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This case study describes how a college business instructor and an academic librarian collaborated, using the tenants of Continuous Improvement (CI) and embedded librarianship, to help improve student writing and information literacy skills in an online course. The authors detail their personal experiences, the challenges they faced, and the practices they developed. Data related to the successful results of the collaboration are shared, as are sample materials used in the course: a screencast video, email, and discussion post.

Keywords: Continuous Improvement; embedded librarianship; online teaching and learning; business education; case study

Continuous Improvement (CI) strategies are well known in the manufacturing world. Drawing on the Japanese principle of kaizen, CI is a "process of continuous incremental improvement" with the end goal of more effectively providing a better product for the customer (Singh & Singh, 2013, p. 32). One of the main tenets of CI is to provide value to the customer.

When applied in the educational environment, this might mean providing not only content, but also the skills that surround the content (writing, reading, researching, citing, etc.). In addition, because content-area experts are frequently not trained in teaching these general education skills, partnering with general education staff in order to provide this learning is an optimal method of helping students, the customers, obtain their goals. Finally, in order to apply CI in an educational setting, instructors must be willing to learn from their mistakes and make constant improvements to their processes and methodologies (Sayer & Williams, 2007).

Librarian and Instructor Partnerships

One frequent type of partnership that has developed over time is that between librarians and instructors. Usually, the partnership develops in order to help students develop and strengthen information literacy skills so that they may become better consumers and users of information, and thus more informed future professionals. Partnering between instructor and librarian can take the form of one-shot-workshops, collaborative assignment development, and shared grading—just to name a few examples. A more recent method of partnering, embedded librarianship, where the librarian strives to be "there with the user at the point of need, rather than waiting passively… [in] the library," is growing in popularity in higher education (Smith & Sutton, 2010, p.1).

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Embedded Librarianship

The practice of embedding in a brick and mortar setting can prove difficult because both instructional partners must have time to meet and plan, and the content instructor must substitute some content time for general education skills. Embedding in an online, asynchronous environment, however, removes many of the obstacles found in a synchronous setting. CI principles used in an embedded librarianship partnership can produce excellent results. Online embedding can help provide students, instructors, and librarians with an optimal learning environment: instructors can teach subject matter content, librarians can share information literacy skills, students can be successful learners, and content can be adjusted and changed continuously to meet the needs of all involved.

In this article, the authors seek to share the process of learning to partner and embed, using CI principles. We are very aware that we are describing a work in progress. We continue to learn from our efforts, our mistakes, and most of all from our students. The goal of this process is to provide the very best student experience possible in an environment of constant change.

Case Study

The Business Instructor's Perspective: Lisa Reed

I am a latecomer to the field of education. Previously, I had spent 21 years in the world of manufacturing management and had provided extensive training for employees both in formal classroom settings and in informal coaching environ-ments. Additionally, I am a parent with all the training and coaching opportunities this particular role involves. As someone who had recently embarked on a second career on the shady side of 50, I was terrified that I might not be able to adjust to the challenges a career in education might demand.

I resolved that determination and extensive preparation would compensate for the actual teaching experience I lacked. I told myself I was prepared to thoughtfully and patiently lead students through their business course material. I would understand but be firm with those students who fell behind or lacked the proper motivation to succeed in college. I would be flexible with my schedule to make myself available whenever a student needed to contact me. I spent long hours agonizing over lesson plans and homework assignments, obsessing over which case studies would be most relevant to my students.

I eagerly anticipated reading the submissions for that first written assignment. This assignment asked students to share why they had chosen to study business and what career they hoped to pursue after graduation. The goal of this assignment was for me to get to know my students and for the students to reflect on their career choices. As I read the initial submissions from my students, there were several that contained statements like the following: "i [sic] want to study business because i [sic] need a job."

My preconceived notions died with a barely audible whimper. How could I teach business to students who were not willing or prepared to write at the level I was expecting? Were my standards too high? Was I not being clear in my instructions? I told myself this might have been a unique group of students, and that I would double my efforts with this group. Surely in

the next term I would have students who were ready for and understood the challenges of college. The next term a similar pattern repeated itself and I found that my entry-level college students were again struggling with academic-level writing.

