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Introduction

Welcome to this issue of the ***Business Education Innovation Journal***.

The purpose of this journal is to assemble researched and documented ideas that help drive successful learning and motivate business students to learn. The intention is to draw ideas from across both methods and disciplines and to create a refereed body of knowledge on innovation in business education. As a result, the primary audience includes business education faculty, curriculum directors, and practitioners who are dedicated to providing effective and exciting education.

We invite you to read about innovations published and apply in your classroom. We also encourage you to develop your original creative ideas, prepare an article, and submit for review.

This particular issue includes a number of interesting classroom innovations in diverse areas.

Peter J. Billington
Editor

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Shark Attack! Using an Online Tool to Enhance Student Learning

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ABSTRACT

Today's undergraduate, a member of Generation Y or Generation Z, tends to be technologically savvy and an avid multitasker with a short attention span. These traits result in a new set of learning preferences instructors should consider when developing and delivering course content. This paper proposes the use of Brainsharks®, a voice-over video solution, as a way to deliver class content online, thereby freeing up class time for the application of concepts. The implementation of Brainsharks® in an undergraduate sales management class is discussed and preliminary results reviewed. Based on these findings, challenges and opportunities are presented.

Keywords: Gen Y, Gen Z, online content, Brainshark, video solution, teaching tool, classroom innovation

INTRODUCTION

Today's university instructors are witnessing a generational transition, with the traditional college student population including both Generation Y (Gen Y) and Generation Z (Gen Z). Gen Y includes Americans born between 1977 and 1994 (Weiss, 2003); Gen Z children were born between 1995 and 2009 (Williams, 2010) and are just beginning to enter college.

Members of Gen Y and Z appear to share several key traits. Both groups demonstrate an attachment to technology, including a desire to have the latest tech gadget (Oblinger, 2003; Worley, 2011). They are very adept at using computers and technology (Jones, 2012); Gen Y students were introduced to computers in primary and/or secondary schools, whereas members of Gen Z were using computers prior to starting school (Wellner, 2000). Sophisticated multitasking skills are also possessed by both generations (Williams, 2010).

Short attention spans are another hallmark of these two generations; as such, they "…exhibit a marked deterioration in active reading habits, rarely reading newspapers or books" (Jones, 2012, p. 18). Some researchers argue the short attention spans and poor reading habits have resulted from a biological adaptation to the use of new technologies (Black, 2010; Small and Vorgan, 2008). Others suggest that the "[m]ultitasking and focus on technology has eroded their capacity for sustained attention" (Sherman and Lynn, 2009, p. 360). Because they can absorb information at a rapid pace, Gen Y and Z students tend to bore quickly (Worley, 2011).

These changes in the traits of the student population necessitate changes in the way content is delivered. Worley (2011) argues "[e]ducators must continue to examine ways to incorporate new technologies, new modes of communication, and engagement and interaction into the learning environment" (p. 35). Accordingly, the purpose of this paper is to present a communication tool, Brainshark® that can be used to deliver content to students in a way consistent with their learning preferences. In the next section learning preferences of Gen Y and Z students are discussed, and the Brainshark® tool presented. Subsequently an example of class implementation is provided, along with an assessment of effectiveness. Finally, challenges will be discussed, along with other potential uses for this tool.

LEARNING PREFERENCES OF GEN Y AND Z: HOW CAN INSTRUCTORS ADAPT?

Researchers agree that the traits of Gen Y and Z students—technology and multitasking adeptness, along with attention span and reading weaknesses—result in a different style of learning and learning preferences (e.g., Black, 2010; Pelton and True, 2004; Worley, 2011). These preferences include the use of technology to gather content, with action and results seen as more important than the accrual of facts (Oblinger, 2003). Due to their struggle to read books, they prefer visual learning, seeing concepts as opposed to reading about them (Black, 2010). Moreover, these students like to have more control over how they receive messages and information (Williams, 2010). Finally, because they are very active online they prefer being entertained when gathering information and have a positive response to humor (Morton, 2002). Not surprisingly, Gen Y and Z do not respond well to traditional lecture formats (Weiss, 2003).

How can university instructors respond to these learning preferences? According to Wellner (2000), the use of multimedia will become prevalent, and "[e]ye-popping, multi-media effects will be expected" (p. 64). Technology can be used to help students understand academic content and facilitate their ability take the lead in their own learning (Jones, 2012). Brainshark®, a presentation tool designed for businesses, offers one means to deliver content to students in a way that can achieve the goal of facilitating Gen Y and Z learning.

What is a Brainshark®? As noted on the company website (www.brainshark.com), Brainshark® offers cloud-based presentation solutions for businesses. Once created, these presentations can be accessed and viewed on-demand using any computer or mobile device. Analytics provide a means for measuring the effectiveness of video presentations. A key benefit of this format is information retention: "Audiences prefer video presentations by up to 88% over static forms of communications and retain information three times better in this format" (*Benefits & Uses*, 2014).

Creating a Brainshark® is relatively simple. First a Power Point presentation is developed and uploaded to the Brainshark® site. Next the voice over is added using either a microphone/speakers or telephone. Users can then add background music to enhance the video. Free basic accounts are available, making this a viable tool for instructors.

Using Brainshark® in the Classroom: An Example To provide a preliminary test of Brainshark® as a classroom learning tool, the instructor used the presentation solution in a sales management class as part of a larger effort to make the structure of the class more conducive to Gen Y and Z learners. In line with this effort, instructor coverage of reading materials was moved online. Classroom time was dedicated to the application of concepts learned via the Brainsharks®. This revised format refocused class time on action and results (Oblinger, 2003), incorporated multi-media (Wellner, 2000), and at the same time allowed students to be in command of their own learning by controlling the format for receiving information (book, video presentation, or both), the pace at which information was received, and the frequency with which information was reviewed (Jones, 2012). By using the Brainsharks® the instructor sought to facilitate learning and retention of content.

Over the course of the semester fourteen different Brainsharks® were created. Twelve of these videos covered each of the assigned book chapters. The two remaining videos included "bonus material," i.e., material relevant for the class but not in the textbook. Each Brainshark® covered content deemed critical by the instructor. Great care was taken to make the videos entertaining as well as educational. Background music was added to the slides to make them more interesting, and the instructor maintained enthusiasm throughout the voice over. Personality was interjected, as were motion clips designed to add action and visual interest.

Brainsharks® purposely were kept short because short activities are more likely to keep students' attention (Sojka and Fish, 2008). Chapter videos ranged in length from one minute 36 seconds to 12 minutes 15 seconds, with the average of all videos being nine minutes three seconds in length (Table 1). Videos containing the bonus material were slightly longer, running 24 minutes 45 seconds and 32 minutes 38 seconds in length.

Quizzes comprising two short answer questions were used to assess students' knowledge of the material presented in the videos. Six quizzes were given over the course of the semester. Four quizzes covered the book chapters, with one quiz covering each of the bonus material videos.

RESULTS

Initial descriptive information was generated from the analytics provided by the Brainshark® site. The results can be seen in Table 1.

Table 1: Viewing Statistics

Chapter	Length (min:sec)	N	# of Views	Average View per Student	Total Viewing Hours (hrs:min:sec)	Ave. Viewing (min:sec)
1	11:50	41	43	1.05	15:14:15	21:25
2	12:55	41	45	1.02	11:43:39	16:14
3	9:36	41	42	1.02	9:01:25	13:29
4	3:45	41	35	.85	3:20:16	5:43
5	12:17	41	60	1.46	20:42:26	20:42
6	5:10	41	52	1.27	15:25:09	17:47
7	9:34	41	51	1.24	18:06:10	21:18
8	1:36	41	51	1.24	14:41:19	17:17
9	8:33	41	27	.66	6:49:53	15:11
10	11:27	41	25	.61	5:11:58	12:29
11	12:08	41	24	.59	6:33:21	16:23
12	7:13	41	16	.39	1:25:32	5:21
Bonus Material	24:45	41	56	1.37	24:41:58	26:28
Bonus Material	32:38	41	73	1.78	44:29:42	36:34

Forty-one students were enrolled in the class. The second set of bonus materials received the most views (73), with an average view per student of 1.78. Regarding book chapters, Chapter 5 was reviewed most frequently, receiving 60 views and an average view per student of 1.46. Chapter 12 received the least views (16), for an average view per student of .39. Average viewing time ranged from five minutes 21 seconds for Chapter 12 to 21 minutes 25 seconds for Chapter 1. Regarding the bonus materials, average viewing times ranged from 26 minutes 28 seconds to 36 minutes 34 seconds. Clearly the students engaged the final four chapters of the book less than the first eight chapters; this finding may be a result of other materials that were due in the class during the same time period. A correlation analysis revealed no relationship between the length of the video and number of views per student.

Richer detail is provided by the example verbatim from students (Table 2). These comments were collected as part of the semester-end teaching evaluations. Students were asked the following: "Did you like the use of Brainsharks® to present chapter material? Why or why not?" All answers received were positive, although it is worth noting that not all students answered the question. Several students noted that the videos helped them retain information:

> I loved the Brainsharks!!! I'm not the type of person that can engage with educational books and actually retain what I read. I have to have it taught to me so the Brainsharks were like a mini-lecture of the material. SOOOO beneficial!!!!!

Interestingly, several students commented on their poor reading comprehension, confirming information provided by previous research (e.g., Jones, 2012). Other students noted that they used the book as an initial resource, and the Brainsharks® as a supplemental tool:

> I thought the Brainsharks were a huge help in reviewing and retaining the information from the book. The book was good for explaining the information, whereas the Brainsharks really helped me retain the information.

Even when the book was utilized, this student found the video to be more helpful in information retention. Along these lines, some students noted that they found it easier to learn with visual and audio, lending support to Black's (2010) assertion that this generation of students prefers visual learning. The efficiency of the format was also mentioned as a positive aspect of the Brainsharks®, as was the ability to interject the instructor's personality.

Table 2: Example Verbatim

- I thought the Brainsharks were a huge help in reviewing and retaining the information from the book. The book was good for explaining the information, whereas the Brainsharks really helped me retain the information.
- The Brainsharks were great because watching a video and listening to audio is a much better way for me to study.
- The Brainsharks were very helpful. Whenever you made them it was a lot more efficient because you told us what is relevant or not.
- I love the Brainsharks. One because they didn't take a ton of time up. They helped me understand the material better.
- The Brainsharks helped very much. It helped me understand the material a lot better.
- I thought the Brainsharks were a great way to summarize the main points and helped me to gain a better understanding of the material.
- The Brainsharks helped me because I often need to read or go over things multiple times for them to stick, but I don't have time to read 4 chapters in a book multiple times. The Brainsharks helped me retain information.
- Brainsharks were very helpful. I read and do the assigned material but sometimes don't comprehend what I am supposed to. Brainsharks are a great review. I would use them and then go back and read that section I may not have understood in the first place.
- I loved the Brainsharks!!! I'm not the type of person that can engage with educational books and actually retain what I read. I have to have it taught to me so the Brainsharks were like a mini-lecture of the material. SOOOO beneficial!!!!!
- Your Brainsharks were especially helpful for studying - it helped piece together the book. Not to mention, I have terrible reading comprehension so it was nice to have a different medium of learning.
- The use of Brainsharks was a great supplement to understanding the book. Helped me realize the top information in the chapters.
- I loved the Brainsharks they were a great tool especially when it came to taking the quizzes over the book I would always watch the brain sharks right before class to refresh the things I was going to be quizzed on.
- I really enjoyed getting exposure to Brainshark and have already used it outside of Sales Management in my job.
- I thought the use of Brainsharks helped to summarize the information and was useful in understanding the key concepts and points of the material.
- I liked the Brainsharks to review chapter material and thought it was really helpful to remind me of what I read. Plus it was like we were in class with your great personality.
- I thought the Brainshark presentations were probably the most beneficial tool in learning material. Short, simple. Very efficient.
- I definitely used the Brainsharks; they helped summarize the book material into important points.

FINAL THOUGHTS AND CONCLUSIONS

Overall, the use of the Brainsharks® in class proved to be a positive experience for the instructor and students, improving learning retention and opening up class time for application of key concepts. Still, some challenges exist. Although uploading and creating the videos is not difficult, the voice-over can be somewhat time-consuming, depending on the level of perfection required. This will vary by individual instructor; some will be able to record on the first "take," whereas others might require several "takes" to get the desired effect. Incorporating personality and excitement into the videos also requires some forethought. Slide animation is important to keep things lively; personal stories and examples the students can relate to add interest to the voice-over and make the videos more enjoyable to watch. Of course, although it might take some time to develop the initial videos, they can be re-used as long as the content remains current.

The Brainshark® site (www.brainshark.com) permits video voice-over via microphone or telephone. The quality of the voice over varies widely depending on the method used. This semester-long project revealed that minimization

of background noise and improvements of overall sound quality are best achieved with a headset with a built-in microphone. Otherwise, any type of office or hallway noise will be incorporated in the video.

Brainshark® offers both free and paid accounts. Paid accounts offer more opportunities to review analytics, including the opportunity to have students provide contact information prior to watching the video. The inclusion of contact information would permit the instructor to track views by students. Although this option was not available for the present study, future research might explore possible relationships between the number of student views per video, the length of time of student video views, and quiz/test performance. An experimental or quasi-experimental design incorporating a control group could provide even further evidence of the effectiveness of this online video tool.

This study used qualitative comments from students, in the form of secondary data, to assess their perceptions of the video tool. Future research might also incorporate a survey and/or focus groups to gain additional insights. By facilitating an empirical investigation, a survey incorporating concepts such as ease of use, quality of learning, and effectiveness of the tool in comparison to other learning tools, will enhance our understanding of students' learning styles and preferences.

Although this video solution was implemented in the sales management class, it has applications for a wide variety of classes in marketing as well as other disciplines. Any class incorporating a book or other material that could be delivered outside of class would benefit from this tool. Moreover, it can be used in other, more creative, ways. At DePaul University, for example, the instructor requires sales students to develop a Brainshark® for a hypothetical customer, using it as a communication tool to help sell a product (Strunk, 2012). One can imagine similar uses in a promotions class. Online classes, of course, would benefit greatly from the use of this tool. With a little creativity, a wide range of possibilities can be imagined.

Certainly Brainshark® is not the only alternative available for instructors seeking to provide voice-over content to students. Still, because this solution was developed for businesses, it provides a quick, easy, and inexpensive way to develop and distribute interesting, professional-grade videos that students will find enjoyable. Instructors can use voice-over videos to develop a visual, interactive means for students to receive content in a way that provides more control, while at the same time freeing up class time for application of learning. The result is the creation of an environment more conducive to the learning preferences of the Gen Y and Z students.

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Using Student Feedback to Revise a Flipped Operations Management Class

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ABSTRACT

Instructional videos were used to teach 58 students the quantitative component of an operations management course. The course was taught as a flipped class: students watched the videos before class and solved their homework problems during class time. At the end of the course, they completed a questionnaire about their experience. Students who found learning more difficult in the flipped class environment reported that they needed more video examples, often came to class unprepared, failed to benefit from teamwork, implied their grades suffered, and did not appreciate the convenience of watching the videos on their own schedule. The author/instructor will make changes to the course based on these findings.

Keywords: flipped class, flipped classroom, flipped course, operations management class

INTRODUCTION

A few years ago the author began teaching her operations management classes as flipped classes. Over time she experimented with a variety of instructional technologies before selecting her current portfolio of products. When her choice of instructional technologies stabilized, she wanted her students' feedback to guide the next iteration of changes she would make to her classes. Her research objective was to have her students evaluate the course materials, their experience with the various instructional technologies, and flipped classes in general. This study reports the findings of that research.

The flipped class pedagogy has been used to redesign courses from only a few class sessions (7 Things You Should Know About Flipped Classrooms, 2012) to entire courses and even entire curriculums (McLaughlin, Dean, Mumper, Blouin, & Roth, 2013; McLaughlin, et al., 2013; Roth, et al., 2014; Sommerville, et al., 2005). Instructors from a variety of disciplines have flipped their classes. Many of them employ the pedagogy to teach quantitative courses in business (Findlay-Thompson & Mombourquette, 2014), psychology (Deslauriers, Schelew, & Wieman, 2011), statistics (Peters , 2014), the STEM (science, technology, engineering, and mathmatics) disciplines (Herreid & Schiller, 2013), and information systems (Davies, Dean, & Ball, 2013). Class sizes have ranged from small (McLaughlin, et al., 2013) to very large (Deslauriers, Schelew, & Wieman, 2011).

Instructors who teach flipped classes believe that time spent in class can be optimized. Instructional videos can be used to off-load learning at the lower levels of Bloom's taxonomy, and use class time to focus on the upper levels (Sams & Bergmann, 2013). Other instructors appreciate devoting class time to active learning activities (Deslauriers, Schelew, & Wieman, 2011; Love, Hodge, Grandgenett, & Swift, 2014; Roth, et al., 2014), spending more time interacting with students (Bull, Ferster, & Kjellstrom, 2012; Steed, 2012), and providing much needed help with homework assignments (Garrow, Hotle, & Mumbower, 2013; Wilson, 2013).

Despite the advantages associated with what can take place during class time, challenges exist for the work that needs to be completed outside of class. Bull, Ferser, & Kjellstrom (2012) warn of digital inequity that occurs when students do not have adequate access to the Internet and the necessary instrucitonal technologies. Fortunately, at the author's university this does not appear to be a problem because laptop computers are required, and enterprise software and high-speed Internet are available. However, time-related challenges do exist for instructors. If they record their own videos, they must realize that a great deal of time to plan and create the recordings is required (The Flipped Classroom: Increasing Instructional Effectiveness in Higher Education with Blended Learning Technology, 2012; Herreid & Schiller, 2013; Tucker, 2012). And even if instructors use videos that are publically available or subscription-based, crafting a playlist takes time as well (Peters, 2014). Furthermore, there is push-back from students who resist paying tuition dollars to watch videos that are freely available on the Internet (7 Things You Should Know About Flipped Classrooms, 2012), or having to spend excessive amounts of time preparing for class (Findlay-Thompson & Mombourquette, 2014; Prober & Khan, 2013).

Nevertheless researchers cite benefits that outweigh the costs associated with flipped classes. Digital, Internet, and video are resources that should not be squanderd because they are the foundation of time management. They provide students with convenient access to course materials and mitigate the limits of face-to-face instruction (Prober & Heath, 2012), including those student who are struggling to take notes while listening to a live lecture (7 Things You Should Know About Flipped Classrooms, 2012). Moreover, students can replay the video lectures when studying for

exams and instructors will not have to answer the same questions from different students over-and-over again (The Flipped Classroom: Increasing Instructional Effectiveness in Higher Education with Blended Learning Technology , 2012).

Whether instructors record their own videos or create a playlist from stock videos, best practices should be observed. Video run times cannot be interminable. Reasearchers have found that the peak learning period for adults lasts only 10 minutes. Therefore, when recording or choosing videos, instructors should be conscious of this run time limit (Garrow, Hotle, & Mumbower, 2013; Prober & Khan, 2013). Another best practice is to find a way to make students accountable for the videos' contents by requiring students to take a quiz (Herreid & Schiller, 2013; Mangan, 2013) or generating follow-up questions to ask in class (Sams & Bergmann, 2013).

The author was mindful of the above-mentioned research as she tweaked her operations management classes from semester to semester. What follows is a description of the course and classes that existed at the time of this study. The flipped class pedagogy was used to teach the *quantitative* component of the operations management course. This meant that students watched instructional video tutorials or screencasts, took a quiz to test their understanding of the tutorials, started working on their assignment before coming to class, and then finished the homework assignment in class. The tutorial quizzes were due and graded before class began, giving students an incentive to come to class prepared. The author was mindful of the above-mentioned research findings as she developed her flipped classes, and now provides a summary of her current practices.

The video tutorials were created by the author/instructor using Camtasia Relay, audiovisual software for recording screencasts. The videos were stored on the university's server and links to those videos were inserted into SoftChalk Cloud lessons. SoftChalk Cloud is a web-based eLearning authoring tool. Links to the SoftChalk lessons were then uploaded to Desire2Learn, the university's learning management system. The tutorial quizzes were created using the Desire2Learn quiz function, and homework assignments were created in McGraw-Hill Connect, a web-based assignment and assessment platform.

There were nine homework assignments, each consisting of several multi-part problems and focusing on a single chapter's content. Students were required to use operations management models, formulas, equations, and algorithms, as well as Microsoft® Excel to solve the homework problems. For in-class work, students were assigned to teams of no more than four students with each student having his or her own version of the problems to solve. (Using McGraw-Hill Connect, instructors can assign students the same problems with different, randomly generated data.) Class time was then used to complete students' homework assignments with the help of their teammates and the instructor.

METHOD

Sample characteristics

Study participants were students in two sections of the author's junior-level operations management course, a required course for business majors and some nonbusiness majors. Participants were ages 19 to 24 years, and many were international students for whom English was not their first language. Although 58 students were enrolled in the two sections of the course, only 56 students elected to participate in the study.

Survey instrument

At the end of the semester, in exchange for 10 extra-credit points, students were asked to complete, anonymously, a survey about their flipped class experience. The survey was written using Qualtrics software and a survey link was sent to the students' university e-mail address. Participants were given a few days to complete the survey; the survey was closed before the final exam was given, and the bonus points were awarded. The survey inquired about the students' previous experience with flipped classes, their behaviors while viewing the video tutorials, satisfaction with the video quality, preparation for the in-class homework sessions, and their assessment of the operations management flipped class experience. Institutional IRB exemption was requested and received.

Video viewing behaviors

In addition to links to the instructional videos, the SoftChalk lesson content included text and chart information about the various operations management models that were meant to replicate the traditional classroom instruction. In order to solve the problems successfully, students needed to watch and listen to the videos carefully. Positive viewing behaviors would include reading the SoftChalk lesson text and charts, and playing, pausing, and replaying the videos. Fast-forwarding through the videos was discouraged because students might miss key information or

steps. Students who practiced the positive behaviors and avoided fast forwarding the videos were expected to report that the videos helped them complete the homework assignments.

