons Learned*

An important lesson learned while working on these projects is to properly evaluate and document the process at the start. If done correctly, the results of the project when compared to the starting point will encourage the individuals involved to continue to work towards efficiency and perfection.

Proper documentation also allows the opportunity to share process improvements to other departments.Highlighting the importance of continuous improvement and maximizing portability may encourage other departments to follow. Hopeful in creating a domino effect, Lean Six Sigma improvements spreading through an organization will likely prevent waste and save the organization some expenses.

Another important lesson I learned involved preparing the department for the type of Lean Six Sigma project implementation, which may be either disruptive or incremental. For a disruptive project, relocating meetings to avoid potential visuals may help with an important client. For an incremental project, scheduling employee time off may need factored around a particular period to ensure maximum communication of a particular change.
Looking Forward

The opportunity presented itself for me to continue to work in the Division of Student Success for the upcoming academic year as a graduate assistant. I will use the knowledge gained from these projects as well as the Lean Six Sigma research I completed to continue helping improve the processes within the department. I will also continue helping my supervisor simplify some of the processes and provide additional training for other areas on campus as deemed necessary.

Conclusion

As with any Lean Six Sigma process, these projects need re-evaluated and manipulated to reflect proper efficiency and customer satisfaction. The 6S project now lies in the hands of the users, but the project within Student Health Services will continue improvements during the upcoming academic year. As ideas develop in the Lean Six Sigma and more individuals and/or departments complete process improvements, these ideas can help the department run efficiently. This shows how adaptable Lean Six Sigma principles are to any workplace or home.

By changing your perspective, “‘you can change the way you work,’ and ‘change the way you think’” (Voehl, 2014 p. 146). As attributed to Einstein, “The world we have created is a product of our thinking; it cannot be changed without changing our thinking” (Einstein, n.d. [B]).

As a newly certified Lean Six Sigma individual, I will continue to look at the world from a new perspective and plan to market my skills to benefit not only myself, but also my future employer(s).
References


Doi:10.1002/joe.21491


Appendix 1: Copy of Preliminary Survey-Commencement Room

Thank you for taking the time to complete this survey. In order to improve and organize the commencement room as part of my honors project, please answer the following questions based on your experiences. Any feedback or additional comments can be left at the end of the survey in the comment section.

Please rate your experiences based on the criteria below:

<table>
<thead>
<tr>
<th>What is your overall opinion of the current commencement room?</th>
<th>Very Unsatisfied</th>
<th>Somewhat Unsatisfied</th>
<th>Neutral</th>
<th>Somewhat Satisfied</th>
<th>Very Satisfied</th>
</tr>
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<tbody>
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<td>○</td>
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<tr>
<td>What is your assessment on the safety of the room?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Please answer the following based on your experiences.

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you believe there are any items (waste) that are no longer needed in the room?</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Have you ever experienced trouble finding a common office supplies item?</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Would you utilize the space in the room if it was free from clutter?</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

What are some types of labels you would like to see on the cabinets and drawers to ease finding items?

What do you consider the room to be used for?

If this room were organized for efficiency, what would be the benefits to your department?

Feedback and Additional Comments

[Space for comments]