To stave off panic, I conferred with my colleagues. They had similar experiences. What was going on? I asked the librarian to help me with some research. We discovered that issues with writing were not unique to my students. In fact, articles bemoaning the poor writing skills of college graduates, much less new college students, were rampant. A research study by the College Board and the National Commission on Writing (2004) indicated that even though writing is considered an essential skill when hiring and promoting employees, businesses are spending "as much as $3.1 billion annually to remediate their employees' writing deficiencies" (p.4). Further, Quible and Griffin (2007) pointed to changes in the teaching of writing at the high school level due to high-stakes testing as possible parts of the problem. Similarly, the National Center for Education Statistics (2012) noted that in tests of writing skills, 74% of high school seniors were found to be less than proficient writers. Various other research studies unveiled additional contributing factors that were impacting the writing skills of students:

• An increasing number of college students are nontraditional and coming from a work environment rather than straight out of high school. This is not a new trend. The National Center for Education Statistics indicates that 37% of college students are enrolled part time, 32% are working full time, and 38% are over the age of 25 (Hess, 2011). For these students, writing a paper was a thing of the past; several years may have passed since they wrote their last academic paper.

• The world of social media is now ever present. The writing skills needed to post to social media technologies are far different than the skills required for crafting a persuasive argument or effective essay. While texting may or may not destroy the writing skills of the nation (Crystal, 2008), my students were including text such as "gr8" and "imho" in their papers.

• Many students are taking their first college courses online and not residentially. While Rasmussen College provides an abundance of support resources for our online students, those resources might be in a new and unfamiliar online format for students, and they might not take advantage of them.

It has been noted that when people are faced with difficult situations they revert back to their original training and background. A doctor will naturally speak of diagnosing the problem, the engineer will consider how to analyze the situation, and an information technology specialist might be most comfortable creating a flow chart to address an issue. My background includes many hours spent working on Continuous Improvement projects. So it is probably no surprise that in an act of desperation I chose to apply some CI concepts to this situation.

The first and most important tenet of CI is to provide value to your customer (Sayer & Williams, 2007). In this case, my customers were my students, and the value, or outcome, they were seeking was a college education. Professionals who work with CI will tell you that you do not get to select your customer, you have to adjust your product or service to provide value to your customer. Therefore, in addition to teaching business concepts to students, it is essential to provide instruction on how to write a paper. Similarly, while we might be more experienced with providing assistance to

students in a face-to-face residential class, our students were frequently choosing the online platform for their classes. Hence, the task became how to teach business and writing to new college students in an online environment.

Another important tenet of CI is to consider input of all involved stakeholders (Sayer & Williams, 2007). This turned out to be a huge benefit for me because it encouraged me to continue to share my challenges with our campus librarian. She had seen this scenario play itself out in many areas beyond the school of business. As the campus librarian, she had heard students share their frustration with a process that required them to learn their subject course material, learn how to write a paper, and learn how to navigate online classes and resources simultaneously.

The Librarian's Perspective: Jeneen LaSee-Willemssen

Lisa's plight was not new to me at all—in fact, I could list a variety of skills in which students needed help. As a librarian, I work with students on a wide range of issues: computer use, course software navigation, Internet navigation, writing skills, editing skills, the ability to find and use quality information, and citing skills. The aforementioned skills are collectively known as information literacy.

Much of my time is spent helping students minimize information literacy gaps—either one-on-one or in workshops and webinars. Because not all students are required to attend workshops, I am not able to co-teach in all classes, and not all students are inclined to come in for one-on-one help, my information literacy instruction reaches only a limited number of students and only at certain points in their education. Thus, there is a lack of consistency and complete-

ness to the information literacy curriculum provided by instructional librarians without a required class.

As an example, early in our partnership, Lisa's Introduction to Business courses were taught on campus rather than online, and we worked together to ensure that I regularly presented a variety of information literacy topics to students in the classroom. Topics included how to use specific resources for research, develop a thesis statement, and cite sources according to the Publication Manual of the American Psychological Association (APA). The sessions were helpful to students, but this format required Lisa to take time away from her business content to allow time for the information literacy content, that we both be in the class at the same time, and that the students had to wait until after class to practice what I presented. In short, there was room for improvement.