Video quality
The instructional videos or screen casts were designed to support students' learning. For that reason the individual video run times were limited to approximately 10 minutes, and the number of videos created for each lesson were meant to provide the students with enough information to solve the problems. Therefore, the author expected that students who could see and hear the problem-solving process clearly would indicate that the videos explained the solution process satisfactorily.

Preparation for homework sessions
Each class period lasted only 75 minutes, not enough time to complete a homework assignment from start to finish. To be successful, students had to come to class prepared. They and their teammates had to have studied the SoftChalk lessons, taken the tutorial quiz, and at least started the homework problems so they would know what questions they wanted to ask the instructor and their teammates. Students who came to the in-class homework sessions prepared were expected to report that the videos helped them complete those assignments.

Overall satisfaction with the flipped class experience
Previous studies have reported students' beliefs, opinions, and comments about the amount of work involved with taking flipped classes, how the pedagogy did or did not help them learn, and whether or not they would take another flipped class. This author wanted to gauge her students' agreement with several of those same findings. One would expect that students who favored the flipped class pedagogy would be more likely to report they experienced its benefits.

RESULTS

Only five of the 56 respondents reported experience with flipped classes while in high school. However, experience with the pedagogy was higher at the university level. In addition to the operations management class in this study, 29 students, nearly 52%, indicated they had registered for at least one other flipped class during their university career.

One of the initial survey questions required the students to indicate their level of agreement, using a 7-point Likert scale (1 = Strongly Disagree to 7 = Strongly Agree), with the statement that the instructional videos provided enough explanation for them to complete their homework assignments satisfactorily. Due to the small sample size, it was decided to break the 56 respondents into only two groups, those who disagreed with that statement (Likert responses 1 through 3) and those who agreed with the statement (Likert responses 5 through 7). This breakdown resulted in 10 students who reported disagreement, 40 who agreed, and six students who indicated neither agreement nor disagreement with the statement.

In addition to the small sample sizes, preliminary analysis found that both the disagreed and agreed groups failed to conform to a normal distribution. Therefore, it was decided to use nonparametric Mann-Whitney-Wilcoxon-rank sum tests rather than parametric independent t tests to analyze the differences between the two groups (de Winter & Dodou, 2012; Doane & Seward, 2013; Field, 2009; McLaughlin, et al., 2013). Basically, the Mann-Whitney-Wilcoxon test ranks all of the observations from both groups and then sums the ranks from one of the groups which is then compared with the expected rank sum. If the difference between the actual and the expected sum is greater than expected, a significant difference between the groups is detected (Field, 2009).

Differences between the two groups

The author expected that students who reported that the videos did not help them solve their homework problems (10 students) would have statistically significant differences in their responses to the survey questions than those students who indicated the videos were helpful (40 students). Therefore the responses for the four sets of questions—viewing behaviors, video quality, preparation for class, and satisfaction with the flipped class—were tested for differences between these two groups. The results of the Mann-Whitney-Wilcoxon tests at the .05 level of significance, along with Likert questions and scales, are reported for each set of responses. Because the Mann-Whitney-Wilcoxon tests are based on differences in ranked sums, the median scores are included with the means and standard deviations for the two groups.

Video viewing behaviors

It would appear that neither group overwhelmingly practiced the positive behaviors associated with using the instructional videos to learn how to solve the homework problems. See Table 1 for the specific mean, standard deviation, and median scores. Only sometimes did students in both groups read the SoftChalk lesson. More often both groups of students did replay and pause the videos. Students in both groups admitted they sometimes fast-forwarded through the instructional videos. None of the differences between the two groups were statistically significant.

Table 1: Frequency of students' behavior when viewing instructional videos.

	Disagreed That Videos Explained How To Do Homework Assignments		Agreed That Videos Explained How To Do Homework Assignments		
Statement	Mean* (SD)	Median	Mean* (SD)	Median	Significant Difference $\alpha = .05$
I read the lesson in the SoftChalk module while watching the videos.	3.20 (1.03)	3.00	3.58 (1.08)	3.50	No
I watched each video more than once.	3.60 (.97)	3.50	3.63 (1.19)	4.00	No
I paused the videos to make sure I was understanding the demonstration.	4.10 (.99)	4.00	4.40 (.67)	4.00	No
I fast-forwarded through the videos.	3.00 (1.05)	3.00	2.75 (1.03)	3.00	No

*Frequency of the behavior was assessed using a five–point scale 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, and 5 = All of the Time.

Video quality

Regarding the run time and number of videos available for the assignments, the two groups of students differed significantly (Table 2). Those who reported that the videos did not explain how to complete the homework assignments were less likely to agree that the video run times were appropriate (mean = 4.00, SD = 1.80, Mdn = 5:00) than those who indicated the videos explained how to do the homework (mean = 6.03, SD = .64, Mdn = 6.00). With regard to the number of video examples provided, those who belonged to the former group agreed to strongly agreed (mean = 6.00, SD = 1.58, Mdn = 7.00) that they needed more video examples versus the latter group who disagreed more examples were needed (mean = 3.15, SD = 1.75, Mdn = 3.00). However, both groups found the visual and audio qualities of the instructional videos to be satisfactory and there were no statistically significant differences between the groups for these measures.

Preparation for homework sessions

As reported in Table 3, median scores for the students who reported that the videos did not explain how to do the homework indicated that they always attended the homework sessions (Mdn = 5.00), often started the homework before coming to class (Mdn = 4.00, and sometimes completed the homework before class (Mdn = 3.00). Their teammates sometimes attended the homework session (Mdn = 3.00), sometimes began working the homework problems before class (Mdn = 3.00), and rarely to sometimes (Mdn = 2.50) had the assignment completed before the homework session. They and their teammates sometimes/often (Mdn = 3.50) helped each other with their homework.

Table 2: Students' level of agreement with statements describing the quality of the instructional videos.

	Disagreed That Videos Explained How To Do Homework Assignments		Agreed That Videos Explained How To Do Homework Assignments		
Statement	Mean* (SD)	Median	Mean* (SD)	Median	Significant Difference $\alpha = .05$
The run time (in minutes) of the individual videos was appropriate for the demonstration.	4.00 (1.80)	5.00	6.03 (.64)	6.00	Yes
There were not enough videos to help me complete the assignments. I needed more examples.	6.00 (1.58)	7.00	3.15 (1.75)	3.00	Yes
The videos showed the instructor's computer monitor clearly.	5.22 (2.05)	6.00	6.06 (1.00)	6.00	No
I could hear and understand the instructor's narration.	4.56 (2.13)	5.00	6.27 (1.10)	7.00	No
There was too much background noise on the recordings.	2.67 (1.94)	2.00	2.36 (1.67)	2.00	No

*Level of agreement was assessed using a seven–point scale 1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 = Neither Agree nor Disagree, 5 = Somewhat Agree, 6 = Agree, and 7 = Strongly Agree.

The median scores for students who believed that the videos explained how to complete the homework assignments indicated that they always attended the in-class homework sessions and always started the homework assignment before coming to class (Mdn = 5.00). They also reported that to a lesser extent (Mdn = 4.00) their teammates did the same. As for having the homework completed before coming to class, this same group reported that they often did (Mdn = 4.00) and their teammates sometimes did (Mdn = 3.00). But when it came to getting help with the homework assignments, this group indicated that they and their teammates both gave and received help equally (Mdn = 4.00).

When compared to each other, members of both groups reported that their teammates came to class less prepared than they did, with the difference between the two groups being significant for those teammates having actually completed the assignments before class. When describing whether or not they helped each other solve the homework problems during class, students in both groups reported they gave their teammates more help than they received. Students in the group who did not find the videos helpful reported receiving significantly less help from their teammate than did those in the other group.

Table 3: Students' preparation for the in-class homework sessions.

	Students Who Disagreed That Videos Explained How To Do Homework Assignments		Students Who Agreed That Videos Explained How To Do Homework Assignments		
Statement	Mean* (SD)	Median	Mean* (SD)	Median	Significant Difference $\alpha = .05$
I attended the in-class homework sessions.	4.50 (.97)	5.00	4.23 (1.06)	5.00	No
I tried to solve the homework problems before I came to the in-class homework sessions.	4.00 (.82)	4.00	4.41 (.82)	5.00	No
I had my homework assignment completed before the in-class homework sessions.	2.70 (1.41)	3.00	3.51 (1.05)	4.00	No
Most of my teammates attended the in-class homework sessions.	3.20 (1.23)	3.00	3.97 (.99)	4.00	No
Most of my teammates had tried to solve the homework problems before coming to the in-class homework sessions	3.10 (1.20)	3.00	3.64 (.78)	4.00	No
Most of my teammates had their homework assignments completed before they came to the in-class homework sessions.	2.20 (1.14)	2.50	3.03 (.96)	3.00	Yes
I helped my teammates solve their homework problems.	3.50 (.85)	3.50	3.97 (.87)	4.00	No
My teammates helped me solve my homework problems.	3.00 (1.25)	3.50	3.51 (.97)	4.00	Yes

*Level of agreement was assessed using a five–point scale 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, and 5 = All of the Time.

Overall satisfaction with the flipped class experience

Table 4 summarizes the findings for the students' satisfaction with the flipped operations management class. The two groups of students reported neutrality or somewhat agree (Mdn = 4.00 vs. Mdn = 5.00) regarding the flipped class being more work for them, but no significant difference between the two groups was detected. As for the statement about the flipped class being less work for the instructor, students who did not believe the videos helped agreed with that statement (Mdn = 6.00) and students who found the videos helpful when completing the homework assignments tended to be neutral in that regard (Mdn = 4.00). But the difference between the two groups was not significant.

No significant differences between the two groups were found when students were asked about being able to get things accomplished during the homework sessions and with the flipped class helping meet deadlines. But the students who did not find the videos helpful tended to agree less with those statements (Mdn = 5.00 vs. Mdn = 6.00). However, the two groups did disagree significantly in their responses to the statements about the flipped class improving their grades and the convenience of watching the videos. Those students who did not find the videos helpful disagreed that their grades improved (Mdn = 2.00 vs. Mdn = 5.00) and were neutral about the convenience of watching the videos (Mdn = 4.00 vs. Mdn. = 6.00).

Lastly, no significant differences of opinion between the two groups was detected when it came to willingness to take another flipped class (Mdn = 3.00 vs. Mdn = 6.00) or wanting answers to their questions sooner rather than later (Mdn = 7.00 vs. Mdn = 4.00).

Table 4: Students' level of agreement with statements describing flipped classes.

	Students Who Disagreed That Videos Explained How To Do Homework Assignments		Students Who Agreed That Videos Explained How To Do Homework Assignments		
Statement	Mean* (SD)	Median	Mean* (SD)	Median	Significant Difference $\alpha = .05$
The flipped class seemed like more work for students.	4.14 (2.12)	4.00	3.89 (1.94)	5.00	No
Flipped classes are less work for the instructor.	5.57 (1.40)	6.00	3.95 (1.54)	4.00	No
I liked going to class knowing I would get things accomplished that would impact my grades.	4.71 (1.98)	5.00	5.87 (.96)	6.00	No
The flipped class helped me meet deadlines.	3.71 (2.06)	5.00	5.71 (1.14)	6.00	No
I felt the flipped class improved my grades.	2.71 (1.60)	2.00	5.18 (1.33)	5.00	Yes
I liked the convenience of watching the videos when I wanted to watch them.	4.14 (2.04)	4.00	6.11 (.89)	6.00	Yes
I would take another flipped class.	3.29 (1.80)	3.00	5.97 (.94)	6.00	No
I was frustrated when I did not understand a video and had to wait to get answers to my questions.	6.00 (1.53)	7.00	4.29 (1.18)	4.00	No

*Level of agreement was assessed using a seven–point scale 1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 = Neither Agree nor Disagree, 5 = Somewhat Agree, 6 = Agree, and 7 = Strongly Agree.

DISCUSSION AND CONCLUSIONS

The small sample size of only 10 students in the group who found the flipped class learning environment satisfactory is a limitation of this study. Such a small sample made it difficult to detect significant differences between that group and the second group who indicated that the videos did provide sufficient instruction. Therefore, at this time it is not possible to generalize the results of this study to a larger population. Student data collected in future semesters should increase that sample size and make significant differences between the two groups easier to detect, yielding more generalizable results.

However, the significant differences detected between the two groups should be discussed. Many students wrote comments to explain their responses when they answered the survey questions. Students who indicated that the video run times were not appropriate or that there were not enough video examples wrote that the "the homework problems were different from the video examples," I couldn't figure out what I was being asked to do," and "I didn't know what formula to use." Even though the videos were based on textbook examples and the homework problems came from the end-of-chapter problems, comments such as these led the author to conclude that these students expected the homework problems to be essentially the same as the examples in the videos. They were unable to transfer the concepts learned from the video problems to new contexts. Having difficulty transferring something learned to something new is not unusual. Students in both flipped and non-flipped classes experience this stumbling block. The author anticipated this situation and tried to control for it by attempting to replicate the traditional classroom lecture in the videos. The text information in the SoftChalk lessons and charts, plus the video narration, were meant to explain the concepts well enough for students to apply what they learned to the new and different homework problems. Perhaps students in flipped classes who struggle with the transfer of knowledge will need more support.

That struggle carried over to the in-class homework sessions. Students who indicated they needed more examples also reported being less prepared for the homework sessions. They also reported not receiving much help with the

homework problems from their teammates. Justifiably, they would have found it difficult to start, much less complete, the assignments if they did not find the videos helpful. Furthermore, their confusion may not have enabled them to help or by helped by their teammates when it came to completing the homework assignments.

Turning to the feedback about the flipped class itself, students for whom the videos were not helpful reported that the flipped class pedagogy was less work for the professor than for the students. Understandably, they were not aware of how much time the author spent recording the videos and writing the SoftChalk lessons. Nevertheless these students also reported that the pedagogy did not improve their grades or help them meet deadlines. Their time management skills may be at fault here. Flipped classes require students to take more responsibility for their learning and allowing oneself enough time to complete assignments is part of that responsibility. McGraw-Hill Connect provides instructors with a dashboard for each assignment. Instructors can see which students have started a homework assignment and can check their progress. Although homework assignments were available at least a week before their due date, it was not uncommon for more than 50% of the students to wait until the day before the assignments were due to begin working on them.

Lack of time management skills may have affected other measures for the above-mentioned students. They did not fully appreciate being able to view the videos at their convenience, nor did they report much enthusiasm for enrolling in another flipped class, and they did not like having to wait until class time to get answers to their homework questions. Students who were not frustrated by having to wait for answers to their questions commented that the instructor answered their questions by e-mail, during office hours, or by posting the answers to their questions in Desire2Learn Discussion. Help was available for those students who began their assignments in a timely manner.

To summarize, 10 out of 56 students, or approximately 18% of this study's participants, reported that the instructional videos did not prepare them to complete the homework assignments satisfactorily. Those numbers are alarming. On the one hand, this group of students may simply prefer a more traditional pedagogy where instructors teach or lecture on the material during class time and students solve the homework problems outside of class. No pedagogy is the right one for all students. If students believe the flipped class pedagogy creates difficulties for them, the author's department offers several sections of operations management taught by other instructors who use a more traditional pedagogy. Students should be able to select the class that is right for them.

On the other hand, students not completing an assignment, such as a reading assignment, before class is nothing new (Peters & Higbea, 2012). But the ramifications for doing so may be greater for students enrolled in flipped classes. Regardless of any particular reason, the author intends to make four changes to her operations management course based on this study's findings. 1. The web-based class schedule will include a note that indicates the class is a flipped class, with a brief explanation of what that means. The students can then decide if they want to register for the class. 2. The syllabus will emphasize, in a way that it has not before, that the class is flipped and what expectations this sets for the students. When the syllabus is discussed on the first day of class, this information will be underscored. If students do not think the flipped class is right for them, they will have several days during the course drop/add period to register for another section of the course. 3. More instructional videos for each homework assignment will be recorded with the hope that struggling students will find the homework problems easier to solve. 4. The tutorial quizzes that students take after studying the videos will be in McGraw-Hill Connect, rather than Desire2Learn. The author hopes that by choosing quiz questions from the same pool as the homework problems, the perceived disconnect between the videos and the homework questions will be narrowed.

Even though flipped classes are becoming more common, the pedagogy is by no means mature. Changes in and the availability of instructional technologies are encouraging more faculty to try flipping their classes and veteran "flippers" are always tweaking their existing classes. The changes proposed above will create new dynamics for the author's classes and the effects of those changes will need to be monitored, yielding new data to drive improvements in her operations management classes.

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The Frolick & DeTour Model: Role-Playing to Prepare Students for the Legal Environment of Business

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ABSTRACT

Today's business students graduate into an environment where they must take significant responsibility for legal matters. A basic legal education can help students assess risks, conduct preliminary research, and efficiently communicate with professional counsel. This paper describes a series of role-playing exercises that I developed for undergraduate students in a Legal Environment of Business class. The exercises span the entire semester and invite students to take on the role of associates in the fictional business law firm of "Frolick & DeTour LLP." By playing the role of lawyers advising business leaders, students learn and practice the critical skills of (1) attaining substantive legal knowledge, (2) performing detailed legal analysis, and (3) effectively communicating with stakeholders. In this paper, I discuss the value of role-play as a pedagogical tool, provide sample exercises, and describe how I designed the exercises to cumulatively impart key business law skills over the course of a semester.

Keywords: business law, legal environment of business, role-play, legal analysis.

INTRODUCTION

In the aftermath of the 2008 economic crisis, the legal environment of business is changing. Many companies, under pressure to be "lean and mean," made significant cuts to their legal budgets (Haynes, 2009). But legal issues are always present, and companies can pay a hefty price, through litigation, for disputes that might have been pre-empted. Even as legal spending increases with the prospect of economic recovery, companies are keeping more of their legal work in-house, and any work provided to outside counsel is heavily negotiated to reduce the price (PeerMonitor & The Georgetown Law Center for the Study of the Legal Profession, 2014). In this environment, where companies are taking on more responsibility for their legal affairs, it is important for businesspeople to have a basic understanding of the law and legal strategy. Business schools can have a positive impact by teaching future business leaders basic lawyering skills. With just a rudimentary legal education, students learn to manage many legal aspects of a business, reduce risk, and avoid expense down the road. Also, business leaders who learn to "think like lawyers" will be more efficient in their use of counsel -- improving legal outcomes and reducing their lawyers' billable time.

To this end, I have developed a role-playing exercise for business students in my Legal Environment of Business class called "Frolick & DeTour LLP." The students take on the role of associates in a fictional law firm. They receive assignments from clients who have questions about business law. In the beginning, the assignments come by email, but quickly we transition to "real-life" clients (played by fellow professors and community members) who come into our class for consultations. The assignments are consistent with the course material and build upon each other, becoming more complex and requiring more student involvement as the semester progresses. Through these assignments, students develop a host of legal skills – not just legal knowledge. They learn to be proactive in assessing legal issues, collecting relevant facts, and providing in-depth, yet concise, analysis through memoranda and face-to-face "client" communication. I find this model to be highly effective in training students -- not to be lawyers -- but to be managers who can "think like lawyers" when navigating businesses through a complex and changing legal landscape. This paper will describe the skills I seek to impart to my students and the assignments I use to help students develop these skills. I hope that my ideas and experiences will assist other business law teachers to develop similar programs in their classrooms.

LITERATURE REVIEW: ROLE-PLAY AS AN EFFECTIVE TEACHING TOOL

Experiential learning techniques, such as role-playing, long have been recognized as effective in helping students retain and apply knowledge. Teachers in many disciplines, including law, use role-play in their classrooms (Kang, 2012). In preparing my exercises, I reviewed the work of professors at undergraduate and graduate institutions who used experiential learning techniques in their classrooms. I found several law schools that used role-play to

reinforce knowledge and build analytic skills. However, I did not find a significant body of work on the use of role-play to teach business law principles to non-lawyers.

Nathenson (2011) writes about the use of online role-playing simulations to teach "legal doctrine, underlying theory, lawyering skills, and professional values" in the field of cyberlaw. Gouvin (2004) describes efforts by law schools to offer courses focusing on role-play, in order to prepare their graduates for actual law practice. Some law schools offer business law "clinics," which offer a true hands-on approach to learning as students interview, counsel, and represent actual clients, under the supervision of experienced attorneys. Examples include University of Pennsylvania's Entrepreneurship Legal Clinic, Lewis & Clark Law School's Small Business Legal Clinic, and Western New England University School of Law's Small Business Clinic. Hertel & Millis (2002) discuss how role-playing simulations in the law school context can be adapted to other forms of education. In describing such simulations, they write, ". . . participants learned substantive legal principles and processes, developed legal skills, and worked together . . . They learned to manage time, to meet deadlines, and to balance competing interests. Most important, they learned how to interact with others to *apply* what they had learned."

Student motivation is a key element of role-playing simulations. Simulations encourage students to be active participants in the learning process (Greenblat & Duke, 1981). By taking on the role of an authority figure (a business leader or a legal advisor to a business), students become more motivated to learn. They no longer are passive recipients of information. They are active problem-solvers. I found this difference is apparent when comparing homework assignments that use the role-play and those that do not. Within a few semesters, I saw this student "ownership" of problems that professors tout as a key befit of role-play. Students took more pride in their assignments where they took on the role of a problem-solver, despite their knowledge that this role (and the problem itself) was fictional. Allowing a student to take on a role as an authority figure leads the student to become invested in the problem and its solution – and transforms the exercise from something a student has to do into something the student wants to do (Finkel, 2000). Giving students a sense of ownership of the problem provides intrinsic motivation, which in turn promotes knowledge retention (Rhem, 1995).

The fictional nature of the exercise allows instructors to simplify the problem so that the students can focus on specific learning objectives. Students also benefit from the freedom to make mistakes and learn from their failures in a relatively consequence-free environment (Hertel, 2002). However, I try to base the exercises on real-life business law issues that students might encounter upon graduation. The learning objectives for the exercise match up with skills that a business leader might be expected to display as part of his or her employment. Other professors have identified core business skills that can be effectively taught through role-play, including identification of strategic management issues and effectively structuring arguments for managerial action recommendations (Gosen & Washbush, 1999). The Frolick & DeTour method builds off of this prior work, but focuses on the legal aspects of business management. The focus, and the greatest value, of role-play simulations is encouraging students to apply their knowledge to real-life situations. Professors who incorporate role-play into their pedagogy recognize this value. J.B. Cunningham wrote: "Learning is not simply the storage of information, but the ability to use it" (1984). As detailed above, the Frolick & DeTour exercises are not just about imparting legal knowledge, but on encouraging students to apply that knowledge to real-world business situations and communicate the results of that analysis to stakeholders. In creating the exercises, I studied the body of academic work regarding the use and effectiveness of role-play, but I tailored the exercises to the specific learning objectives and subject matter of a Legal Environment of Business course.

ESSENTIAL LEGAL SKILLS FOR BUSINESS LEADERS

Based on my experience as a business law attorney, there are three essential skill sets for effective navigation of legal issues. These are (1) substantive legal knowledge, (2) analytical skills, and (3) client communication. The Frolick & DeTour exercises help students build these skill sets in a fun and systematic manner, with a hands-on approach to legal problem-solving.

Knowing the law: Necessary, but not sufficient

When I ask students what they hope to gain from a class on the Legal Environment of Business, they invariably say something like "I want to learn the law so I don't get in trouble." Certainly, we want to give students a basic knowledge of "black letter law" as well as a sense of how basic legal principles can vary by locality and judicial interpretation. Managers should learn the laws that are most likely will apply to their business, and they should

learn how to do basic legal research. The internet has made access to sources of law, such as statutes, regulations, and case law, readily available to the public. Even specialized case law research tools such as Westlaw and LexisNexis are more and more frequently made available at universities, libraries, and courthouses. And yet this has not made lawyers irrelevant, because knowing the law is not enough. It is only the starting point for a legal education. In fact, one of the first lessons I teach is the value of attorneys and why a business might benefit from retaining professional counsel. The skills that lawyers build in law school and in practice go well beyond "knowing the law." Substantive legal knowledge is necessary, but it is not sufficient. As I taught my first few semesters of the Legal Environment of Business, I noticed that the coursework focused on developing students' substantive legal knowledge. I developed the Frolick & DeTour exercises to help students learn to *apply* that knowledge, and, in doing so, develop two other critical skills: analysis and communication.

The value of legal analysis

The primary value of a modern lawyer is analysis – the ability to apply the law to new factual situations. Law schools recognize this fact. Students learn the basic rules of the law, but they also learn how judges, through case law, have interpreted the law throughout history to apply it to unanticipated scenarios. Law students learn writing techniques, such as the IRAC method (Issue, Rule, Application, Conclusion), that help them present legal analysis clearly and methodically (Turner, 2012). They also learn to consider multiple points of view, to see a case from the viewpoint of an adverse party, which helps in evaluating the case's merit. When it comes time for law students to demonstrate their knowledge (on law school exams), they are not asked multiple choice or fill-in-the blank questions that merely test their knowledge of the law. Instead, they are tested through essay responses to hypothetical questions that examine whether they can apply the law to a previously unknown factual scenario.

The reason law schools emphasize analytical skills is because questions of law are rarely simple, and the answers are rarely obvious. The text of a statute will tell you the legal rule that a court will apply, but that text will not tell you exactly how the rule applies to your situation. You may find case law that you believe to be "on point" – addressing similar legal and factual issues – but still, it is unlikely that the facts in a prior case will be exactly the same as in your situation. A successful lawyer learns to use analysis to "connect the dots" between legal principles and the facts at hand. Furthermore, the parties directly involved in a legal dispute may have their judgment clouded by self-interest. Each side believes it is right, but may have trouble articulating exactly why. And self-interest can lead a party to dismiss the adverse party viewpoint, when the adverse party may actually have arguments that could appeal to a judge or jury. A successful lawyer learns to view a situation objectively, and consider both sides of an issue. By learning to apply the law to unexpected scenarios, organize thoughts in a systematic manner, and consider the opposing party's viewpoint, a party can better evaluate the true strength of its case. Lawyers have special training in this type of analysis, but business students also can learn and benefit from a brief education in analytical principles.

Interview skills and client communication

Analysis is a lawyer's paramount skill, but it is not the end of a lawyer's education. Excellence on law school exams does not guarantee success in the "real world." There is a popular saying among law students that "those who get A's become law professors, those who get B's become judges, and those who get C's become millionaires." I don't think this statement is merely a comfort to those at the bottom of the class curve, I think there is some truth to it. One can have an encyclopedic knowledge of the law and be the best brief writer in the world, and still be ineffective at actual law practice (and vice versa). What's the main difference between law school and law practice? Clients. Legal disputes in the real world involve real people. When you collect information about a legal dispute you are talking to real people. People sometimes forget important facts, or misremember them. People often have their judgment clouded or crippled by emotion. Whether you are dealing with a legal dispute as a lawyer or a businessperson, you are going to have to talk to people, and therefore people skills, such as communication, are very important.

The classic law school hypothetical, in my mind, has a basic flaw. The facts are presented to the students on a silver platter. All the facts students need to do their analysis are provided by the question. But that's not how it works in the real world. Real-life attorneys must interview and investigate, which requires effective communication skills. Clients cannot always articulate their problems effectively. A client may think certain facts are irrelevant when they are, legally, very significant. A client may think certain facts are very significant when they are legally irrelevant. Lawyers often must ask probing questions to refresh a client's memory and to focus the client on pertinent issues. Finally, the client may not even know exactly what it is he or she wants to accomplish. Legal advisors cannot

simply take the facts as presented. They must ask probing questions, and listen carefully to the answers, and sometimes suggest potential solutions that may not have occurred to the client.

FROLICK & DETOUR LLP: INTRODUCTION AND SAMPLE EXERCISES

In this section, I demonstrate how I introduce my students to the law firm role-playing exercise, and provide sample assignments to demonstrate how I use the role-playing exercise to help students develop skills in legal knowledge, analysis, and client communication. The examples I show here are just that – examples that I have found helpful in my class. However, I encourage readers not to concentrate on the specific example, but how I use the examples to teach different skills. In this way, readers can use these techniques to develop their own assignments, in any substantive area of an undergraduate business law course.

Introducing the role-play and setting the tone

The role-play begins with the initial email I send to enrolled students. I tell them that I am attaching the syllabus and the class schedule, and then I add: "As part of the class, you will assume the role of associates in a fictional law firm ("Frolick & DeTour LLP). I have attached a letter with some details." As you can tell from my "New Associate Letter" (**Attachment 1**), I take a light and humorous tone with most F&D exercises. Our fictional clients and adversaries often have joke names, and some of our clients and their problems are amusingly over-the-top. Students more readily engage in learning if they are having fun. Still, I have to walk a fine line so as not to make legal disputes seem frivolous. In real life, lawsuits are not fun. The parties are heavily invested, financially and emotionally. The circumstances that led to the lawsuits may have been very painful and the lawsuits themselves can be protracted and stressful. In encouraging my students to have fun, I do not want then to ignore the gravity of real-life legal disputes. Later, I will discuss Mr. K, a fictional client who has experienced harassment at his workplace, is considering a discrimination lawsuit, and fears retaliation by his employer. Mr. K's problems are experienced by actual employees in the "real world" and have a significant effect on their lives. So I treat this exercise seriously. As I go through some sample F&D assignments, I will mention some of the other areas where setting the tone is important, and how I try to set an appropriate balance between fantasy and realism.

Assignment #1: The role of attorneys in business

I developed this assignment to address a topic I found lacking in most business law textbooks -- the role that attorneys play in advising businesses. As future business managers, consultants, and employees, students will encounter many lawyers – as salaried in-house counsel, as outside counsel retained on a contract basis, and even as opposing counsel in a business dispute. Most students' knowledge of what lawyers do is limited to television shows, which rarely focus on business disputes, and depict lawyers as constantly making spirited arguments before a jury. In reality, most lawyers do transactional work, and never see the inside of a courtroom. And even when a business dispute ends up in litigation, it rarely gets to a jury. Commercial litigators spend the majority of their time involved in motions practice, discovery and settlement negotiations. Few students understand the nature of legal privilege, and the important role it can play in discovery (and few students appreciate the potential scope of modern e-discovery – I expect many of them change their email, Facebook, and Twitter habits after a few of my classes). To address common misconceptions of the role of lawyers in business, I make this the focus of my first assignment. I also use this opportunity to introduce a major "client" that we will assist throughout the course. See **Attachment 2**. I try to have a mix of clients in the F&D exercises, from individuals to large corporations. Sosume Corporation is a very large corporation, which broadens the possibilities for assignments – anywhere from contract disputes and tort cases to antitrust matters and international trade law. Through Assignment #1, I am easing students into the role-play. They are starting to adapt to their role as "attorneys," but this assignment does not require students to master any special skills beyond taking careful notes and presenting the information in their own words. It is a useful way for me to address any major issues students have with grammar and writing style before we get into the more complex assignments.

Assignment #2: The steps in a civil lawsuit

At this point in the class, we are learning about civil procedure – specifically, the steps in a civil lawsuit, from the complaint to the appeal. As I introduce this topic, I let the students know that C.U. Inncourt has decided to hire our firm and will be coming by for a consultation. I try to schedule the consultations for early in the class period so that we can have time for discussion after the client leaves. I prepare for the consultation by setting up two chairs in front of the classroom. I often provide a pad of paper, pen and bottle of water – things a client might appreciate in real life. I dress like a lawyer meeting a client. The actors I recruit to play F&D's clients are members of my

college's faculty and staff. I have been fortunate to get several "clients" who have an acting background, but that is not necessary. I try to provide a mix of male and female clients, and some of the clients are deliberately given androgynous names (e.g., "C. U."). A week or more in advance of the consultation, I send the client a summary of the role that they will play as well as a detailed "script." I permit them to deviate from the script, or "ad lib" if they like. I've found that some of them get into the character and start asking (very good) legal questions that relate to the issue but were not part of the script! It keeps me on my toes. The most important thing is to make the experience easy and enjoyable for your client, so they will want to come back next semester.

See **Attachment 3** for a sample summary and "script" I use to prepare a client for this assignment. I bring an extra copy to the consultation so the client can reference it and just look like they are examining their "notes." I welcome the client and introduce the students as "some of the top associates at Frolick & DeTour." In this first consultation, I take a lead role in the interview, but I call on students to provide details. In this way, the students provide information to the client on the critical stages of litigation. They apply the knowledge that they learned from their textbook and they are rewarded for their efforts – the client is always vocally impressed with the students' knowledge, and I note which students volunteer and use it as part of a class participation grade. The consultation takes about 10 minutes, and then I tell the client we will write up a memorandum.

This first memorandum does not require the students to use analytical skills – they merely need to distill the information they have learned from their reading and lectures and write it up in their own words. In this way, it is similar to Assignment #1. What I have added with this assignment is a client communication aspect. Whereas, in the first assignment, they only had to express their knowledge in writing, now they have to express it orally as well. Even those students who did not talk during the consultation have learned by watching their peers (and knowing that I may call on them next time). They are learning to relate their legal knowledge to a client's specific situation. I'm pleased to find that many of the students, in their memoranda, treat C.U. as a real-life client. The students are becoming immersed in the "world" of Frolick & DeTour. They are no longer college students who have to write an assignment for their professor. They are high-powered business lawyers advising an important client. Even though they are aware that this is all fake, and I, not C.U., will read their papers, I often see an improvement in their work between the first and second assignments, and I believe the role-playing leads them to take more pride and responsibility in their work product. After I grade and return the assignments, I tell the students that C.U. was very happy with their advice and is excited to work with them again. In fact, word is spreading about Frolick & DeTour and my phone is now ringing off the hook with potential clients.

Assignment #3: Equal employment opportunity law

Our new assignment arises from our discussion of equal employment opportunity law – specifically, Title VII of the Civil Rights Act of 1964 and the role of the Equal Employment Opportunity Commission. I introduce the character of Mr. K, a Sikh who has been experiencing harassment at his workplace. I send the students a memorandum where I describe Mr. K's situation and the advice he seeks. See **Attachment 4** for the sample Mr. K memorandum. With Assignment #3, we begin to work on basic principles of legal analysis. A key principle, and one I find many students struggle with, is organization. This is a general writing skill, and not unique to legal writing, but it is of the utmost importance when communicating legal concepts. I start by teaching my students about the IRAC method (i.e., Issue, Rule, Application, Conclusion -- a legal writing structure taught in most law schools).

For the Mr. K exercise, the Rule and Application steps are the most important. I already have identified the legal issues I want the students to address, and they are not graded on the conclusion that they reach, as long as that conclusion was reached through in-depth analysis. What I really want to see from the students in the Mr. K exercises is that they are able to state the legal Rule with particularity, and then, through Application, relate that Rule to the facts that Mr. K has presented. Aside from organizational skills, and application of the law to facts, the Mr. K exercise encourages students to see legal issues from both sides. Although Mr. K is our client, I tell the students that it is not sufficient to simply discuss the evidence and arguments that support his case. They also must look at each issue from the perspective of Mr. K's employer, and determine what evidence and argument the employer might present in its defense. For a lawyer, this is an essential skill – by anticipating your opponent's arguments, you can evaluate the strength of your case and prepare counterarguments. It is also an essential skill for a businessperson. For example, my students, when they enter the work world, will occasionally be on the employer side of business disputes and occasionally on the employee side. As business managers, they will sometimes be a plaintiff and sometimes a defendant. So it is important that they can evaluate a legal issue from both perspectives.

Businesspeople also must engage in negotiations and other adverse proceedings. Learning to anticipate an opponent's position can help businesspeople strengthen their own position, as well as know its limitations.

A few other lessons from the Mr. K exercise: I intentionally left some grey areas in Mr. K's case, and I don't think it is clear how the EEOC or court would view this case. That is an important lesson in itself – that legal issues are often uncertain, and even when it might appear that there has been harm or injustice, that does not mean litigation will offer a satisfactory resolution. Some of the facts are a bit murky – for example, Mr. K is a Sikh, but Mr. K's supervisor appears to think that he is a Muslim. A sign was posted on the factory door, but it is not clear whether the supervisor who made racist comments was responsible for the sign or the policy it dictates. The most diligent students will note these issues and address whether or not they are relevant. They may propose additional discovery that would be helpful for Mr. K's case. Students may engage in legal research to find similar cases (Mr. K's case has some similarities to religious discrimination claims brought by female Muslim employees against clothier Abercrombie & Fitch).

Assignment #4: Intentional torts

I introduce a new client after we start learning about tort law. We have just learned about the types of intentional torts, such as battery, false imprisonment, and invasion of privacy. We also discuss issues of agency and *respondeat superior*. This next assignment is designed to help students learn to apply their knowledge of intentional torts in a business context. I tell the students we have a new client, the famous reality TV show producer Cliff Hanger (or Dolly Gripp, depending on the gender of the person playing the client). This will be our second in-class consultation. As before, I send the volunteer who will be playing Cliff/Dolly an information sheet in advance. See **Attachment 5**.

This assignment builds on the analytical skills developed during the Mr. K assignment, but adds the client communication aspect. For Mr. K, I provided the students a written sheet with all the relevant facts. They only had to focus on the analysis. For this assignment, the students will need to do a legal analysis, but the facts will be presented orally – so they need to pay attention, take careful notes, and ask questions if there is anything they do not understand. Another difference between this assignment and Mr. K is that, in the Mr. K assignment, the legal issues were defined for the students. Here, the students know they need to analyze potential intentional torts, but I do not tell them what those torts might be, or how many (and there are quite a few possibilities). Therefore, this assignment builds on Mr. K because it requires more "issue spotting" from the students. I talked at the beginning of this paper about setting the proper tone. The Mr. K exercise was one of the more realistic and serious exercises. The Cliff/Dolly character and situation is over-the-top and lightens the mood. However, I don't want to imply that intentional torts are a joke. That is why Cliff/Dolly's actions are prospective, and the character is more oblivious than mean-spirited. Cliff/Dolly doesn't intend harm or really contemplate the consequences of "Sequestered!" After the students have turned in their assignments (and explained how Cliff could be liable for almost every intentional tort in existence!), I tell them that Cliff has decided not to go forward with "Sequestered!"

Assignment #5: Forms of business

I hold one final consultation after we study the different legal forms of business – sole proprietor, partnership, corporation, etc. I tell the students that our new client is Joseph College, a recent graduate of our university. Mr. College is planning to start a business of his own with a few friends who also just graduated. He wants our help in analyzing what would be a good legal form for his business, and what roles he and his friends would play in that form of business. For this last assignment, I up the ante. I tell the students that I have a schedule conflict, so I am relying on them to run the consultation themselves. I caution them that the client may not be forthcoming with all the information they need to complete the assignment (and might not even know what information they need), and so they will need to ask probing questions. I tell the students that Joe College will arrive in a few minutes, so they should get prepared. Then I leave.

Here's the twist – I play the role of Joe College. After I leave the classroom, I put on a baseball cap and a T-shirt and make other outfit changes to resemble a college student. Then I come back to the classroom in my new persona – "Excuse me . . . I'm here to see some lawyers?" This gets a laugh and breaks the ice a bit, as the students realize they are not entirely on their own, but it also achieves the important function of allowing the students to take the lead while enabling me to monitor their work and help out if needed. The Joe College exercise thereby incorporates all of the skills from previous exercises – applied knowledge, client communication, legal analysis – and adds the final skill of self-reliance. The students cannot count on me to ask the client questions to elicit the facts they need.

In this exercise, the students need to think about what they need to know in order to complete the analysis. It encourages a "team" atmosphere – if they don't collectively get the information they need for the assignment, they all will do poorly. Mr. College, like many real-life clients, does not know what information his "lawyers" need either. Joe is not legally sophisticated. He is not aware of the different legal types of business or what he needs to know to choose between them. Unless asked specific questions, he will only offer very vague descriptions of his business plans. However, because I play the client, if there is key information that the students did not elicit, I can prompt them – "Oh, do you need to know about . . ."

Joe's business could be anything, and I change the business each semester. In analyzing what legal form of business would be appropriate for Joe, the students must consider things like the potential liabilities of the business, sources of funding, Joe's business partners/ employees, and tax implications. I therefore create "facts" for Joe that touch on each of these areas, and where several legal forms of business may be appropriate. For example, in the past, I have had Joe College proposing to open a shooting range (potential tort liability and some overhead costs) and his potential collaborators have varying degrees of knowledge, trustworthiness, and capacity to contribute capital or labor.

CONCLUSION AND FURTHER RESEARCH OPPORTUNITIES

I implemented the Frolick & DeTour LLP exercises in the Spring semester of 2013. Student reaction to the exercises has been very positive, but, so far, my assessment of their success has been very informal. For example, students will approach me to tell me that they find the exercises useful and entertaining, and students reported on their class evaluations that they found the exercises effective. Also, I can observe firsthand the benefits of the Frolick & DeTour exercises in that students appear to be paying more attention during the exercises, and students who do not normally speak in class are more likely to participate during a role-play. However, I would like to build on this anecdotal evidence of success with a more formal assessment of how the Frolick & DeTour role-play might help students retain knowledge and develop analytical and communication skills.

In the meantime, I encourage other business law professors to experiment with role-play in their classes, using the Frolick & DeTour LLP model as a template, and report on the results. I continue to develop new exercises each semester, and I hope to supplement this article in the future with Frolick & DeTour assignments covering other fundamental business law topics, such as intellectual property, white-collar crimes, and business ethics.

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Attachment 1: New Associate Letter

Frolick & DeTour LLP		
	London	New York
	Paris	Chicago
	Dubai	Los Angeles
	Hong Kong	[Your City]

[Date]

Dear New Associates:

I am pleased to welcome you to Frolick & DeTour LLP, a business-focused international law firm headquartered in [name of your city].[1] As a new associate, you will provide legal advice to key members of the business community.[2]

I trust you enjoyed our lavish recruitment events, which I hear are the envy of every law firm in the world.[3] Jay-Z says hello and hopes you will come party with him again soon.[4] But now it is time to get to work.

At F&D, we advise clients on a broad range of legal issues – including business formation, contract disputes, employment issues, even constitutional law. As F&D's partner in charge of associate training, I will help you understand the complex legal environment in which our clients do business. I will email you when we have new assignments. Until then, I look forward to seeing you at our first training sessions on [date of first class].

Sincerely,

[Name of Professor]

Partner in Charge of Associate Training[5]

Frolick & DeTour LLP

[1] Disclaimer: Law firm does not actually exist.
[2] Not true. This is part of your [course ID] class. Frolick & DeTour's "clients" and "cases" are fictional. We do not provide actual legal advice.
[3] Also not true.
[4] *Id.*
[5] And also your [course ID] professor.

Attachment #2: Role of Attorneys in Business

SOSUME CORPORATION

[date]

[Name of Professor]
Frolick & DeTour LLP
[Your City]

Dear [Name of Professor],

Hello! How are you! It's been a while since we talked. Congratulations on your move to Frolick & DeTour. Great firm. We had some excellent results from F&D's New York office in the past, but I'm told [your city] is really where the action is.

You may have heard that I joined Sosume Corporation a few years ago. I'm sure you've read about us in the press. Our founder and CEO, Itortu Sosume, is a brilliant businessman but is no stranger to litigation. I think last year he spent more time in depositions than he did in the office!

A few months ago, Mr. Sosume fell out of contact with the company. He has always been prone to unusual behavior but this is the first time we lost touch with him completely. Unfortunately, he left us holding the bag on some potentially difficult legal issues. The Board of Directors has appointed me CEO of the company until Mr. Sosume can be found. They also gave me the task of sorting out the legal issues Mr. Sosume left behind.

I am considering hiring your firm to provide legal advice to Sosume Corporation on a number of matters. But because of the expense involved, I may need to justify it to the Board. Could you draft a letter to me describing the role that attorneys play in providing legal advice to businesses and why it might be advantageous for us to hire attorneys instead of dealing with these issues ourselves?

Thank you very much for your time.

C. U. Inncourt

Chief Executive Officer
Sosume Corporation

Attachment #3: Steps in a Civil Lawsuit

Information for C.U. Inncourt Role – Litigation Procedure Consultation

Essential Facts

C.U. Inncourt ("see you in court") is the new CEO of Sosume ("so sue me") Corporation. C.U. was appointed CEO after the previous CEO, Itortu Sosume ("I tort you, so sue me") mysteriously disappeared. Itortu was known as a brilliant businessman, but also for frequently getting sued, in both his private and business life. C.U. took over Itortu's office to find the desk covered with "complaints" – documents from plaintiffs that say Sosume is being sued for various reasons. Even more complaints have come in since C.U. took over.