When Lisa's courses moved online, the transfer presented an incredible opportunity. We realized that I could become a member of the course in the mode of "lurking librarian," an "observer who monitors course discussion and initiates communication in response to perceived needs" (York and Vance as cited by Smith and Sutton, 2010, p. 6). As lurking librarian, I could share more content than I had previously, but without taking away from Lisa's business content. In addition, because the course was asynchronous (not in real time), Lisa and I did not need to match schedules; therefore I could post guidance and feedback in the course based on my schedule availability. Finally, the content I had been providing in one or two workshops in the past could now be spread out throughout the whole course and presented exactly when the students needed it. It was a win-win-win situation.

We began our adventure by enrolling me as a teaching assistant in Lisa's online Introduction to Business course. Lisa

introduced me to the whole class, and together we explained what I would be doing: (1) perusing the assignments and readings, (2) reading student discussion posts, and (3) providing advice and guidance to individuals as teachable moments presented themselves. Once introduced, I logged in to the course every Monday and Thursday and emailed students with suggestions and advice as needed, based on what I was reading in their discussion posts. Lisa and I agreed that I would limit my comments to information literacy-related areas and skills and that she would address content. As we grew more comfortable with the collaboration, I also began proactively presenting information to the class as a whole via class announcements and discussion posts. For example, if the students needed to find unemployment statistics related to their state or county for a given module, the day the module opened I might introduce them all to the Bureau of Labor Statistics website and provide an explanation of not only how to best search it but also how to cite it using APA style. If students used "txt" language in their discussion posts, I might guide them away from that. See Figures 1, 2, and 3 for illustrations of content provided to all students.

Figure 1. Lurking Librarian Video for Module 3 Written Assignment
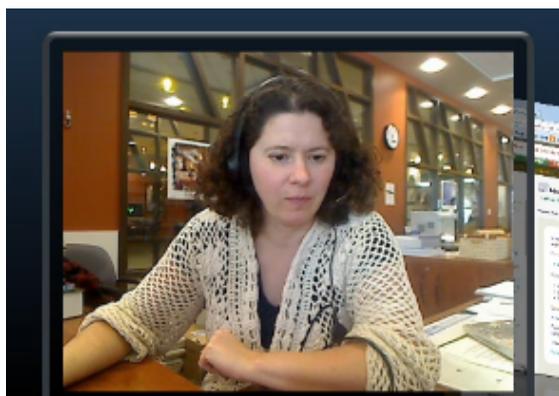
Lisa and I also worked towards laddering the way my content was introduced and assessed. We used CI principles in my instruction methodology. For example, I introduced APA style at the beginning of the course, but only had students learn and use certain components of it early on. In this way, mastery of APA style was not expected until the end of the course, and students had a safe environment in which to practice their new skills. Lisa graded the citation aspects of student papers accordingly.

During the first several rounds of embedding I was not sure if I was having a substantial impact. I wanted to help students become better consumers and users of information. I could see that some students were taking my advice, using the resources I had recommended and trying to cite the way I had modeled. Few, however, actually chose to contact me or ask me questions directly; and I could only see the discussion posts, not the papers. Lisa, however, reassured me that the presence of the lurking librarian was making a positive impact in student papers as well as discussion posts. The positive impact combined with lack of student interaction with me, the librarian, matches research by Tumbleson and Burke (2010), who note that even with students who found embedded librarians in their online courses helpful, only 27% reached out to that librarian with questions or for advice.

Results

After several quarters of embedding and lurking, an opportunity presented itself to prove that the initiatives were working. In the fall quarter of 2012, Lisa had two online sections of Introduction to Business rather than one. Jeneen lurked in one, and the other section became the control group. The class the authors part-

Figure 2. Sample Email for Module 6 Assignment

Email

In your week 6 written assignment, you need to research a software or hardware that facilitates or promotes team collaboration.

1. Make sure to cite the source of your information on the software/hardware that you pick!

2. Think about using Rasmussen College Library's subscription to Faulkner's Database for finding information about team work software. Tip: Once in Faulkner's, click on *Converging Communications* and then on *Conferencing* for a whole list of product profiles, marketplace reports, and tutorials. The Product Profiles will probably be most useful for this assignment.

If you use Faulkner's resources, and have trouble citing, let me or your librarian know! We will try to help you out.

Figure 3. Discussion Post Prompt for Module 9 Assignment

Discussion Post

This week's discussion prompt will probably only have you citing your textbook. However, if you are curious about market segmentation and want to take it a step further, you might want to visit a source that was highlighted earlier in the quarter: **Best Customers: The Demographics of Consumer Demand**.