C.U. recently reached out to her old friend [name of professor], who is a partner at the reputable law firm of Frolick & DeTour ("frolic and detour"). She asked for a letter describing how hiring attorneys might assist Sosume with its legal problems. [Name of professor] sent that letter and C.U. was so impressed she decided to hire Frolick & DeTour to handle some of these issues. But before discussing any specific case, C.U. is looking for some basic advice on legal procedure. So now that these "complaints" have come in, what is the next step? How will a trial proceed and at what points will C.U. need to be involved? Are there any opportunities for Sosume to get out of a case before it goes to trial, or before a jury verdict? What are good times to negotiate a settlement and how will that work?

[Name of professor] will ask his "associates" (the class) to tell C.U. some basic information. Then [professor] will tell C.U. that he will send C.U. a memo with more detailed information. That will conclude the consultation.

Proposed Script (just a guideline -- as long as you stick to the Essential Facts, feel free to change any of this)

[Professor] - Thank you for coming in today, C.U. I've invited some of my top associates to sit in.

C.U. – Thanks. I really appreciated your letter on the role of attorneys and I'm excited to be working with your firm.

[Professor] – Please tell us a little about what brings you in today.

C.U. – I've been working at Sosume Corporation for a number of years now. As you know, it was founded by Itortu Sosume and he was the CEO. He's a brilliant guy but seems to attract trouble. He was a very aggressive businessman and often took risks. I knew there were plenty of lawsuits against Sosume but I never had to deal with any of that until recently. A few months ago, Itortu vanished. He just didn't show up at work and no one has heard from him since. So until he comes back, I was named CEO. I was really excited by the promotion until I went into my new office – Itortu's office, and found it covered with letters from plaintiffs and plaintiff's attorneys. There were documents titled "Complaint" and they all said pretty bad things about Sosume. I'm not a lawyer, but just looking through them it was obvious that we are being sued in a number of courts, for many different things. And it didn't stop there – every few days a new complaint comes in. So I'm really glad to be hiring your firm, so I have someone to help me with this.

[Professor] – We're glad to help. Please send the complaints to my office and I'll start to go through them.

C.U. – Thanks. That will be great. But before we get into any particular case, I just have some basic questions about the process. So now that we have these complaints, what comes next? Do we get to respond? Do we have to go to court on all these cases, or is there a way to make them go away?

[Professor] – (will ask the class to talk about responses to a complaint, including the potential for dismissal).

C.U. – That's great. But if the complaint is not dismissed, what happens then?

[Professor] – (will ask the class to discuss the discovery process and motion for summary judgment)

C.U. – So then we go to trial. How will that work?

[Professor] – (will ask the class to discuss jury selection, witnesses, expert witnesses, role of judge and jury).

C.U. – This is really helpful. I'm particularly interested in these motions to dismiss – any way we can make these cases go away. And maybe opportunities to settle some of them – I don't mind spending some money to get us out of trouble. But this is information overload – could you write all this up an send it to me.

[Professor] – We would be glad to send you a memo. Will Monday work for you?

C.U. – That would be great.

[Professor] – Thank you for coming in. If you hear from the plaintiffs or their attorneys, please tell them we represent you in the matter and ask them to contact me. And it would be a good idea to not discuss any sensitive legal matters with anyone else, even other Sosume officers, without including me in the conversation.

C.U. – Thanks. I'll be in touch.

PRIVILEGED AND CONFIDENTIAL
ATTORNEY-CLIENT COMMUNICATION
ATTORNEY WORK PRODUCT

Memorandum

To: **Frolick & DeTour Associates**

From: **[Name of Professor], Partner, Frolick & DeTour LLP**[6]

Date: **[date]**

Yesterday, a new client contacted me. He believes he has a legal claim against his employer for discrimination under Title VII of the Civil Rights Act of 1964. He is very concerned about possible retaliation from his employer if it becomes known he is contemplating a lawsuit. For that reason he has asked me to keep his name and the name of his employer confidential until he decides how to proceed. I will call him Mr. K.

Mr. K works at a soft drink bottling plant, and has worked there for four years. The plant has a factory floor where machines fill and seal the bottles, which go by on conveyor systems. Mr. K is an accountant and works in an office off of the factory floor. He spends most of the workday in his office, but must cross the factory floor to enter and exit the building. The only machinery in his office is a computer, printer and copier.

Mr. K was born in India and is a member of the Sikh faith. He wears a turban as part of his religious observance. He has never discussed his religion, ethnic background, or national origin with anyone at the plant.

Recently, a new supervisor was hired at the plant. Mr. K overheard the new supervisor making disparaging remarks about Muslims, including referring to them as "towelheads." A week ago, Mr. K went to work and found a sign on the door of the building that read:

"NOTICE: Turbans and other headwraps are not permitted on the factory floor."

Plant security refuses to admit Mr. K to the factory as long as he wears his turban. Mr. K refuses to go to work without the turban.

Let's assume that Mr. K will be able to obtain a right-to-sue letter from the EEOC. I would like you to analyze the legal theories he might argue before a court.

> **1. Could Mr. K sue under the theory of disparate treatment**? What would he need to prove? What arguments might he make? What defenses might the employer raise? What counterarguments could Mr. K make?
>
> **2. Could Mr. K sue under the theory of disparate impact?** What would he need to prove? What arguments might he make? What defenses might the employer raise? What counterarguments could Mr. K make?

[6] DISCLAIMER – Firm may not exist. If litigation persists, discontinue use and contact actual attorneys.

Attachment #5: Torts

Info Sheet for Torts Consultation

Essential Facts: You are Cliff Hanger, owner of the film production company Twisted Productions. You have what you consider to be a great new idea for a reality TV show. The show is called "Sequestered!" The premise is that a group of twelve people will be told that they have been selected as jurors in a high-profile criminal trial against an organized crime figure. For their own protection, they will be sequestered in one floor of a hotel for the duration of the trial. To avoid outside influences on their judgment, they will be banned from watching TV or making phone calls. They will be taken each day to the trial in a van with a security escort, and will spend the rest of their time in the hotel. The trial will last a few weeks.

Actually, there is no trial. The hotel is outfitted with video cameras, and Cliff hopes that this high-pressure environment will create interesting drama for the viewers of the show. In order to increase the tension, Cliff has developed a few ideas:

1. Security guards will be stationed on the hotel room floor and told to restrain, forcefully if needed, any jurors who try to leave the hotel.
2. One of the "jurors" was planted by Cliff and knows the true nature of the show. This juror has been asked to spread false rumors about the other jurors, for example, that two of the jurors, who are married to people not on the show, are having an affair during the sequestration.
3. At one point in the show, Cliff plans to let it "leak" to the jurors that the defendant may be aware of their identities and their families may be in danger.
4. A few of the "jurors" are workaholics with very demanding jobs. They will not be allowed to check in with their work during the period of sequestration.
5. One of the jurors is a famous actress. She is not being told that she will be on TV, but Cliff is hoping that her fame will attract viewers to the show.

Cliff thinks the show will be a big hit and that the "jurors" will forgive the deception once they find out they are reality TV stars. However, the idea just recently occurred to him that some of them might sue once the truth is revealed. He would like to hire the world-famous law firm Frolick & DeTour LLP (pronounced "frolic and detour") to consider the potential tort liability of the show.

Proposed Script - (feel free to change any of this as long as you stick to the essential facts.)

[Professor]: Mr. Hanger, thank you for coming in today. I've invited some of my top associates to sit in on our consultation.

Hanger: Glad to be here. I actually know some folks from your London office. But I hear all the best lawyers work in [your city].

[Professor]: I hope we will live up to that reputation. Please tell us how we can help you.

Hanger: Well, as you know, I'm a TV and movie producer. My films and shows always push the edge, but they've been really popular. I have a great new idea for a TV show. But in the past few days I've started to wonder if I'm going too far with this one. I've had people threaten to sue me before, but it's never actually happened. So I'd like to tell you about the show and maybe you could tell me whether someone could sue me, and if so, how much they might get.

[Professor]: We're glad to help. Maybe you could tell us a little about the show.

Hanger: It's really exciting. I think it will be a huge hit. So I did some research and the top-grossing shows are in two categories – courtroom dramas, and reality TV. So why not put them together? The show is called "Sequestered!" Here's the tag line: "Twelve jurors, one hotel, no escape."

[Professor]: It sounds very interesting.

Hanger: You bet. So we get twelve people and tell them they have been selected as jurors in an organized crime trial. We go through the whole jury process so they think its real, set up a fake courtroom, etc. We tell them the defendant is a high-profile member of an organized crime family and this case will get a lot of news coverage. So for their protection, and to keep them from being influenced, they need to be sequestered.

[Professor]: So sequestered as in, they are kept in a hotel for the duration of trial, and out of contact with others?

Hanger: Exactly. No TV, no phone calls. It's the perfect situation for reality TV. Close quarters, lots of tension. I expect a lot of drama. Oh, and one juror will be a famous actress. I haven't decided who. But she'll think she's on jury duty too. We'll keep them all on one floor of a hotel except for when they go to the trial. Of course, there is no actual trial. It's all fake. And we will have video cameras planted all around the hotel.

[Professor]: I see. And how will you keep them from leaving the hotel?

Hanger: Well, first we will threaten them, tell them they could be in contempt of court. But of course, if one of them gets away it ruins the whole thing. So I'll have security guards at the hotel, and if anyone tries to get away the guards will grab them.

[Professor]: Ok. We will do a full analysis for you, but I do see a few potential liabilities here. Is there anything else we should know about?

Hanger: Well, in case things slow down, I have a few ideas to make it more exciting. For example, I thought one of the jurors could be working for us, and spread rumors about the other jurors. Like, they could spread rumors that two of the jurors are having an affair with each other. I also thought we could get a few workaholics with high stress jobs to be jurors. You know those guys that are checking their email every ten seconds? And then we wouldn't let them check in with work. It would drive them nuts. Oh, and one more thing. It's a little extreme, but I thought one of the security guards might tell the jurors that the defendant has found out some of their identities and their families are in danger. We'll say we are protecting their families, but we won't let them call them. Of course, they won't be in any real danger, because the whole thing is fake. I'll probably save that one in case I really need it. So what do you think?

[Professor]: Ok. I'll want to discuss this with other members of my firm, but I think there are some concerns here. Do you know what a tort is?

Hanger: Nope.

[Professor]: (Will ask the class for a definition and examples).

Hanger: I see. Well I thought lawsuits were possible. But hopefully they won't sue once they realize they will be TV stars. Is there a particular part of this that you think would be considered a tort?

[Professor]: (Will ask the class for their preliminary opinions on liability and damages).

Hanger: Hmm. Well, why don't you write this up for me so I can talk it over with my staff. I guess there are two things I'd like to know. First, what kinds of lawsuits could be brought against me. But second, what they might be able to claim as damages? If you can't give me dollar figures, I'd at least like to hear about what a court or jury might consider in coming up with a number.

[Professor]: We'd be glad to do that. We will put it all in a memorandum. How is ___ for delivery?

Hanger: That would be great.

[Professor]: Thank you very much for coming in today. I'll be in touch.

Meeting the Challenge of Developing Innovative Problem-Solving Students Using Design Thinking and Organizational Behavior Concepts

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ABSTRACT

This teaching brief describes the Innovation and Design Experience for All (IDEA) program at Bryant University, an intensive three-day experiential learning program for 891first-year students to teach them about the process of innovation. The 56 hour experience introduces students to the design thinking process with a learning-by-doing philosophy. Students work in teams on design challenges during the three-day program, mentored by faculty, staff, upperclassmen students, and alumni. Through their work on these projects, and the counsel of mentors, they learn how to innovate using the design thinking methodology. Students learn that traditional strategic planning and decision-making processes are often not well-suited for generating and implementing breakthrough ideas. Design thinking proves beneficial as a process for challenging existing ways of thinking, as well as to generate and test breakthrough innovations. This paper describes the program in detail, offers data on effectiveness, and outlines lessons that we have learned.

Keywords: Action learning, creativity, design thinking, innovation, interdisciplinary learning, programmatic change

INTRODUCTION

Julius Caesar once stated "It is better to create than to learn. Creating is the essence of life." Increasingly, organizations of all kinds have adopted many practices from the field of design to enhance their creative capabilities as a conduit for gaining competitive advantage. Business education is being tasked to do the same to meet the needs of a global, rapidly changing business climate. The path to innovation and creativity requires students to not only imaginatively frame questions and consider multiple perspectives, but to enhance their ability to problem solve, collaborate, brainstorm, and integrate ideas. In essence, today's students need to be adept at integrating across disciplines and working outside of their own academic silos to succeed in the project based, active learning programs popular in many of today's business schools. The result is learning by doing, deciding, and creating.

The recently published Carnegie Report – *Business, Entrepreneurship and Liberal Learning* (Colby, Ehrlich, Sullivan, & Dolle, 2011) - underscores the need to develop ways to better educate business students to be more analytic thinkers with the disposition to consider multiple perspectives when challenged to solve complex problems. The report stresses the need to blend the practices embedded within a liberal arts education to the pedagogies of business. Specifically, as it currently exists, professional business education is founded on the concept of disintegration based on specialization and training. Students are taught to pursue specific goals, such as maximizing profit or creating shareholder value. They learn that problem solving is accomplished through a linear step-by-step process, and come to view innovation as the result of moments of "creative genius" - something which emanates from brilliant minds rather than a disciplined, collaborative process (Brown, 2008). Liberal education focuses more on understanding and evaluating multiple means to an end; developing particular skills such as critical thinking, reflection, and multiple framing (Herrington & Arnold, 2013). Blending these approaches requires those of us who teach business to not only re-examine how we teach and what we teach, but more importantly, *how we think about what we teach* (Nesteruk, 2012).

One tactic for developing curriculum that blends liberal education with business pedagogy, and fills the gaps created by the more linear approach to problem solving, is the process known as "design thinking." Design thinking refers to a method for defining, investigating, and solving complex, ill-structured problems. The design thinking process truly sits at the intersection of business and the liberal arts, as people such as Apple founder Steve Jobs have so eloquently explained (Johnson, 2011). Design thinking does not just represent a concept. It creates a new mindset that challenges the norms of a given problem, focuses on being human-centric and helps people become more comfortable with ambiguity (Drews, 2009). This approach offers a systematic process for structuring a problem,

gathering information, and generating creative multiple solutions (Brown, 2008; Dunne & Martin, (2006). While there are some instances of design thinking being implemented in MBA programs in courses, rarely has it been used at a programmatic undergraduate level in business schools (Collopy, 2010; Drews, 2009).

The purpose of this paper is to demonstrate how a university program was executed, using the concepts of design thinking, to foster critical thinking among student participants while enhancing students' abilities to collaborate, innovate, and reflect. The program focused on topics of creativity and innovation, with a particular emphasis on interdisciplinary approaches to innovation. The ultimate goal is to share lessons learned in developing the program that can be tailored to any classroom setting equally well by adhering to the *process* inherent in the design thinking approach. The following sections will provide an overview of the Innovation and Design Experience for All (IDEA) program, lessons learned from the two years the program has been executed, and suggestions for using similar tactics and approaches in smaller classroom settings.

IDEA PROGRAM BACKGROUND

The Innovation and Design Experience for All (IDEA) program at Bryant University is an intensive three-day experiential learning program for first-year students to teach them about the innovation process. The 56-hour experience introduces students to the design thinking process and asks them to apply it to challenging real world problems. Students learn about the innovation process in a true learning-by-doing mode.

The program has four main learning objectives. First, students learn to apply the design thinking process to work on tough problems and come up with creative solutions. Second, they develop the skills to engage in brainstorming, as well as constructive conflict and debate with other team members. Third, each student discovers his or her cognitive style and learns how to work with others who have different cognitive styles. Finally, students develop the ability to communicate their creative ideas in a concise and clear manner.

Beyond these content-related objectives, the program also has several broader goals and aspirations. It aims to help each first-year student develop a relationship with at least one faculty member, staff member, alumnus, and upperclassmen. Those four mentoring relationships serve to help that student discover their passion and achieve a fulfilling four-year experience at our institution. Research suggests that student retention and learning outcomes improve if they develop a mentoring relationship with at least one faculty or staff member during their first year at an institution (Salinitri, 2005; Tinto; 1993). Moreover, the program aims to bring the first-year students together as a class and further develop their collective identity. Finally, we aim to excite students about the learning process, particularly the experiential nature of much of our curriculum.

PROGRAM ORGANIZATION

The program first ran in January, 2013. What follows is a description of the second iteration of the program, which ran January 2014. The planning for the program took approximately six months. The leadership team consisted of eleven individuals (six faculty members, 2 student affairs professionals, two students and the Director of Teaching and Learning) who collectively directed the effort. They met regularly to plan the IDEA program, using feedback gleaned from the initial program to make significant improvements to the process and schedule. In the fall semester, in preparation for the program, all first-year students attended one of the several one-hour orientation sessions that were offered. At that time, the leadership team presented the students with a list of 36 possible projects (or design challenges) that they could work on during the IDEA program. Students ranked their top five choices. We then tried to match students to one of their top choices. Every student received one of their top five preferences. The projects ranged from business to the arts to the social enterprise sector.

The first-year class consisted of 891 students. We allocated the students across the 36 projects. Most cohorts consisted of 25 students; several had approximately 20 students. Within each cohort, we divided the students into teams of five. Therefore, for most projects, we had five teams of five students working on a particular design challenge. Each team worked independently, though it could share and discuss ideas with the other teams within its cohort.

Four mentors guided each cohort of students. A faculty member served as the lead mentor for each cohort. Given that the IDEA program was interdisciplinary, approximately half of the faculty mentors came from the College of

Art & Sciences, and half came from the College of Business. Three additional mentors guided each cohort: a staff member (from areas such as Advising, Student Affairs, etc.), an alumnus, and an upperclassman who had previously been inducted into our chapter of the Omicron Delta Kappa National Leadership Society. These mentors did not lecture to the students. They served as guides and facilitators throughout the 56-hour experience.

Preparation proved crucial for this program. We provided several four-hour training workshops, in which mentors participated in the Design Thinker Simulation developed by *Experiencepoint* (in collaboration with the leading product design firm, IDEO). These workshops, facilitated by three faculty members (part of the leadership team) certified in design thinking, enabled the mentors to experience the same three phases of the process that the students would encounter during the IDEA program - inspire – ideate – implement, to enable them to better coach their cohorts through each aspect of the process. The mentors also participated in a one day workshop prior to the start of IDEA in January. This workshop went beyond a focus on design thinking. The mentors were engaged in some team-building exercises to help the mentors work together more effectively. We provided information on working with 18 year olds, for those who had limited recent experience with first-year students. Moreover, we provided guidance on topics such as conflict resolution, so that mentors were prepared to intervene when groups reached an impasse or encountered interpersonal conflict. We also developed a session focused on different ways to facilitate brainstorming – since this had been problematic in the past, and tactics for creating a unique classroom experience for students that assisted in fostering cohort identity. Finally, the student mentors received additional training throughout the weekend prior to the launch of the program since they often spent more time with the freshmen students, and had a peer-to-peer rapport that required additional skills and understanding.

PROGRAM IMPLEMENTATION

Day 1

The program itself began with all students convening in the athletic center to meet their cohort mentors and hear welcoming remarks from the president of the university. The students were then given a short overview on design thinking and the objectives of the IDEA program, before being sent to their assigned classrooms to work on a design challenge: to design and build something that can carry a Ping-Pong ball from the top of a zip line string to the bottom in four seconds (or less!). The rules were simple: Use the materials provided to build a Ping-Pong ball carrier that could make it down a zip line – a line of wire running between the back of a chair and a stack of books (Zipline, 2014).

The design challenge was followed in the classroom by an introduction to the basic concepts of design thinking, emphasizing the three stages at the heart of the process: observational field research, team brainstorming, and rapid prototyping. Each student received a packet with some written information on these stages of the design thinking process, with questions and instructions to guide them through their work. These "manuals", coupled with a session that introduced specific phases of design thinking offered in the afternoon (to be explained next) helped the groups stay on track as they moved through the key phases of the design thinking process. Finally, students signed a contract committing to engage in the program with effort and integrity, as well as to produce a prototype for demonstration at the final trade show on the third day. Most important, students were informed that they were **not** permitted to demonstrate their prototype using a PowerPoint presentation; they had to find some other creative way to display their solution to their design challenge.

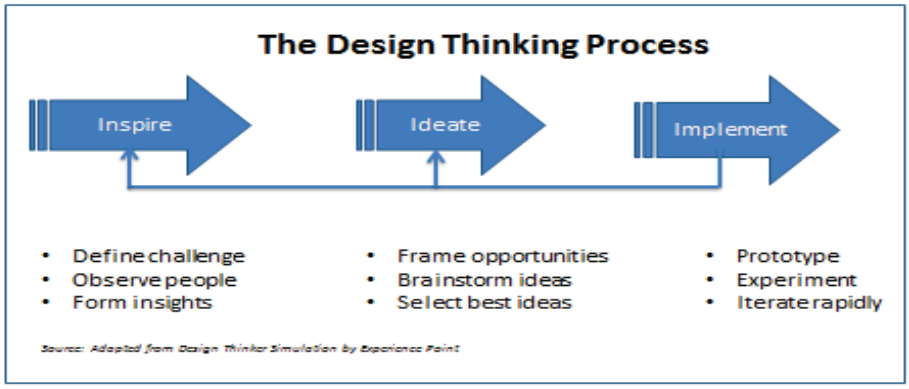
Students returned to the athletic center to debrief the design challenge, and engage in a more in-depth discussion of the design thinking process. Students were first shown Tom Wujec's terrific TED Talk on design thinking (Wujec, 2010). During that six minute video, Wujec describes the results from having run a different type of design challenge - the Marshmallow Challenge - many times with different groups of people. Wujec shows that business school students tend to do poorly on the challenge, while kindergarten students do well. Why? Wujec explains that business school students tend to be trained to find the "one right answer" to problems. They tend to spend a great deal of time jockeying for power within their teams, and then they engage in extensive planning before building the structure. The kindergarten students tend to start playing with the marshmallow! They engage in repeated trial and error. Wujec explains that the youngsters demonstrate one of the key principles of design thinking: rapid, inexpensive prototyping. We share with students how great innovators have used rapid prototyping with examples such as Sir James Dyson, Thomas Edison, and Pixar Animation Studios.

From there, the students are shown ABC News "supermarket shopping cart" video from IDEO (The Deep Dive, 1999). In this episode of the Nightline program, cameras capture the entire design process, as IDEO tries to completely redesign the supermarket shopping cart for the 21st century in only five days. We used the video to highlight the basic principles and phases of the design thinking process.

After lunch, all 891 students participated in one of five Myers-Briggs workshops located throughout the university. These workshops provided hands-on exercises for understanding the different personality temperaments and the impact personality has on team effectiveness and cohesiveness, to improve team performance – one of the goals of the IDEA program.

The team building exercise and zip line prototyping challenge were followed by two additional training workshops – each focused specifically on key phases of design thinking. The collective purpose of each of these workshops was to provide students with specific skill sets they would need to complete their design thinking challenge. The first was an Observation Workshop, underscoring the skills needed in the inspiration phase. One of the faculty members on the Leadership Team had developed a diary of photos taken at a local university. Students were given the challenge of generating from the photos as many observations and insights as possible. In order to complete the assignment successfully, the students were first provided with an overview on *how* to successfully conduct observations, looking for "surprises", trends, "work-arounds," etc. (See Figure 1). These would be the same techniques they would apply during their field research the next day. The final workshop, on Brainstorming, followed the students' visit to the field (discussed next), and introduced them to successful approaches for effective brainstorming.

FIGURE 1: The Design Thinking Innovation Process



The first day of the IDEA program concluded with two events. The first was a social service project. Each student was asked to bring two canned goods when they returned to campus. The canned goods were donated to their cohort and were used initially to create a cohort mascot. The mascot was built out of the cans, and provided an easy mechanism for developing cohort identity while providing 3150 pounds of canned food for the Rhode Island Food Bank. The second event was an interactive performance and presentation by the Providence Improv group. The purpose of this event was to teach students the brainstorming technique of "yes, and"….a method employed by improvisation groups to generate responses to a prompt (Sawyer, 2007). This approach keeps the creative process moving forward, just as brainstorming does in the design thinking process. The first evening concluded with a variety of late night activities to foster fun and more relaxed social interaction.

Day 2

The second day of the IDEA program began with a session on field research preparation – rules of the road for conducting field research in a public arena. Students were then sent from their classrooms to bus loading locations, where each cohort had a bus waiting to take them to sites reflective of their design challenge. Students plus the student mentors boarded buses for travel throughout the greater Providence, Rhode Island area. Locations included shopping malls, movie theaters, playgrounds, museums, auto dealerships, performing arts centers, and hotels. (See Appendix A for a sample list of the type of "design challenges" used in the program.) They had several hours to observe people in these natural settings, much like anthropologists do in their work. Students learned that focus groups and surveys have a number of critical limitations. In focus groups, for instance, we find that people often say one thing, but actually do another in their homes and workplaces. Designers use observation to see what's really going on, drawing from the field of anthropology (Roberto, 2009). Using skills ascertained the day before in their observation workshop, coupled with guidance from mentors, students were provided sufficient information to initiate their projects.

In the afternoon of Day Two, the teams engaged in extensive brainstorming after debriefing their field assignments within their classrooms. We supplied each cohort with materials to help them during this creative process (post-it notes, flip charts, markers, crayons, glue sticks, pipe cleaners, etc.). By the evening, the students were ready to begin the prototyping process. They were reminded of their outcomes from the earlier workshop on prototyping – fail often to succeed sooner, aimed at fostering greater iterations of prototypes before determining the best one to meet the team's specific design challenge needs.

Also during the afternoon of the second day, in partnership with Student Affairs, the IDEA *Rest and Refresh* shop opened – modeled after similar areas in Google's headquarters in Silicon Valley. *Rest and Refresh* included one room with video games, a ping pong table and basketball hoop. A second room offered ten minute massages, while a lobby area was continually filled with different food items. The *Rest and Refresh* shop remained open until 1 am the following morning, and students were encouraged to, as necessary, take a break and eat nachos, get a massage, or compete in a ping pong tournament to rejuvenate and refocus during the remainder of the 56- hour period. Since this was the period of time that coincided with escalated stress as the design challenges were being addressed and prototyped, having the option to "take a break" in the vicinity of the classrooms heightened the level of energy and direct attention focused on each of the projects, and kept them in the "work zone" mentality. Across the cohorts, most teams stayed well into the night building and refining their prototypes to display the next day.

Day 3

During Day Three, the students worked hard to enhance their prototypes and prepare for the trade show at which they would display their solutions to the design challenge assigned to them. The IDEA *Rest and Refresh* shop also reopened, from 9 am -1pm.

Each team within all 36 cohorts displayed their final design challenge prototypes at a trade show, which began at 2 pm. During the trade show, 180 tables were set up in various locations across campus, including the student center, library, and academic building. Teams set up their models, storyboards, videos, and other forms of presentation on these tables. We had 50 judges visit the tables to interact with the students. The judges consisted of alumni, business executives, members of the community, and senior university officials (such as the President, Vice President of Academic Affairs, Vice President of Student Affairs, etc.). The program concluded back in the athletic center with a closing ceremony at which we recognized the 144 mentors that worked with the students. In addition, we recognized the top 12 teams out of the 180 involved. The event concluded at 4:30 pm.

PROGRAM EFFECTIVENESS

Student Feedback

Feedback from students and mentors has been positive. Table 1 provides a sample of the qualitative feedback that we have received. The median overall satisfaction score from the student body for the two-year period equals five (on a seven-point scale). Nearly two-thirds of the students rated the program a five or higher. One student wrote, "This program was an inspiration for many teachers, visitors, and students (like myself). As a participant, I truly believed I learned much more valuable information compared to an 'average' academic classroom setting." The most significant reason for low scores from students concerned the timing of the program. We asked the first-year students to come back from winter break three days early to participate in the program. Many students did not view

this positively. Moreover, many students expressed concern that regular classes began the very next morning, after the close of an exhausting three-day schedule. We intend to reexamine the timing and schedule moving forward.

TABLE 1: IDEA Program Feedback

The best part of the program was…		*My recommendation for improvement is…*	
Student Feedback	**Mentor Feedback**	**Student Feedback**	**Mentor Feedback**
The on-site research was the most fun because it was hands-on	The hands-on design of the program -- students worked collaboratively, and mentors were facilitators.	The program is really intense and then we have classes after it is over. Having a break between the IDEA program and the first day of classes is a MUST.	Match up student mentors, faculty mentors, and staff mentors earlier.
The program is a great way to learn how to work in groups and think outside the box.	A fresh way to view how to approach projects/questions.	It was not emphasized enough that the prototype did not matter as much as the process to get to the prototype	Tell the students from the start that this program is about the process. It seemed that many cohorts were panicked about the final product.
Truly enjoyed forming relationships with not only my team, but also my entire cohort and the mentors involved	Hands on experience for the students (i.e. allowing the students to go on-site and make their own observations and conduct interviews)	More time to assess the problem/ be out in the world, seeing the issue firsthand	Don't tell students what project they got ahead of time; should be shared at the beginning of IDEA or just before, so they don't have time to come up with their solution in advance.
Learned a new way of being an innovative thinker! I also learned so much about myself! Learned what my strengths and weaknesses are.	For the students I think it was the combination of structure up front and then space for creativity.	Give more time to work on the prototype - it can be very stressful to try to finish a project at 11pm.	In order to improve the program I think some faculty need to be more carefully selected.
A fun way to meet faculty, professors, and students that I may have not otherwise. I also enjoyed the chance to solve an issue that was real/substantive.	The ability to interact with first-years and observe and guide them through an extremely though-provoking process. To see them grow over the 3 days, from a state of frustration into one that fostered unlimited creativity, was an awesome sight to see.	Wait to tell the students their topic until we arrive on campus. Since we found out in December, we had been thinking about our projects for a month. It made us have preconceived notions.	I think it is important to have a feature of the program that fosters continuity of the experience throughout students' tenure at Bryant so that they are truly transformed by the time they graduate
How we learned about our personalities and how that helps us in team projects. I thought the IDEA Program was a nice departure from traditional classroom learning	The camaraderie that occurs between faculty, student, and staff mentors.	Some groups were jumping ahead by already making their project without focusing on the design thinking process	Student mentor training was extensive. Faculty and staff mentors could use more training

Mentor Feedback
Feedback from the mentors (faculty, alumni, and upperclassmen students) has been overwhelming positive. Ninety-six percent of our mentors ranked the program a five or higher, resulting in a median score over the two-year period of seven on a seven point scale. Student mentors described IDEA program as a truly transformational experience. Many of them have used their IDEA experience as a crucial selling point in the job search process. One student mentor wrote, "A few months ago when I was asked to be a student mentor for the IDEA Program, I never knew how large of an impact I would have on first-year students. Now, I can't imagine starting off my last semester at Bryant, any other way. Thank you for proving that with a lot of hard work, ideas can become realities." Alumni mentors have cherished the opportunity to advise and counsel our students. One alumnus (a highly successful entrepreneur) wrote, "I wanted to tell you how impressed I was with the IDEA program… The program is incredibly beneficial to the students, and I was amazed at how well they performed. I have been gushing about it to friends, family, and fellow alumni." Additionally, we asked several of our corporate recruiters to serve as judges this year. They came away very impressed with the students' work, and they have indicated a desire to become much more involved in the IDEA program. Finally, the faculty mentors have embraced the process to such an extent they are experimenting with integrating design thinking projects within their individual courses.

LESSONS LEARNED

Four critical lessons emerged from the IDEA program about the teaching of design thinking with undergraduate students. Faculty members must address these issues if they want to increase the student teams' understanding of the design-thinking methodology, as well as its potential.

1. Trust the Process – It's the Journey
2. Balance the Needs for Control versus Freedom
3. Overcome the Risk Avoidance Syndrome
4. Redefine the Concept of "Winning" in Design Projects

Trust the Process
The key fundamental lesson in teaching design-based thinking, especially with first year students, is to trust the process. In our experiences with over sixty-five projects, students have been educated through their academic education to find the one correct solution in the quickest manner. Students have a tendency to engage in a premature solution bias. They jump upon their first project idea and then "back into" this premature solution with their subsequent decisions to prove their ideas were ideal. Even worse, some teams compounded this bias by deciding upon what they were going to do when they first received their assignment and before they conducted their field work and further training. This problem was observed by one student mentor who stated: "Don't tell students what project they got ahead of time; it should be shared at the beginning of IDEA or just before, so they don't have time to come up with their solution in advance."

Along with this decision-bias tendency, faculty members observed that first and second year students have difficulty in brainstorming, even after being shown role models in videos. They are afraid to "let go" and generate wild ideas, defer judgment and build upon the ideas of others. This reluctance of "letting go" can also be seen in their prototyping. They have fewer, inspirational designs to solve their design challenge. When asked to explain their process of the thinking, they struggle at times in illustrating their creation process with visuals, pictures or diagrams. Given these deficiencies, the leadership team during the second year developed a more structured approach to the design process that purposely mitigated the risk of early solution fixation. Students were thoroughly trained and reminded by faculty, staff and student mentors to use the design thinking process. Teams were required to demonstrate and document each step of the design process. Emphasis was placed on how teams were arriving at their solutions and less on the end result. If the students did not complete a particular step, this was seen as an opportunity to coach them and redirect their approach.

Balance the Needs for Control versus Freedom
As outlined earlier, design thinking fosters a disciplined process to stimulate creativity and innovation. It balances a structured methodology that uses designers' tools and techniques to inspire, ideation and implement (Brown, 2008). In teaching this methodology, faculty must learn how control and influence student teams to keep them on task in following the process and carefully eliciting the assumptions that they have relied upon in creating their prototypes. At the same time, teachers need to encourage students to be free with their creativity to achieve projects that are

human-centric, desirable, feasible and viable. In the first iteration of IDEA program, the leadership team discovered that some faculty over controlled the design process. They acted as class production supervisors checking each step of the students' work. Even worse, a few faculty members had their own visions of what the teams' final results should be. Students became discouraged and contentious which led to a number of teacher – student conflicts. At the other end of the spectrum, some faculty members took a laissez faire approach; they let students do what they wanted with little guidance. This encouraged students to skip design thinking steps or do them superficially. These groups went with their first ideas or pre-determined solutions. The resulting projects were less than satisfactory in meeting the criteria for a successful project. Based on these observations, the leadership team agreed that more education was needed for all staff and student mentors in deepening their understanding of design thinking and learning on how to coach project teams. As a result, during the training the second year, faculty members who were highly successful during the January 2013 program were asked to share their ideas on how to achieve the balance between control and freedom. They offered a vision of how they engaged students to follow the process while encouraging them to creatively express themselves and have fun. An open discussion was created based on the following question: "When do mentors (faculty, staff and students) intervene with student groups and when do they let go of the students?" This question and answer discussion created a list of "Dos and Don'ts" for mentors to follow. It cannot be emphasized enough that all faculty, staff and students work together as a team to create this dynamic of balanced control and freedom. Time must be provided before the start of a program so everyone has a coherent philosophy and approach. Student mentors were especially valuable in driving home the methodology of design thinking. Since these students were successful on campus, they served as role models who first year students wanted to listen to and follow their suggestions. In traditional class settings, it is recommended that instructors find ways to use more senior students in guiding student teams in design projects as an important supplementary educational tool.

Overcoming the Risk Avoidance Syndrome

Students have learned during their educational experience in high school and college that the key to success is avoiding mistakes. They become fixed on finding the one, right answer in case studies. This type of problem-solving approach can be seen in how different groups approach the Marshmallow Challenge (Tom Wujec, 2010). In this exercise teams must place a marshmallow on top of the highest freestanding tower of spaghetti strands. Students learned from Wujec's TED talk about how rapid trial and error leads to greater success. To reiterate a point stated in the beginning of the paper, success was reflected in the way elementary students tried a number of prototypes and learned from their failures, whereas the more "educated" groups, such as MBAs, could not seem to collaborate and focus on one correct design. Little time was spent on generating a number of prototypes to see what works. As Tom Kelley, the General Manager of IDEO stated in The Art of Innovation, individuals must: "Fail Often to Succeed Sooner" (Kelley, 2001). In order for individuals to be innovative in their designs, they must overcome their fear of failure.

Carol Dweck has conducted extensive research on the fear of failure and has characterized this syndrome as the problem of a "fixed mindset" versus "growth mindset" in individuals' thinking (Dewck, 2008). Fixed mindset individuals have a tendency to avoid challenges, become defensive to negative feedback, give up more easily and feel threatened by the success of others. In the growth mindset people view the possibility of failure as a way to grow. They stretch themselves, embrace challenges, persist in overcoming obstacles, learn from criticism and see others' success as lessons and inspiration. After observing the teams in year one, we re-designed the IDEA program to ensure that we would create more of a "Growth Mindset" in our students. Since we used the Marshmallow Challenge for the first year, we needed another challenge given it was already known on campus. In addition, we decided that the design challenge selected in the future needed to stimulate more of a rapid prototyping approach. For the second year, a zip-line creativity exercise, described earlier in this paper, was chosen which required students to send a washer down a specified length of line in a prescribed time. This challenge forced students to try a number of attempts to get a satisfactory solution. During the debriefing of the exercise, greater emphasis was placed by the mentors on how the teams learned from their failures. We encouraged mentors to praise students for taking more risks, sharing ideas and generating more prototypes rapidly. This coaching approach was used throughout the IDEA program. We redefined what success meant: it was about following the process and learning to let go to create more and better ideas. They needed to understand that learning from failure was a badge of honor!

Redefine the Concept of "Winning" in Team Design Projects

In year two the IDEA leadership team revised how they extrinsically rewarded superior projects. In the first year of the program, substantial cash prizes were awarded to the teams chosen by the alumni judges as having the best design projects according to alumni judges. Unfortunately, this led to a number of dysfunctional behaviors. First, the event became a competition with "winners and losers." Even though this fit the approach of other team competitions, it failed to acknowledge the number of good design projects that were achieved by the first year class. It distracted students from the important interdisciplinary goals of the course. Second, it reduced the collaboration between different teams. People did not want to share their ideas. Third, it compounded the premature solution bias in teams. They already believed they had *the* idea with which to win the competition. It was about the results and not the journey itself or the process by which they arrived at their solution. Very little prototyping occurred. Fourth, the alumni judges focused on picking a winning team since, as business people, they saw the event as a competition. Little attention was directed toward how different teams arrived at their final project designs.

In the revised model of the second year, the leadership team decided to change the extrinsic reward to more of an intrinsic approach. If one team won in a cohort of five teams, all teams within the winning cohort were rewarded with a President Reception and recognition ceremony. This approach led to greater sharing among different teams within each of the cohorts. Finally, in the second year the judges were trained in-depth in following a grading rubric that placed more weight on the process of design thinking versus the final end product in evaluating different projects. They were coached on how to interview teams about how the teams developed their prototypes and final project models.

CONCLUSIONS

The IDEA program represents a unique approach to teaching students how to apply the design thinking process to complex problems. Students learn that one weakness of traditional planning and decision-making processes is that they tend to move in a linear fashion from analysis to action. Design thinking proves to be much more non-linear and iterative. Moreover, it emphasizes action early in the problem-solving process. Students learn to act (through testing, prototyping, and experimentation), assess the results of those actions, and then iterate quickly to improve their ideas.

At a broader level, students learn that the traditional strategic planning and decision-making processes in organizations prove useful for generating incremental improvements to the existing business model. However, these traditional processes often are not conducive to generating breakthrough innovations. In fact, traditional planning, decision-making, and budgeting processes stymie bold innovation in many cases. Design thinking proves beneficial as a process for challenging existing ways of thinking and for generating breakthrough innovations. Large organizations such as Proctor and Gamble, Gannett, FedEx, and Target have embraced design thinking and achieved positive results.

Students should not come away with the notion that design thinking is a superior problem-solving process though. Traditional approaches and design thinking are not mutually exclusive methodologies. Each has a role in an organization, and they can be complementary. Traditional approaches emphasize efficiency maximization and incremental improvement, both necessary goals in an organization. Design thinking provides a tool for reinventing products, services, and business models. In a turbulent environment, firms need that set of tools more than ever so as to avoid becoming the victims of disruptive innovation by others. The IDEA program provides students with hands-on experiences working with these tools and techniques, resulting in learning by doing, deciding, and creating.

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APPENDIX A: BRYANT IDEA DESIGN CHALLENGE SAMPLE LIST

1. **Playgrounds:** How could we design a playground that encourages and stimulates kids' creativity more effectively?
2. **Public Transportation:** How can we make it easier for families with small children or individuals with disabilities to use public transportation?
3. **Museums:** How could museums in the city of Providence be redesigned and/or how could they market differently so as to attract more visitors?
4. **Movie Theaters:** How can movie theaters enhance revenue and improve customer satisfaction, particularly in an age when many people choose to watch movies at home?
5. **College Classrooms:** How can we redesign college classrooms to enhance learning, improve student satisfaction, and increase faculty-student interaction?
6. **Civic & Political Knowledge:** How can we increase the level of citizens' civic and political knowledge in the United States?
7. **Roger Williams Zoo**: How can the Roger Williams Zoo enhance guest satisfaction?
8. **Apps for College Students in Providence**: What type of app could be developed to help college students get acclimated when they move to Providence for the first time and begin school?
9. **Post Office in 21st Century:** How can the US Postal Service be transformed to survive in the 21st century?
10. **McCoy Stadium:** How can McCoy Stadium (home of the Pawtucket Red Sox) enhance the fan experience during minor league baseball games?

Principles of Economics Textbooks: A Readability Analysis

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ABSTRACT

Selection of a textbook for use in introductory economics courses can be challenging. Many criteria may be considered in such decisions, including a textbook's readability. Using a widely-used readability index, this study analyzes the predicted readability of ten principles of economics textbooks. T-tests are performed to determine whether significant differences exist between the texts. The study finds that one text is more readable than most of the others. The findings can be useful to adopters and editors of introductory economics textbooks.

Keywords: readability, economics principles, textbook, Flesch-Kincaid

INTRODUCTION

The selection of a textbook for use in principles of economics courses is an important decision for faculty. Since introductory economics (one or two courses) is required in the typical business and economics curricula, all students in these majors are affected by their decision. But the text selection process is complicated by the large number of text attributes for faculty to consider. Such attributes may include: a text's pedagogical approach; coverage of material; exhibits, charts, and vignettes; end-of-chapter material; student and instructor supplements; and authors' reputations, as well as instructors' past experiences with the text. Faculty may also wish to consider a text's *readability*.

Readability may be defined as the degree to which a class of people finds certain reading matter compelling and comprehensible (McLaughlin, 1969). "Readability" should not be confused with "legibility," which refers to the ease of being read. Readability, in this context, refers to the qualities of writing which are related to reader comprehension. A variety of techniques have been used to predict readability, including several readability indexes (or formulas) which have been used widely since the 1950s. Examples of readability indexes include SMOG (developed by McLaughlin), Flesch Reading Ease, Flesch-Kincaid Grade Level, Gunning-Fog, and Fry.

Information on readability can be helpful to faculty when making textbook adoption decisions. One of the criteria to which faculty attach the most significance in those decisions is textbook comprehensibility (Smith and DeRidder, 1997), which can be predicted, at least in part, using a readability index. Evidence also suggests that the higher the readability (difficulty) level of textbooks in core business and economics courses, the lower the grade averages in those courses (Spinks and Wells, 1993).

LITERATURE REVIEW

A careful survey of literature identifies only three works that include the study of the readability of introductory economics textbooks. In one study, Gallagher and Thompson (1981), the authors apply the Flesch Reading Ease Index to fifteen principles of economics textbooks. They showed that Elbert Bowden's Principles of Economics: Theory, Problems, Policies (1980, 3rd Edition) was the most readable textbook of the time. In another study, however, McConnell (1982) was able to show that the application of various readability formulas to the same set of introductory economics textbooks did not produce consistent results.