If you live close to a campus, many of Rasmussen's libraries own a print copy. They also have an online copy via their eBooks via EBSCO subscription. You can link directly to the book at: http://ezproxy.rasmussen.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=345748&site=ehost-live

Why is **Best Customers** so cool? You can search by product or service (everything from Apples and Appliances to spending on travel) and find out who is the most common buyer for that product/service: by age, by education, by geography, by income, by household type, and by race. It is fascinating.

If you use Best Customers, note that you are getting this one from the database eBooks via EBSCO. If creating the reference is confusing, ask your librarian and/or visit http://rasmussen.libanswers.com/a.php?qid=128317 for more information on how to create a reference for an e-book.

nered in was weaker academically. These students had more difficulties writing and researching while the control group seemed better prepared. This assessment was made in part because the control group was writing more substantial posts and taking initial attempts to cite sources. By the end of the quarter, however, the section with a lurking librarian had become more successful researchers and writers than the control group. In specific, the students in the lurking group were integrating quality sources such as Bureau of Labors Statistics web pages into their writing, while students in the control group were still frequently picking sources that were lacking in authority if they were finding backup sources at all. The lurking group had started to understand the idea of backing up their points with outside evidence, while the control group still wanted to cite random concepts or to simply use personal experiences as substantiation. Finally, the lurking group students were starting to grasp the logic and details of APA formatting, while the control group students were still struggling with formatting issues like matching in-text citations to reference items. These results match what is available in the literature. For example, Tumbleson and Burke (2010) point out that "sixty-seven percent [of students who had taken an online course with an embedded librarian] agreed or strongly agreed that it was helpful" (p. 979).

Enamored by our success, we gathered the information Jeneen had provided to the students and created a file of announcements, discussion post starters, and course emails that could be reused in other sections of the same course, with or without an actual lurking librarian. The file, a Word document, was structured chronologically to match the course. Each type of information was identified by a header: email, announcement, discussion post, etc.

One could simply open the file and copy and paste the content into the appropriate module of the online course and upload it. The content was utilized with and without a lurking librarian in the following quarters with mixed success. Most quarters the lurking librarian content seemed to prove helpful to the students because, unlike past quarters, students would use quality resources, integrate sources into their writing, and attempt citing in APA style.

CI principles came into play again during the winter quarter of 2013. Lisa had one section of Introduction to Business in which a handful of students seemed to resent the fact that they were being asked to do things they felt were outside of the content of the course, namely to write clearly, provide researched backup to their statements, and cite their sources in their discussion posts. They seemed to feel that discussion board writing was much more casual than we did. At first, we worried that we were failing these students. Why couldn't they understand how important clear, persuasive writing with basic documentation was? We decided that that even though some of these students were expressing frustration at being assessed on their writing and citing, that that very frustration indicated a developing awareness of the importance of professional communication. That developing awareness is something we can continue working with.

Current and Future Endeavors

We are moving forward in three veins. First, we are sharing the wealth of information. Jeneen shared her file of cumulated discussion posts, emails, video links, and announcements she had used not only with Lisa, but also with the Rasmussen College librarian team so they could lurk with their own Introduction to Business instructors. It is our

hope that this file will also be distributed to other business instructors, so that they may use the content.

Second, we aim to leverage our own success by continuing to apply CI concepts, specifically implementing stable processes and minimizing their variability so we can manage by exception. Accordingly, we hope to edit, modify, and use Jeneen's file of lurking librarian content to supplement future online Introduction to Business courses. One adjustment we will make in the near future is to address the frustration exhibited by some of the students in our winter 2013 section of Introduction to Business. We will be editing the lurking librarian content to help make it more obvious to the students that the writing, research, and citing skills we are sharing are essential to their development as future professionals and that assessment in this area now is to their benefit. Using this newly edited content will also allow us to spend more time focusing on providing individual feedback and support to students who need more help than already provided.

Finally, we couldn't help but notice that much of the lurking librarian material, lessons in formatting and structuring academic papers, searching databases, selecting quality resources, and citing sources, was general in nature. All of these instructional materials could be introduced into any introductory online course with relatively minor adjustments to fit specific assignments and/or disciplinary differences. Thus, it is our hope that other instructors and librarians will seek opportunities to collaborate and partner with one another, use the embedded librarian idea, implement CI concepts to keep improving, and share the results with world.

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