The most recent study of the readability of principles of economics textbooks is that of Tinkler and Woods (2013). This study investigated whether there are differences in readability among ten popular undergraduate macroeconomics texts. The authors applied several readability formulas, including the Flesch Reading Ease Index, to a sample passage in three chapters (GDP, Money, and Unemployment) of each book. The authors were not able to determine the most or the least readable book across the indexes. Some of the studies of textbook readability for other disciplines include: Pender, Stair, Stearns, and Villere (1976) in operations research, Raabe, Stevens, and Stevens (1984) in taxation, Razek, and Cone (1981) in business communication, Shuptrine and Licktenstein (1985)

in marketing, Villere and Stearns (1976) in organizational behavior, and Plucinski, Olsavsky, and Hall (2009), Plucinski (2010), and Plucinski (2011) in accounting.

METHODS

Undergraduate students usually take the introductory course(s) in economics during their freshman and sophomore years. Familiarity with the fundamentals of macro- and microeconomics is critical to a full grasp of the upper level courses in economics and business curricula. A more readable textbook will certainly help students understand the principles of economics and subsequent subject matter.

Previous studies of the readability of introductory economics textbooks use the Flesch Reading Ease methodology, which is a function of the number of words per sentence and the number of syllables per word. Our study uses Flesch-Kincaid index, which is based upon and related to the original Flesch index. Since it can be easily generated using word processing software, a large amount of text can thereby be readily analyzed with results that are objective and easily replicated.

Flesch-Kincaid Grade Level

The Flesch-Kincaid Grade Level has its roots in the Flesch Reading Ease formula developed in 1948 by Rudolf Flesch. In 1975, J. Peter Kincaid tested over 500 enlisted United States (U.S.) Navy personnel on a reading-comprehension test and also on passages from Navy training manuals. This enabled him to derive a version of the Flesch Reading Ease formula which yielded reading grade-level scores. The resulting Flesch-Kincaid Grade Level has since been adopted by the U.S. military services as the basis for deciding whether technical manuals from suppliers meet their readability requirements (Pearson, 2002). The Flesch-Kincaid index is now one of the leading readability indexes. It is used extensively by the U.S. government and others, and it is included as a grammar-checking feature in the word processing software, Microsoft Word (MS-Word).

The Flesch-Kincaid Grade Level formula is based upon sentence length and word length. It rates text on a U.S. school grade level. For example, a score of 11.0 means that an eleventh grader can understand the document. The formula is:

$$(0.39 \times ASL) + (11.8 \times ASW) - 15.59$$

where: ASL = average sentence length (number of words divided by number of sentences)
ASW = average number of syllables per word (number of syllables divided by number of words)
(Pearson, 2002)

This study uses MS-Word to calculate the Flesch-Kincaid Grade Level of select passages. The formula used by MS-Word is confirmed by agreeing the formula above to that specified in the MS-Word help file. The MS-Word calculation is then validated by manually applying the formula above to a 200-word passage and agreeing the result to that provided by the grammar-checking function in MS-Word.

Selection and Adaptation of Text Passages

An examination of the offerings of the five largest publishers of economics textbooks in the United States yields about twenty introductory economics texts currently being published in English. That number does not include the many variations of the main texts by the same author(s). To make this study manageable, a subset is chosen for consideration. However, fairly selecting among the many alternatives is difficult. To make the results useful to the greatest number of instructors while limiting the number of texts, this study examines the most popular (best-selling) introductory economics textbooks.

Discussions with representatives of the five largest publishers of economics textbooks in the United States yields ten major principles of economics textbooks. An examination of the website, *Amazon.com*, confirms that the texts so identified are the ten best-selling introductory economics textbooks at Amazon. The ten texts are listed in Table 1a and Table 1b, along with each textbook's particulars.

A review of the list of each text's ancillary materials reveals comparable offerings among the texts. For students, each text has a study guide and online study aids. For instructors, each text has an instructor/solutions manual, a

testbank, transparencies, PowerPoint presentations, and test generation software. All of the publishers distinguish their product in some way, usually with additional online material. However, it is expected that an instructor will subjectively evaluate the usefulness of any distinctive ancillaries. Therefore, an examination of ancillaries is beyond the scope of this study. This study is limited to the main textbook.

Table 1a: Principles of Economics Textbooks Tested

Authors	Baumol, Blinder	Case, Fair, Oster	Colander	Cowen, Tabarrok	Hall, Lieberman
Title	Economics: Principles and Policy	Principles of Economics	Economics	Modern Principles of Economics	Economics: Principles and Applications
Edition	12	11	9	2	6
Year	2011	2013	2012	2011	2012
Publisher	Cengage	Pearson	McGraw-Hill	Worth	Cengage
ISBN: 978-	538453677	133023800	0078021701	1429239974	1111822347
Chapter Numbers Tested:					
Consumer Choice	5	6	8	3	6
Elasticity	6	5	6	5	5
Production Costs	7	7	9	11	7
GDP	22	21	23	24	18
Fiscal Policy	28	24	30	35	24
Monetary Policy	30	28	28	33	26

Table 1b: Principles of Economics Textbooks Tested, continued

Authors	Hubbard, O'Brien	Krugman, Wells	Mankiw	McConnell, Brue, Flynn	Miller
Title	Economics	Economics	Principles of Economics	Economics: Principles, Problems, and Policies	Economics Today
Edition	4	3	6	19	17
Year	2012	2012	2011	2011	2013
Publisher	Pearson	Worth	Cengage	McGraw-Hill	Pearson
ISBN: 978-	132817257	1429251631	538453059	73511443	132948906
Chapter Numbers Tested:					
Consumer Choice	10	10	21	3	20
Elasticity	6	6	5	4	19
Production Costs	11	11	13	10	22
GDP	19	22	23	27	8
Fiscal Policy	27	28	34*	33	13
Monetary Policy	26	30	34*	36	16

* Topics of Fiscal Policy and Monetary Policy appear together in one chapter in the Mankiw text. Content of the 2 topics were separated for testing.

Six chapters are selected for analysis from throughout the texts, three on microeconomics and three on macroeconomics. The chapters (topics) targeted are those covering: *Consumer Choice, Elasticity, Production Cost,*

GDP, Fiscal Policy, and Monetary Policy. This approach provides passages for analysis from throughout the texts, covering about 20 percent of each text, based upon an average of 30 chapters per text.

A hardcopy of each text is obtained from the publishers. Digital content is then obtained for each of the six target chapters of each textbook by electronically scanning the relevant pages with optical character recognition (OCR) software. All files are then imported into MS-Word for analysis.

Only the sentences in the body of the chapters are subjected to analysis. Appendices are excluded. Since the Flesch-Kincaid formula analyzes only sentences, all material in figures, exhibits, and headings is omitted from analysis. Since material in graphics and vignettes cannot be readily converted to plain text by word-processing software, it is also omitted. End-of-chapter material (e.g., vocabulary, review, problems) is omitted as well, since it is largely quantitative/ tabular in appearance and does not match the textual nature of the Flesch-Kincaid index.

When a colon appears at the end of a sentence, it is replaced with a period when the sentence is originally followed by a calculation, list, or figure. This is necessary because, in the Flesch-Kincaid calculation, MS-Word does not recognize a colon as the end of a sentence. Since calculations, lists, and figures are removed from the text, a sentence with a colon preceding a figure, for example, would have been combined with the one following the figure, thereby inflating the length of the sentence. In that case, replacing the colon with a period "ends" the sentence before the figure. Colons appearing in sentences that eventually ended in a period are unchanged.

After converting, importing and pruning all files, the spelling and grammar function in MS-Word is applied to all files to correct occasional errors that arise and then to obtain the Flesch-Kincaid Grade Level. The text matter in the target chapters is not just sampled; the entire text matter of each of the six target chapters of each textbook is subjected to the Flesch-Kincaid calculation.

RESULTS

Comparison of Textbooks by Chapter

Table 2 shows the Flesch-Kincaid Grade Levels for the six target chapters of each textbook. The mean of the six grade levels for each text (MGL) is also shown. Since the grade level indicates the U.S. school grade level required to understand a text passage, the lower the grade level the more readable the chapter.

Table 2: Computed Flesch-Kincaid Grade Levels of Textbook Chapters

	Textbook (Author, et al)									
Chapter Content	Baumol	Case	Colander	Cowen	Hall	Hubbard	Krug-man	Mankiw	McCon-nell	Miller
Consumer Choice	11.9	9.2	11.2	9.4	9.4	11.9	11.0	9.1	10.0	13.0
Elasticity	12.1	10.2	10.1	10.8	10.5	11.7	11.5	9.9	11.0	10.9
Production Costs	11.8	9.9	11.1	9.5	8.7	11.1	11.3	9.8	10.8	10.8
GDP	11.5	10.9	10.9	11.3	10.5	11.6	11.5	10.3	11.2	11.6
Fiscal Policy	11.7	11.8	11.0	10.6	11.4	13.6	12.5	11.4	13.8	12.0
Monetary Policy	11.4	10.1	13.0	11.8	10.4	12.7	11.7	11.6	12.1	10.7
Mean Grade Level	11.7	10.4	11.2	10.6	10.2	12.1	11.6	10.4	11.5	11.5

An examination of Table 2 reveals that among the ten textbooks analyzed, the Hall textbook is the most readable (has the lowest grade level) for *Production Costs*. That chapter's computed grade level of 8.7 was the lowest for

any chapter among the ten textbooks. In other words, this chapter received the lowest grade level among the 60 chapters under study. Being perhaps the most rigorous chapter in any introductory economics textbook, this low index is a welcome sign for students and instructors. The least readable Hall chapter is *Fiscal Policy* with an index of 11.4; the range for the other texts for this chapter is 10.6 to 13.8. This result is expected, as the topic is fairly rigorous.

With a Mean Grade Level (MGL) of 10.2, the Hall textbook appears to be the most readable. On the other hand, the Hubbard text, with a MGL of 12.1 appears to be the least readable textbook. The ten textbooks were generally more readable for the first three chapters tested than the last three chapters. This is perhaps because the last three chapters deal with the macroeconomics topics that are more complex and therefore more difficult to verbalize.

Overall Comparison of Textbooks

While the entire text of each target chapter is analyzed, those results constitute sample passages relative to the text overall. Therefore, t-tests are performed to determine whether significant differences exist between the textbooks overall. Independent-samples t-tests are performed on the sample means, without assuming equality of variances. Table 3 shows the p-values of differences between the MGLs of each textbook.

Table 3: T-Test Results: P-Values of Differences Between Textbook Mean Grade Levels (MGLs)

Textbook Author, et al. (MGL)	Baumol (11.7)	Case (10.4)	Colander (11.2)	Cowen (10.6)	Hall (10.2)	Hubbard (12.1)	Krugman (11.6)	Mankiw (10.4)	McConnell (11.5)	Miller (11.5)
Baumol (11.7)										
Case (10.4)	.011**									
Colander (11.2)	.251	.137								
Cowen (10.6)	.030**	.695	.268							
Hall (10.2)	.008***	.716	.082*	.468						
Hubbard (12.1)	.376	.007***	.131	.017**	.005***					
Krugman (11.6)	.538	.019**	.433	.053*	.012**	.256				
Mankiw (10.4)	.016**	1.000	.151	.706	.726	.009***	.026**			
McConnell (11.5)	.667	.117	.698	.202	.076*	.370	.868	.124		
Miller (11.5)	.562	.050**	.608	.112	.030**	.274	.848	.059*	.980	
	Baumol (11.7)	Case (10.4)	Colander (11.2)	Cowen (10.6)	Hall (10.2)	Hubbard (12.1)	Krugman (11.6)	Mankiw (10.4)	McConnell (11.5)	Miller (11.5)
	Textbook Author, et al. (MGL)									

*** Statistically significant at .01 level; ** Statistically significant at .05 level; * Statistically significant at .10 level.

The Hall textbook's MGL of 10.2 is significantly lower than those of Baumol and Hubbard (at the .01 level), and Miller and Krugman (.05 level), and McConnell and Colander (.10 level). However, its mean differences with those of Mankiw, Case, and Cowen are not statistically significant. The Hubbard textbook, with a mean of 12.1, is the least readable text; it is significantly higher than Case's, Hall's, and Mankiw's (.01 level), and Cowen's (.05 level).

However, its mean differences with those of Baumol, Colander, Krugman, McConnell, and Miller are not statistically significant.

CONCLUSIONS AND LIMITATIONS

If an instructor places substantial emphasis on readability in selecting an introductory economics textbook, he/she should strongly consider the Hall textbook. Its predicted readability is significantly higher than most of the other textbooks studied. The Mankiw or Case text is a strong second-choice. Hubbard's, on the other hand, should be avoided, unless readability is not a major consideration in the textbook adoption decision. Finally, in terms of readability, there is no compelling evidence to choose or avoid any of the remaining texts.

Editors of principles of economics texts can also use these findings. There is more to comprehensibility of a subject than the readability of text matter. The diagrams, charts, demonstrations, calculations, and figures included in textbooks are intended to aid in the student's comprehension of the subject matter. Nonetheless, long, complicated sentences, while sometimes necessary, may hinder a student's comprehension when used extensively. Textbook editors may use these findings to set their expectations of authors of future introductory economics textbooks.

One limitation in this study concerns readability formulas in general. They assume that the lower the readability level the better; but an unrealistically low readability level may lead to lower transferability of the content. In addition, readability formulas *predict* readability; they do not *measure* it. While there have been many critics that questioned the validity and value of readability formulas, there is ample research to suggest that formulas, despite their faults, can predict whether one piece of text will be easier to read than another (Pearson, 2002).

Secondly, the results of this study should not be the sole basis for judging the appropriateness of a particular introductory economics textbook. Only the main body of each target chapter was analyzed in this study. The calculations, vignettes, charts, exhibits, graphics, figures, and end-of-chapter material are excluded from analysis. Ancillaries such as instructor and student supplements are also not considered. It is likely that an instructor will subjectively evaluate the effectiveness of this material separately from the main body of the textbook.

Finally, as Smith and DeRidder (1997) indicated, when making a textbook selection, faculty attach the most significance to comprehensibility to students, timeliness of text material, compatibility between text material and homework problems, and exposition quality of text, respectively. The first of those criteria, comprehensibility, is addressed (at least in part) by this study. Future studies might address comparisons of texts based upon the remaining criteria.

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Increasing Student Appreciation of A Liability That's Liable To Be Good and Insightful

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ABSTRACT

Firms as varied as retailers, fitness clubs, airlines, and universities each receive cash in return for the obligation to provide goods or services in the future. The resulting obligation could require the firm to honor gift cards, allow use of a fitness club, provide a future airline flight, or allow attendance at courses next semester. A database created from 202 firms' 10-K disclosures revealed that those companies collectively reported unearned revenue of over $51 billion at Fiscal 2013 year-end. Unearned revenue exceeded $250 million for one in six firms and this "good" liability exceeded the firm's accounts-payable balance for one-fourth of the companies. The equivalent of order backlog for a manufacturer, these "good" liabilities represent guaranteed future revenue. Their existence and magnitude can make the discussion of liabilities more interesting and relevant, given that many students have worked at retailers, received gift cards, or booked airline tickets in advance and all have paid tuition ahead of receiving their instruction.

Keywords: unearned revenue, gift cards, "good" liabilities

INTRODUCTION

Ask most businesses whether they prefer assets or liabilities and assets would win hands down. Liabilities are often accepted as a "necessary evil," such as the mortgage needed to finance construction of a factory or an amount due to the IRS. When an accounting instructor introduces the subject of internal control, he/she often mentions that one objective is to safeguard the firm's assets. Should a student ask why there is no need to safeguard the liabilities, the instructor could note that anyone interested in a firm's (or individual's) liabilities is always welcome to take them; if somehow it were possible to keep the asset while having the liability discharged, well that would seem like a good deal. Nevertheless, there is at least one liability whose presence *and* growth over time speaks well for retailers as varied as Amazon.com, The Cheesecake Factory, Starbucks, and Urban Outfitters and service-sector firms such as Angie's List, Netflix, Nutri System, and Southwest Airlines. A classroom discussion of unearned revenue serves to inform students that some liabilities are more desirable than others. Because many students have worked at retailers, received gift cards, or books airline flights in advance, they bring some background knowledge to the classroom that can foster an active class discussion of how these liabilities arise and how they are extinguished. The topic also gains relevance from the fact that students' advance tuition payments contribute to universities' unearned revenue.

A "GOOD" LIABILITY

Unearned (deferred) revenue represents a liability whose presence and growth can be a definite plus for a firm. This liability represents the amount paid in advance by individuals in return for goods or services that they will receive in the near future from the firm. Consistent with accrual-basis accounting, firms do not record *earned* revenue until they have provided the goods or services. In the case of gift cards, the retailer would record no revenue until the card is redeemed. Similarly, an airline would not record ticket revenue until the flight is taken. For newspaper subscriptions, college tuition, and club memberships, accounting standards require that revenue be earned pro-rata, meaning proportionally over the length of the subscription, semester, or membership period.

Obligations arising from the above situations are beneficial for they represent guaranteed future business for *that specific firm*. For example, an Urban Outfitters gift card will not be honored at American Eagle Outfitters and a Southwest Airlines ticket will not be accepted by Delta. In one sense unearned revenue represents the equivalent of a manufacturer's backlog of non-cancelable orders, but with one important difference. Non-cancelable factory orders often do not initially require cash advances from the customer and, accordingly, are not reflected on the firm's financial statements. The manufacturer could comment on order backlog in its 10-K, but this might occur only if the disclosure would place the firm in a favorable light. On the other hand, the situations described above

for retailers, airlines, newspapers, universities, and fitness clubs all feature the receipt of cash prior to the provision of goods or services. Here it becomes *necessary* to include a liability among the firm's obligations and perhaps comment on its nature in a note to the financial statements.

POTENTIAL SIGNALING EFFECT

The change in the unearned-revenue liability would prove insightful if it signals that the firm has either risen or fallen in the public's estimation as a desirable place to receive or gift goods or services. A decline in *today's* balance of unearned revenue at one firm could signify a decline in its earned revenue *tomorrow* if gift cards are now being purchased from a competing retailer, flights are being reserved with a competing airline, and students have enrolled at a different educational institution. On the other hand, a sharp increase in the unearned-revenue liability could signify that the firm's product or service has become more popular in the eyes of consumers.

Do firms in the same line of business present differences in the magnitude and direction of the changes in their unearned-revenue balances? The following section describes a database created to test this relationship.

CREATION OF DATABASE

As a first step in creating the database, balance sheets and accompanying notes were searched in the Fiscal 2013 10-Ks for publicly-held retailers and service firms. In addition to airlines, hotels, and newspaper publishers, the latter would include fitness clubs, weight-management firms, and internet-based entertainment streamers (e.g., Netflix) and service-referral sites (e.g., Angie's List). The search for retailers was aided by reference to the gift-card listing on the Gift Card Granny website. To be included within the database, a firm's beginning and ending balances of unearned revenue had to be disclosed somewhere in its 10-K. While unearned revenue is almost always given its own balance-sheet line by airlines and educational institutions, this occurs only about 50 per cent of the time for retailers. When unearned revenue is lumped together with "other current liabilities" on the balance sheet, that total is usually, but not always, divided into its separate components somewhere in the notes to the financial statements. The selection process yielded a database of 202 firms. A breakdown of those firms by line of business is presented in Table 1.

UNEARNED-REVENUE AMOUNTS AND TRENDS

Taken together, the 202 firms reported $51.7 billion of unearned revenue at year-end in their Fiscal 2013 10-Ks, a sizable amount that was more than one-third as large as the $145.6 billion of accounts payable they reported. It was also observed that

- Fifty-four firms reported an unearned-revenue amount that exceeded their accounts payable. This included most airlines and educational institutions, but also retailers and firms with membership fees.
- For five firms, unearned revenue not only exceeded accounts payable but also was the *largest* liability, current or noncurrent, reported on the balance sheet.
- The median unearned-revenue amount reported by individual firms was $31.8 million.
- Thirty-five firms reported unearned revenue in excess of $250 million at year-end.
- Percentage changes in a firm's unearned revenue during Fiscal 2013 ranged from -44.9% to +416.8%. with a median change of +9.0%.
- Unearned-revenue amounts declined during Fiscal 2013 for one-quarter (51) of the 202 firms.

DIFFERENCES AMONG INDIVIDUAL FIRMS

Comparisons among firms within the same line of business can prove useful in distinguishing between those companies that appear to have become less popular vs. those that appear to have become more popular. Such distinctions could provide *one* input to analysts looking for clues into possible changes in consumer tastes and

preferences. Even if such changes have not impacted firms' *past* sales and earnings trends, they could provide an early indication (or even affirm the conventional wisdom) of *future* success or difficulty for individual firms.

Percentage changes for 60 database firms representing 23 different business lines are shown in Table 2. Within each grouping, firms varied greatly in terms of the percentage change that occurred in their unearned revenue during Fiscal 2013.

POSSIBLE INSIGHTS INTO FUTURE REVENUE TRENDS

Differences among the firms' unearned-revenue trends shown in Table 2 might suggest the following

- Continued growth appears likely for Amazon.com, Angie's List, Netflix, Nutri System, Starbucks, and Urban Outfitters. For these firms, unearned revenue grew by anywhere from 20.8% to 46.3% during Fiscal 2013.

- Challenges facing Apollo Education Group (University of Phoenix), Best Buy, JC Penney, and Weight Watchers have not abated. Their unearned revenue declined by anywhere from 5.2% to 15.3% during Fiscal 2013.

- Declines in unearned revenue for established apparel retailers such as Coldwater Creek (-12.8%), and Abercrombie & Fitch (-10.9%) suggest that they may have lost some appeal with shoppers relative to Lululemon (+9.2%), Cache (+13.4%), Zumiez (+17.6%), and Francesca's (+26.7%).

- Unearned-revenue declines for such traditional restaurants as Bob Evans (-16.5%) and Denny's (-8.6%) suggest that they remain under competitive pressure as The Cheesecake Factory (+24.6%) and Chipotle Mexican Grill (+38.6%) grow in popularity.

- Advance bookings suggest that air travelers appear to continue favoring discount airlines such as JetBlue (+19.0%) and Southwest (+18.5%) over legacy carriers such as United Continental (+1.3%).

The 12.8% decline for Coldwater Creek during Fiscal 2013 represented the third straight year in which its liability for gift cards outstanding had fallen; the declines were 32.4% and 14.5% in Fiscal Years 2012 and 2011, respectively. Declines in unearned revenue could presage a decline in future earned revenue if store traffic and gift-card purchasers have moved to competing retailers. In Coldwater Creek's case, the retailer announced on April 11, 2014 that it would cease operations within months, having been unsuccessful in attracting a buyer for its business. All of its stores were closed by early August 2014.

SUGGESTIONS FOR INSTRUCTORS

1. To begin with, it could be useful to make certain students realize that the receipt of cash from a customer is often not sufficient to record revenue. Instructors have observed that many business students seem to have been born with the cash-basis in their DNA. It never hurts to ask the following of students: "Why does it make sense for firms to consider revenue unearned until they have provided the goods or services to their customers?"

2. Instructors might have students access the latest available 10-Ks or (10-Qs) to determine whether differences in the unearned-revenue trends of Table-2 firms actually did provide insights into future revenue trends. The following are representative of questions that students might be asked to answer based on their financial-statement searches:

During Fiscal 2014,

- Did Amazon.com, Angie's List, Netflix, Nutri System, Starbucks, and Urban Outfitters continue to post impressive revenue gains?

- Did Apollo Education Group (University of Phoenix), Best Buy, JC Penney, and Weight Watchers see their revenues fall?

- Did Lululemon, Cache, Zumiez, and Francesca's fare better than Abercrombie & Fitch?

- Were revenue changes at The Cheesecake Factory and Chipotle Grill more favorable than at Bob Evans and Denny's?

- Did Southwest Airlines and JetBlue experience greater growth than United Continental?

CONCLUSION

Unlike obligations a firm has to suppliers, bankers, or the IRS, unearned revenue represents a "good" liability for the firm, signaling guaranteed future business. Unearned revenue takes many forms, from gift cards not yet redeemed at a retailer, remaining membership periods at a fitness club, airline flights purchased in advance, and advance tuition payments – and it can represent a sizable amount. A database created from 202 firms' 10-K disclosures revealed that those companies collectively reported unearned revenue of over $51 billion at Fiscal 2013 year-end. Unearned revenue exceeded $250 million for one in six firms and this "good" liability exceeded the accounts-payable balance for one-fourth of the companies. Substantial differences were observed in unearned-revenue trends among database firms offering similar goods or services, often reflecting shifts in consumers' preferences for goods and services or in where they shop (bricks vs. clicks). The change observed in a firm's unearned revenue could provide insight as one important input in estimating the likely near-term direction in its *future* sales revenue.

A classroom discussion of unearned revenue serves to inform students that some liabilities are more desirable than others. Because most students have received gift cards, some have worked at retailers that offer such cards, and many have booked airline tickets in advance, they bring some background knowledge to the classroom that can foster an active class discussion. The topic also gains relevance from the fact that students' advance tuition payments contribute to universities' unearned revenue.

Table 1: Lines of Business for Firms in Database

Line of Business	Number of Firms
Retail	
Apparel and accessories	45
Food and restaurants	42
Home furnishings and improvement	12
Department stores	9
Electronics and games	9
Movies and books	7
Variety stores	6
Internet-based	6
Sporting goods	5
Other	14
	155
Services	
Airlines	11
Education	11
Internet-based	11
Hotels	6
Fitness clubs and weight management	4
Newspapers	4
	47
Total firms in database	202

Table 2: Change in Firms' Unearned Revenue during Fiscal 2013 (source: firms' 2013 10-Ks)

Line of Business	Firm	% Change
Airlines	United Continental	+1.3%
	Southwest	+18.5%
	JetBlue	+19.0%
Children's Apparel	Children's Place	+11.0%%
	Gymboree	+17.1%
Coffee	Dunkin' Brands	-1.5%
	Tim Horton's	+15.5%
	Starbucks	+28.1%
Education	Apollo Education (U. of Phoenix)	-15.3%
	Career Education	-12.3%
	Capella Education	+11.2%
Electronics and Games	Best Buy	-8.4%
	GameStop	+6.7%
	HHGregg	+9.1%
Entertainment	Hastings Entertainment	+2.6%
	Netflix	+27.3%
Family Clothing	Stein Mart	+3.9%
	TJX	+12.8%
Fitness Clubs	Life Time Fitness	--23.3%
	Town Sports	-8.7%
Home Furnishings	Ethan Allen	-9.7%
	La-Z-Boy	+29.9%
Internet Retailers	Overstock.com	-2.8%
	Amazon.com	+46.3%
	Zulily	+140.9%
National Dept. Stores	JC Penney	-5.2%
	Macy's	+4.9%
	Nordstrom	+10.4%
National Hotels	Choice Hotels	-16.6%
	Marriott	+12.3%
Newspapers	Washington Post	-7.3%
	Scripps, E.W.	+9.1%
Outfitters	American Eagle	+1.6%
	Urban Outfitters	+20.8%
Regional Dept. Stores	Bon-Ton	-1.4%
	Belk	+9.5%

Regional Hotels	Red Lion Hotels	-19.8%
	Marcus Group	+2.5%
Restaurants	Bob Evans	-16.5%
	Denny's	-8.6%
	The Cheesecake Factory	+24.6%
	Chipotle Mexican Grill	+38.6%
Services	Life Time Fitness	-23.3%
	Shutterfly	+35.1%
	Angie's List	+45.4%
Sporting Goods	Sport Chalet	+1.4%
	Cabela's	+11.0%
	Hibbett Sports	+15.4%
Teen Apparel	Abercrombie & Fitch	-10.9%
	Pacific Sunwear	-5.1%
	Lululemon	+9.2%
	Zumiez	+17.6%
Variety Stores	Target	+3.6%
	Pricesmart	+20.2%
Weight Management	Weight Watchers	-11.4%
	Nutri System	+26.5%
Women's Apparel	Coldwater Creek	-12.8%
	Christopher & Banks	-0.9%
	Cache	+13.4%
	Francesca's	+26.7%

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Barnes & Noble, Bebe Stores, Bed Bath & Beyond, Belk, Best Buy, BJ's Restaurants, Bloomin' Brands, Bob Evans, Body Central, Bon-Ton Stores, Books-A-Million, Bravo Brio, Brinker, Buckle, Build-A-Bear Workshop, Builders FirstSource, Burger King

Cabela's, Cache, Capella Education, Career Education, Carmike Cinemas, Carter's, CEC Entertainment, Cheesecake Factory, Chico's FAS, Children's Place, Chipotle, Choice Hotels, Christopher & Banks, Citi Trends, Claire's Stores, Coldwater Creek, Conn's, Copart, Cosi, Costco, Cracker Barrel, Crumbs Bake Shop

Darden, Dave & Buster's, dELiA*s, Delta Airlines, Denny's Destination Maternity, DeVry Education, Dick's Sporting Goods, Dillard's, DineEquity, Dover Saddlery, DSW, Dunkin' Brands

Einstein Noah, Ethan Allen, Express, Fairway Group, Famous Dave's, Five Below, Foot Locker, Francesca's, Fred's, Frederick's of Hollywood

GameStop, GAP, Genesco, GNC, Good Times Restaurants, Gordman's Stores, Grand Canyon Education, Granite City Food & Brew, Groupon, Guess?, Gymboree

Hancock Fabrics, Hastings Entertainment, Haverty Furniture, Hawaiian Holdings, HHGregg, Hibbett Sports, Home Depot, Hyatt Hotels, IAC/InterActive, Ignite, ITT Educational

J Crew, Jack in the Box, Jamba, JetBlue, Jos. A Bank, Journal Communications, Kirkland's. Kohl's, Kona Grill

L Brands, La-Z-Boy, Lands' End, Learning Tree, Life Time Fitness, Lincoln International, Lowe's, Luby's, Lululemon, Lumber Liquidators

Macy's, Marcus Group, MarineMax, Marriott, Men's Warehouse, Michael's,

Natural Grocers, Neiman Marcus, Netflix, New York & Co., New York Times, Noodles & Co.,Nordstrom, Nutri System, Overstock.com

Pacific Sunwear, Panera Bread, Papa John's, Penney JC, Perfumania, Pier 1, Potbelly, Pricesmart QKL Stores, QVC

Radio Shack, Ralph Lauren, Reading International, Red Lion Hotels, Red Robin, Regal Entertainment, Republic Airways, Restoration Hardware, Ruby Tuesday, Ruth's Hospitality

Sally Beauty, Scripps E.W., Sears Holdings, Shutterfly, Signet Jewelers, Sonic, Southwest Airlines, Spirit Airlines, Sport Chalet, Stage Stores, Stamps.com, Starbucks, Starwood Hotels, Stein Mart, Strayer Educational

Target, Texas Roadhouse, Tiffany & Co., Tile Shop Holdings, Tilly's, Tim Horton's, Tivo, TJX, Town Sports International, Toys R Us

US Airways, ULTA, United Continental, Universal Technical Institute, Urban Outfitters Vistatprint, Vitamin Shoppe

Wal-Mart, Washington Post, Weight Watchers, Weis Markets, West Marine, Wet Seal, Williams-Sonoma,Wyndham, XO Group, Zale, Zulily, Zumiez, Zynga

Gift Card Granny website: http://www.giftcardgranny.ca/

The Strategy Wagon Wheel and Its Application For Teaching Strategy

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ABSTRACT

Strategic planning and its implementation are cardinal management activities, yet neither is entirely instinctive for every business executive or entrepreneur. A focus on operations will often replace both and when one looks at failing companies, an executive focus on operations alone with the resulting loss of market share is often the diagnosis. Yet there is another part to that diagnosis in this era of complexity: effectively using intra/ inter-company analytic and activity relationships, which today are crucial to creating and implementing a strategic plan.

Teaching strategic planning, its implementation and the crucial relationships to both graduate and undergraduate students can be fraught with some of the same issues--among them a lack of student understanding that strategic and collaborative relationships within a business are among the keys for effective operation. This partly derives from the subject silos which exist at many business schools. The Strategy Wagon Wheel© (SWW) enables both executives and students to visualize strategy as the core and understand the necessary relationship of management analyses and activities. The result is an intellectual check-list for executives, particularly when considering a new direction for their companies and good fodder for classroom discussions particularly for student analyses of cases.

KEYWORDS: Strategy, wheel, complexity, liberal arts, management, analogy, evaluation, multi-disciplinary, relationships, collaboration, motivation, spokes, innovation, effectiveness, globalization, accountability, ethics, social responsibility, compliance, decentralization.

INTRODUCTION

Strategy and strategic planning are inexorably the first and fundamental building blocks of management activities for effective operation of both large and small businesses, as well as not-for-profits, in this very global environment. [Markides 2004; see also Magretta 2002]. Strategic planning is also critical for competitiveness in virtually any market, product or service area [Porter 2008]. Yet in this era of complexity, strategic planning has only moderate value if there is not an effective methodology to implement it, to measure its societal and economic effects and to understand and efficiently use the increasingly complex functional relationships [Kantor 2011; Bowen 2012].

In 2012 a short article was published which was called the *Management Effectiveness Circle* (MEC) [Bowen 2012], which formulated a circular diagram to integrate the operational management activities to create a competitively priced and marketable product or service. The components in the circle included, among other things, *consumer-centric innovation, worker motivation, quality as an operational obsession, compliance with the regulatory environment, managerial accountability, risk management* (etcetera). As is illustrated in the Strategy Wagon Wheel© (SWW) diagram, described and shown below, the MEC provided a tertiary part of strategic planning: a check list to implement and measure a pre-determined strategic plan [Bowen 2012]. But as Markides has noted, fundamentals as culture, incentives, structure and people are also needed to implement a strategy [Markides 2004].

It is also evident that other knowledge areas, some from the liberal arts are important for effective strategic and operational management of a business and therefore the implementation of a strategy—sociology, language skills, natural sciences, macro-economics, mathematics, cultural, economic and political history; international relations, ethics and law are among them [Bowen 2014]. The Drucker-Ito School of Management at Claremont Graduate University has, for many years, termed the study of management to be among the liberal arts [Crosby 2014; see also Maciariello & Linkletter 2011].

This brief article is designed to collate these four considerations into an analogy called the Strategy Wagon Wheel (SWW), which illustrates the relationship of strategy to other business subjects and is a tool for teaching strategy, mostly to undergraduate students, as well as offering a visual reference for executives.

DISCUSSION

Why use an analogy? Though the observation is random, my sense, after teaching business for several decades, is the learning skills of undergraduate students are enhanced by the use of analogies and diagrams: they enable

visualization and thus comprehension of broad concepts and relationships[7]. That observation was the original motivation for the analogy of the Strategy Wagon Wheel as a design tool for teaching courses on strategy.

The Strategy Wagon Wheel analogy illustrates that at the center, strategy is the fundamental core for the operation of a company, which is thus the hub or center of the wheel. The several key related subjects become the ball bearings or lubricants which enable the wheel to turn around the axle, which, if one takes the analogy a step further, might be the owners or stockholders. Corporately, the lubricants add efficiency to the strategic planning process. Next, the spokes branch out, which support the wheel and thus implement the strategy. Finally the analogous rim of the wheel collaboratively connects all the parts and allows the wheel to turn forward, thus enabling all the strategic planning components to connect, collaborate and operate together (thus creating the corporate organizational structure) which moves the corporation competitively forward. The SWW therefore can supplant the earlier Management Effectiveness Circle , because much of the contents of the MEC [Bowen 2012] can be incorporated into the strategy wheel, with strategy as the center or "hub".

To take the analogy a step further, if one adds key people, the maker of our fictional wheel must have learned how to construct the wheel and that means the wheel-maker must know something of the history of wheel making. The connection to the CEO? A knowledge of the history of product development and related market arenas (among other things). The wheel-maker may also be charged with improving the new wheel, which from a management perspective, of course, is innovation and creativity. Connection to the CEO? The need for a technical and market knowledge of what the next iteration of the product arena might be.

So what subjects become the analogous lubricating ball bearings and which subjects become the spokes? The analogous ball bearing subjects, which enable strategy and strategic planning to occur, are shown in (A) below. They are the analyses which must exist to create strategy. Heading (B) shows the analogous spokes or implementation subjects—the functional or operational management activities, some of which are part of the earlier MEC.

(A) Analytics to Create Strategy (The "ball bearings" from the analogy)

(1) The history of management thought as it applies to modern decision-making. [Wren 2005].
(2) Michael Porter's Five Forces (+1), the several value chain concepts and their effect on strategic planning [Porter 2008; Magretta 2011].

(3) Market groups and markets as a strategy driver [Barney 2003; Hamel & Prahalad 1994].

(4) Core Competencies and their impact on strategic planning [Hamel & Prahalad 1994].

(5) The Real Options Approach as an evaluative methodology for competing strategies [Copeland & Tufano 2004].

(6) SWOT/SFAS and the ability to evaluate the external and internal environments as strategy drivers [Wheelen & Hunger 2006].

(7) An organizational structure that promotes collaboration [Macy & Izumi 1993].

(B) The Strategic Implementation Subjects (the "spokes" from the analogy). This partly follows the concept of the 10 F*unctional Strategies* described by DeKluyver & Pearce [2012]:

(1) Using globalization, diverse markets and cultures and their strategic management applications for production and customers [Markides 2004].

(2) Leadership, managing people, motivating job performance, communication and creating work environment that promotes collaborative worker dynamics [Pfeffer 1998].

[7] In a related observation this methodology seems less effective for graduate students of management unless the diagram is statistical.

(3) Trending toward organizational decentralization with teams as the basic organizational structure and their importance on strategic planning in the 21st century. [Peter Drucker per Maciariello & Linkletter 2011].

(4) Using the product, executive and corporate life cycles as they affect strategic planning. [Helfat & Peterof 2003].

(5) Using innovation as a basic corporate resource and building block [Magretta 2002].

(6) The information-based economy, the JIT value chain and its impact on implementation of strategic planning [Friedman 2005].

(7) Governance, business size, FP or NFP, and their impacts on the effectiveness of the decision-making processes [Wheelen and Hunger 2006].

(8) Managerial accountability, ethics and social responsibility, values based leadership, conflict negotiation and evaluating the legal/regulatory environment [Bowen 1953/2013; Schermerhorn 2002].

(9) Risk and crisis management as they affect strategy implementation [Schermerhorn 2002].

(10) Measurement as a key for successful implementation of strategic planning [Peter Drucker per Maciariello & Linkletter 2011].

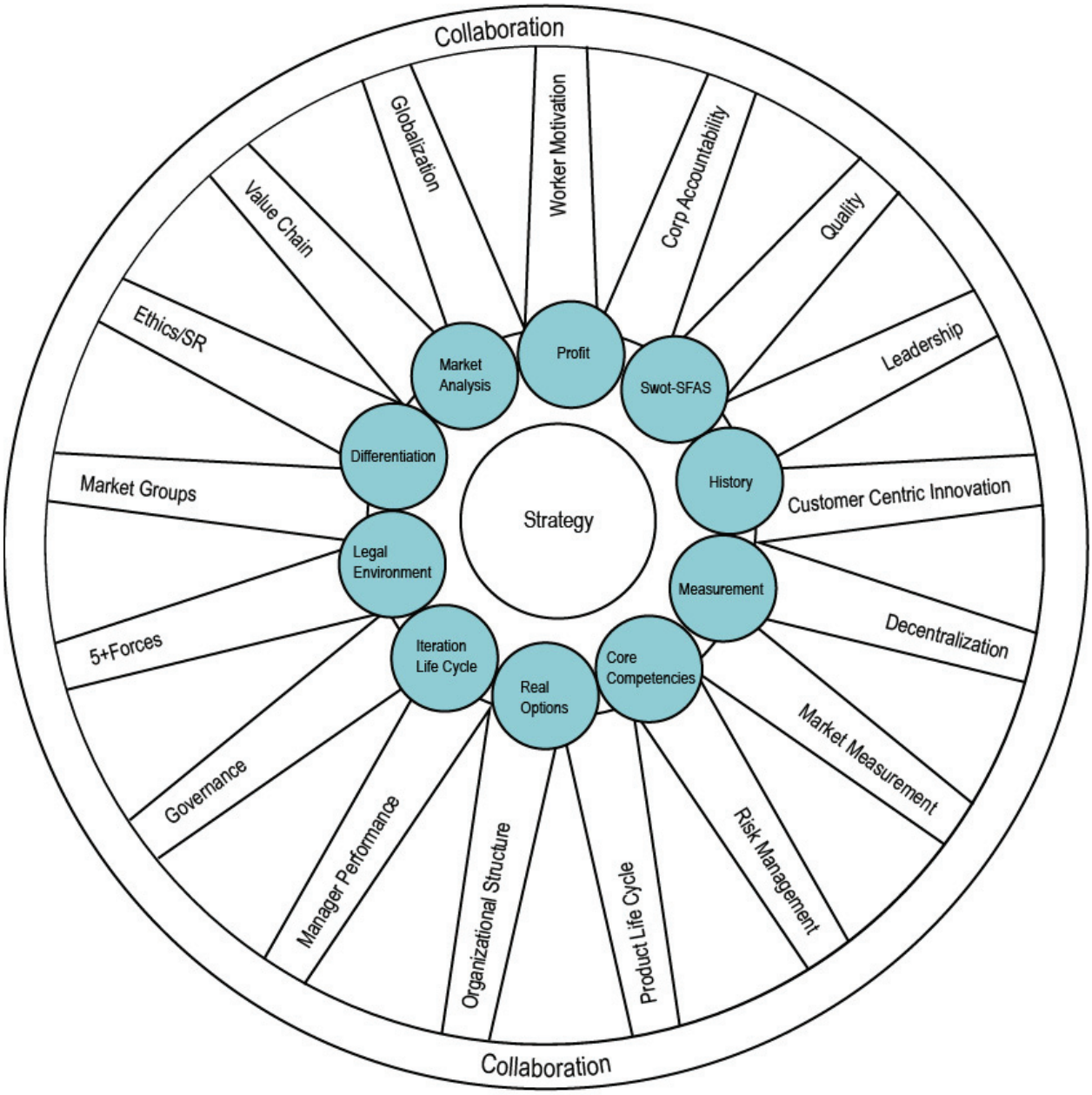
Finally, the corporate connector from the analogous wheel rim is *collaboration* within parts of the company. Result? The completed corporate strategy wagon wheel (see next page).

TEACHING STRATEGY USING THE STRATEGY WAGON WHEEL

Where the analogy breaks down, of course, is that certain parts of (A) and (B) may be reasonably interchangeable in the real world of strategic planning[8]--certainly important for executives to understand. And evaluation of strategy in the real world is certainly important, first, for internal management effectiveness, second as a way of understanding what competitors are doing, and third (mostly) as a way of determining what the next product or service iteration should be [Hamel and Prahalad 1994]. Executives using the relationships within the entire Strategy Wagon Wheel will make those evaluations effective.

But for teaching purposes, interchangeability and inter-relationships among and within (A) and (B) are great subjects for classroom discussion. And teaching with the Strategy Wheel enables students to understand that the separate academic department disciplines within a business school (as, for example, accounting versus marketing) as well as the liberal arts subjects noted earlier, must work together in a real business. As Christensen and van Bever note, the siloed approach of business schools needs to moderate before graduates will understand the relationships of key areas [Christensen & van Bever, 2014]. Bottom line: the SWW graphically illustrates for students the intra and inter-corporate relationships and underscores why they are needed.

[8] As accounting, for example, which is measurement, therefore a spoke, but under certain circumstances might also be a ball bearing. The subject has thus not been used in the analogy.



A second advantage is when management students are assigned to evaluate comparative corporate strategic goals as in a research paper or case simulation, the SWW can be used as a multi-disciplinary checklist for their analysis. Using the SWW as a checklist also aids applying Porter's 5 Forces [Porter 2008] and, trusting that students understand their limitations, a SWOT/SFAS analysis [see Hill & Westbrook 1997] as analytical tools for this evaluation.

Third, as noted in the introduction, for students of different majors within the business school and students with majors in outside disciplines as music, education, engineering, liberal arts and natural sciences that take (at least our) courses on strategy, using the SWW gives them an understanding of the multi-disciplinary nature of business relationships and activity. That has been a valuable result for former students at our university who have majored in

many fields and have suddenly found themselves managing a medical practice, law practice, accounting practice, retail store or not-for-profit: their ability to understand that strategic planning is universal with the related need for effective implementation, has allowed them to be successful.

Fourth, this is truly an era of complexity. Notwithstanding that many American corporations are attempting to decentralize and use of teams as the basic organizational structure (as Google), limits exist on both, simply because the larger the corporation the more complex it becomes. And as noted earlier, business schools still tend to be subject-siloed [Christensen & van Bever, 2014]. As a result, to use the SWW enables students to understand that inter and intra corporate relationships are critical for the implementation of strategy.

CONCLUSION

Strategy is clearly the most important focus for C-suite executives, and the competent implementation of a strategy is certainly number two. This includes effective relationships among venues within a company, with customers, with prospective new markets, or with related companies or suppliers, and with workers. That is simply how a company stays competitive.

It is therefore important to teach students—both undergraduate and graduate--that effective relationships, among the entities described in the SWW are critical for success in this very global and complex world.

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Incorporating Strategy and Business Model Innovation into a Capstone Course Using a Shared Services Center Case Approach

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ABSTRACT

The traditional business education model is designed to be cumulative: starting with a business foundations course, isolating the disciplines essential to business policy, and then assimilating the business disciplines in a final project that requires an advanced mastery of business policy, strategy planning, and strategic-level administrative decision-making. The ideal capstone project should be designed to allow students to explore organizations characterized by competitive intensity, technological turbulence, and demand uncertainty, while coupling students' cumulative learning with a strategic methodology to innovate business models along the dimensions of efficiency, effectiveness, and perceived value. The study of Shared Services Centers provides a way to join business strategy and business model innovation in a final capstone project.

Keywords: business policy, business strategy, strategic-level administrative decision-making, business model innovation, competitive intensity, technological turbulence, demand uncertainty, efficiency, effectiveness, perceived value, shared services centers, capstone project

CHESBROUGH'S & ROSENBLOOM'S RESEARCH AS A STARTING POINT FOR BUSINESS MODEL INNOVATION

In Chesbrough's work "Business Model Innovation: Opportunities and Barriers," he notes that "Companies commercialize new ideas and technologies through their business models… So it makes good sense for companies to develop the capability to innovate their business models" (2010, p 354). Chesbrough & Rosenbloom (2002) define a business model as "fulfilling the functions" of "articulating a value proposition, identifying a market segment, specifying the revenue generation mechanism, defining the structure of the value chain, estimating cost structure and profit potential, describing the position of the firm within the value network, and formulating the competitive strategy by which the innovating firm will gain and hold advantage over rivals" (p 355). This definition provides an operational framework by which a university business capstone course could be designed to apply business model innovation to Shared Services Centers.

A MODEL OF STRATEGY & BUSINESS MODEL INNOVATION FOR A BUSINESS CAPSTONE COURSE

Chesbrough & Rosenbloom's business model innovation dimensions provide a framework for a capstone course combining strategy and business model innovation. The authors' dimensions are identified in Table 1, with their associated roles in business strategy.

A capstone course can be designed around these dimensions to capture opportunities for business model innovation. According to Zazueta, "To be effective, an improvement framework needs to be consistent, complete, repeatable, and incorporate a learning mechanism that fosters benefits realization and new opportunity identification" (2013).

INSTRUCTIONAL DESIGN DIMENSIONS FOR A BUSINESS MODEL INNOVATION PROJECT

Chesbrough's work on business model innovation may be used to inform instructional design of a strategy and business model innovation capstone course. The author's dimensions are identified in Table 2, with their associated roles in business model innovation.

Table 1: Business model dimensions and associated roles in business strategy

Value proposition	"Business models define a business based on its unique value proposition in a network of collaborating users, organizations, and other stakeholders" (Ehret, Kashyap, & Wirtz).
Market segmentation	"Segmentation is based upon developments on the demand side of the market and represents a rational and more precise adjustment of product and marketing effort to consumer or user requirements" (Smith, 1995).
Revenue model	Zott and Amit identify a revenue model as the appropriation of "firm's value capture" mechanism in the business model. The revenue model "refers to the specific modes in which a business model enables revenue generation" (p 3).
Value chain structure	"Having a differentiated (and hard-to-imitate) – but at the same time effective and efficient – architecture for an enterprise's business model is important to the establishment of competitive advantage" (Teece, p 180).
Firm market position	"Whether and how a firm's competitive advantage is eroded depends on the stability of market demand, and the ease of replicability (expanding internally) and imitability (replication by competitors)" (Teece, Pisano, & Shuen).
Competitive strategy	Hamel describes the "skill endowments of firms" that have the propensity to increase their competitive advantage. A study of "global competition highlights asymmetries in the skill endowments of firms" (p 83). These asymmetries indicate "that not all partners are adept at learning; that asymmetries in learning alter the relative bargaining power of partners." Further, "partners may have competitive, as well as collaborative aims" with associated processes that "may be more important than structure in determining learning outcomes."

Table 2: Instructional design dimensions for business model innovation

Value proposition	The author argues that, "[A] company has at least as much value to gain from developing an innovative new business model as from developing an innovative new technology" (p 356).
Market segmentation	"Undertaking active tests to probe nascent markets with new potential configurations of the elements of a business model can allow a firm to learn ahead of the rest of the market, and begin to generate the new data that can power its change process" (p 359).
Revenue model	Chesbrough cites Radiohead's "In Rainbows" experiment: "Whatever revenue Radiohead might have lost through its initial download experiment was more than compensated for by the far greater publicity the band received, which seems to have accounted for the surge in commercial sales, and no doubt also benefited ticket sales for its subsequent world tour."
Value chain structure	The author summarizes Christenson's conceptualization of disruptive technology, and recommends that new value chains which may represent gross margins lower than existing value chains not be "starved of resources" (p 358).
Firm market position	Chesbrough recommends openness to operating in markets in which "both the technological potential and the market potential are highly uncertain" (p 359).
Competitive strategy	"Strategic agility" is necessary for leadership "to be able to transform their business models in the pursuit of strategic innovation. This demands leadership meta-skills in perceptions of the environment, in maintaining unity among the leadership team, and in the ability to reallocate resources to support new models" (p 361, quoting Doz & Kosenen, 2009).

SHARED SERVICES CENTERS AND BUSINESS MODEL INNOVATION: CAPSTONE COURSE CONTEXT

Zazueta's work operates using Shared Services Center business models that consider competitive intensity, technological turbulence, and demand uncertainty. Such models provide a launching point for business model innovation projects within the context of a capstone course in business strategy. Table 3 shows a set of potential dimensions for business model innovation along with their associated learning implications in the context of Shared Services Centers.

Table 3: Instructional design objectives and associated learning objectives for a business model innovation capstone project examining Shared Services Centers

Instructional design objective by business model innovation dimension	Upon successful completion of this project , a student will be able to:
Value proposition: Develop an innovative value proposition model.	Identify ways that the operating business model can generate value by increasing operational effectiveness in order to enable the enterprise to react more readily to market changes.
Market segmentation: Generate new data that creates new approaches to market segmentation.	Design a strategy to leverage location independent resources via a Shared Services Center model to achieve economies of scale, scope, and skill in order to enhance the value of market research and provide agility to serve the newly defined segments.
Revenue model: Design a revenue model that is accepting of short term losses in the interest of competitive advantage.	Assess operational effectiveness and flexibility achieved through a shared services model that is better designed for capacity management in order to enhance tolerance for short term losses and innovation investment.
Value chain structure: Model a value chain structure that represents a commitment to innovation.	Demonstrate how the concept of shared services can be extended to external resources (usually known as outsourcing) through a make-vs-buy decision process aimed at optimizing the relationship between the enterprise and its value network.
Firm market position: Experiment with new markets where the technological and market potential is highly uncertain.	Utilize business model virtualization to swiftly assemble a new product or service offering to respond to a market signal and increase organizational agility.
Competitive strategy: Select a competitive strategy that focuses on business model transformation and allocates resources accordingly.	Craft and present a reconfigured operating model that supports the needs of a dynamic business by providing flexibility and economically efficient resource allocation.

CONCLUSION

"Given the dynamic, volatile and complex business environment in which strategic decisions are made, emphasis on the development of student critical thinking, problem-solving and decision-making skills has heightened" in universities (Giapponi & Scheraga, 2010, p 3). Designing a business strategy capstone course using a business model innovation approach creates a pivotal opportunity to explore a market oriented approach to value creation. Shared Services Centers, with their organizational focus on value creation through operational effectiveness, flexibility through service capacity management, and profitable relationships throughout the value network, present a case study in which students may collaborate on strategic decisions to optimize the service enterprise.

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Interpreting Output Generated by Best Subsets Regression

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ABSTRACT

This paper discusses the best subsets regression procedure from the perspective of pedagogy in teaching multiple regression analysis to business majors. A technique is presented which explains how to interpret the output generated using best subsets regression. The rationale for using this technique and the resulting advantage to the student is discussed.

Keywords: Best-subsets regression, Model building, All possible regressions

INTRODUCTION

The classical methods used by school of business majors for creating multiple regression equations are as follows:

1. Stepwise Regression
2. Forward Selection Regression
3. Backward Elimination Regression
4. Best Subsets Regression

The independent variables or predictors selected by stepwise regression, forward selection regression, and backward elimination regression are apparent to the student. How to interpret the output generated by best subsets regression is somewhat of a mystery to the student.

The following output is representative of the output generated by stepwise regression, forward selection regression, backward elimination regression, and best subsets regression using MINTAB 14.

Table 1: MINITAB Stepwise Regression Output

```
Y versus X1, X2, X3, X4, X5, X6
Alpha to enter: 0.05  Alpha to remove: 0.05
Response is Y on 6 predictors with n = 23

Step              1        2
Constant     14.039   -5.234

X1            0.569    0.885
t-value       10.13    12.36
p-value       0.000    0.000

X2                   -0.0131
t-value                -5.19
p-value                0.000

S              1.59     1.06
R-Sq          83.00    92.76
R-Sq(adj)     82.19    92.04
```

Step 2 in Table 1 shows the stepwise regression procedure selects variables X1 and X2 as the independent variables or predictors to use in constructing an estimated regression for predicting values of the dependent variable Y.

Table 2: MINITAB Forward Selection Regression Output

```
Y versus X1, X2, X3, X4, X5, X6
Alpha to enter: 0.05
Response is Y on 6 predictors with n = 23

Step              1        2
Constant     14.039   -5.234

X1            0.569    0.885
t-value       10.13    12.36
p-value       0.000    0.000

X2                   -0.0131
t-value                -5.19
p-value                0.000

S              1.59     1.06
R-Sq          83.00    92.76
R-Sq(adj)     82.19    92.04
```

Step 2 in Table 2 shows the forward selection regression procedure selects variables X1 and X2 as the independent variables or predictors to use in constructing an estimated regression equation for predicting values of the dependent variable Y.

Table 3: MINITAB Backward Elimination Regression Output

```
Y versus X1, X2, X3, X4, X5, X6
Alpha to remove: 0.05
Response is Y on 6 predictors with n = 23

Step                1        2        3        4        5
Constant      -10.250   -4.266   -4.942   -2.982   -5.234

X1              0.733    0.705    0.852    0.865    0.885
t-value          4.28     4.31    11.03    11.39    12.36
p-value         0.001    0.000    0.000    0.000    0.000

X2            -0.0200  -0.0124  -0.0159  -0.0121  -0.0131
t-value         -1.61    -2.13    -3.31    -4.30    -5.19
p-value         0.128    0.048    0.004    0.000    0.000

X3             0.0075   0.0088   0.0065
t-value          1.02     1.24     0.97
p-value         0.323    0.232    0.346

X4              0.44     0.46
t-value         0.97     1.02
p-value        0.344    0.320

X5              0.55
t-value         0.69
p-value        0.501

X6             -0.044   -0.029   -0.022   -0.010
t-value         -1.56    -1.58    -1.28    -0.84
p-value         0.139    0.132    0.218    0.409

S               1.09     1.07     1.07     1.07     1.06
R-Sq           93.93    93.75    93.37    93.02    92.76
R-Sq(adj)      91.65    91.91    91.89    91.92    92.04
```

Step 5 in Table 3 shows the backward elimination regression procedure selects variables X1 and X2 as the independent variables to use in constructing an estimated regression equation for predicting values of the dependent variable Y.

Table 4: MINITAB Best Subsets Regression Output

Y versus X1, X2, X3, X4, X5, X6

Vars	R-Sq	R-Sq(adj)	Mallows C-p	S	X1	X2	X3	X4	X5	X6	SUM
1	83.0	82.2	25.8	1.5892	X						26.8
1	37.5	34.5	145.9	3.0484		X					146.9
2	92.8	92.0	2.1	1.0629	X	X					4.1
2	91.8	91.0	4.6	1.1316	X			X			6.6
3	93.0	91.9	3.4	1.0706	X	X				X	6.4
3	92.8	91.7	3.9	1.0856	X	X		X			6.9
4	93.4	91.9	4.5	1.0724	X	X	X			X	8.5
4	93.4	91.9	4.5	1.0732	X	X			X	X	8.5
5	93.8	91.9	5.5	1.0710	X	X	X	X		X	10.5
5	93.6	91.7	6.0	1.0864	X	X	X		X	X	11.0
6	93.9	91.7	7.0	1.0880	X	X	X	X	X	X	13.0

The "Vars" column represents the number of independent variables or predictors used in the regression equation. The numbers in the "SUM" column are calculated manually by adding the numbers in the "Vars" column to the corresponding numbers in the "Mallows C-P" column. Students are now instructed to determine the smallest number in the "SUM' column and then identify the independent variables or predictors associated the smallest sum. If the smallest number occurs more than once, student should use the regression equation with the fewest numbers of independent variables or predictors. If the number of independent variables or predictors is the same, student should select the regression equation with the smallest standard error of estimate. The standard error of estimate numbers are the numbers contained in the "S" column.

Thus, using this sum procedure, the best subsets regression procedure selects variables X1 and X2 as the independent variables or predictors to use in constructing an estimated regression equation for predicting values of the dependent variable Y.

CONCLUSION

Over the past twenty years, this technique for interpreting the output generated by best subsets regression has been used on over 100 problems from various textbooks and the technique was always successful in selecting the same independent variables or predictors as stepwise regression, forward selection, and/or backward elimination with the standard alpha level of .05.

This technique eliminates the confusion the students experience in attempting to interpret the output generated by best subsets regression.

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A New Graduate Accounting Course for the Small Business Accountant

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ABSTRACT

Accounting is one of the major obstacles that many small business owners must overcome. Often the small business owner lacks accounting skills and focuses on the primary product or service that the business provides rather than properly preparing and maintaining the accounting side of the business. This problem becomes worse when the small business owner does not know where to turn for help and does not know if the help they are getting is correct when it is sought out.

Another side of the issue is that today's typical accounting curriculum does not prepare the future accountant to help these small businesses. Most of the courses the accounting student takes are related to large corporations and the student is encouraged to specialize in one area (financial, audit, managerial). A small business needs an accountant that can give tax, cost, and planning advice.

In the spring of 2012, Metropolitan State University of Denver offered a course in its master's program that focused on teaching the accounting student about working with small businesses. The course had two components. The first half of the semester the students learned about issues facing the small business. These issues included tax at all levels, employees, breakeven, budgeting, and company formation. The second half of the semester students worked directly with small businesses on an accounting issue. The course was offered again in the fall of 2013 and changes and additions were implemented. This paper includes details about the course, the experience of working with the small business, and suggested improvements that were implemented in the fall 2013 class as well as improvements for future versions of this course.

Keywords: course design, small business accounting

INTRODUCTION

It is estimated that 75% of new businesses fail within three years. Some of the leading causes of start-ups not succeeding are related to accounting and tax issues (Pendrith, 2011). Often the entrepreneur has an exciting idea and focuses on the product or service of the business, but has limited accounting and tax knowledge. In addition, many new startups are underfunded and look for ways to limit spending. Often this results in a lack of spending on accounting software and accounting help. Small companies can also get frustrated when the help they do seek out is not appropriate for their business's needs.

Many small business owners do not understand basic accounting related fundamentals and it is important for the accounting professional to help the small business owner with these issues. The key to successfully doing this hinges on the accounting professional's ability to communicate without becoming overbearing with technical terminology. The focus in most university accounting programs is on larger companies and much of the knowledge the student gains is not presented or explained in a way that is relevant to a small business. Thus, students are not prepared to meet all of a client's accounting and financial needs. Small businesses need help with business formation, taxes, cost control, pricing, budgeting, payroll issues and dealing with banks. In order for this to happen, the small business accountant needs to know at least where to go to answer these questions. In the spring of 2012, Metropolitan State University of Denver offered a small business accounting course to help students become better prepared to work with small business clients.

The course was arranged into two sections. The first section covered the basic skills needed in order to work with a small business client and the second section was a consulting project during which the students work directly with a small business. In the basic skills section the students spent six weeks covering various topics and practicing writing skills, followed by an exam. The consulting project section then began as students were introduced to their clients. During the final six weeks of the course students worked closely with their clients, learning about the business, identifying its issues, and working together to come up with solutions.

Overall the initial offering of the course went well, but many improvements needed to be made. Students quickly discovered that they would face many difficulties while working with their small business owner. One of the most important lessons that the students learned was how to manage scope and time. The rest of the paper includes details on the first six weeks of the course, how the clients were found, overall thoughts for improving the course, and a summary of the second offering of the course.

THE COURSE

The First Six Weeks

Students began the course by reading "The Importance of Capturing and Using Financial Information in Small Business" (Davis and Boswell, 2009) to get a better understanding of small business record keeping. This study helped to illustrate one of the many challenges that students would face while working with small business clients – the fact that many business owners do not keep a complete set of records. The main text for the class was *Accounting and Finance for Your Small Business* 2nd Edition (Bragg and Burton, 2006). This book was written for the small business owner, but covered key accounting topics that the students needed to review. Table 1 outlines the topics covered in the first six weeks.

Table 1: Topics

Date	Chapter: topics	Assignments
Week 1	Introduction to the course and small business accounting Websites to be familiar with: http://www.smartbiz.com/article/archive/41/Accounting.html http://www.accountingtoday.com/	Read Article: *The Importance of Capturing and Using Financial Information in Small Business*
Week 2	Business Formation, Taxes & Reporting Websites to look over: http://www.colorado.gov http://www.irs.gov	Review Chapters 8 & 9 *Taxes & Risk Management* *Reporting*
Week 3	Budgeting & Cash Management	Review Chapter 1 & Chapter 4 *Budgeting for Operations* *Cash Flow Concerns*
Week 4	Performance Measurement Systems	Review Chapter *Performance Measurement Systems*
Week 5	Cost Volume Profit Analysis	Assigned Material for Review
Week 6	Payroll and Accounting Software	Assigned Material for Review

Each week students were required to complete writing assignments in order to demonstrate their understanding of various accounting topics. Most of these writing assignments were addressed to a fictional client so that the student would become familiar with writing in a succinct and professional manner. The primary objective was to explain important accounting and business concepts while using non-technical or laymen's terminology. In class, students worked in groups to identify and solve the different small business issues presented. Students also participated in class discussions about how to work with the client to resolve these issues.

At the end of the first six week session, students were assessed on what they learned through a mid-term exam. The exam covered breakeven analysis, cash flow, and ratio analysis. Once it was determined that the student had a good understanding of the issues it was time for the students to meet their clients.

Finding Clients

Most of the clients were found through various small business groups and associations in the metropolitan area of Denver. One client was found by a student in the class, as this client was better located for students living north of Denver. Initially finding clients to agree to the project was more difficult than anticipated. A major reason that small business owners gave for their reluctance was that the accounting for their business was such a mess that they did not want anyone to see it. Additionally, one small business became unresponsive after the start of the project. This helped the student group working with this client understand communication challenges.

Working with Clients

Once the midterm exam was completed, students were divided into small groups where they selected which client they preferred to work with. Since Metropolitan University of Denver is a commuter school, which draws students from the entire Denver metropolitan area, these selections were often based upon the location of the client's business. After choosing a client, student groups were required to sign a confidentiality agreement with the business owners before they began any work.

Students initiated contact with their clients by telephone and email to set up an initial meeting. This first client meeting was used by the students for a number of purposes. It gave them an opportunity to learn more about the client's business as well as the financial and accounting issues that the owner had already identified. This first meeting also enabled most student groups to meet with the client at the location of their business, to see a bit how things are run first-hand.

After the first consultation, it was left to the student groups to narrow the scope of the work they would do for the client. Students spent the next six weeks working on client issues as a team. Due to the variety of businesses and the nature of help that each one needed, each group's focus was different. Typical tasks included maintaining professional communication with the business owner, communicating and consulting with the professor for additional guidance, and conducting further research on the operational, financial, and accounting issues identified as relevant by each student group.

The consulting project was brought to a close with the preparation of a written report as well as a final presentation to the client done in the professor's presence. This final report and presentation concluded the students' working relationship with the client, so it included tying up all loose ends and ensuring that the students had met their client's expectations within the scope of the class.

Working directly with the clients enabled students to gain the experience of working with a client on a professional basis. This opportunity allowed students to get a feel for thinking on their feet, as well as the opportunity to experience working in a less structured environment than the classroom provides.

CONCLUSION/SUGGESTIONS FOR IMPROVEMENT

While overall the experience was good for the students and the clients, as an educator many lessons were learned. The difficulty in finding clients must be mitigated by stronger professor relationships with groups such as the local Small Business Association. The project scope also must be clearly defined and understood by the client and the student group. While the class is scheduled to be taught in the spring, a fall offering may be better suited so that it does not interfere with the clients' tax season. The need to get the business's taxes filed seemed to shift the focus of the clients away from many important accounting issues, as preparing taxes was not within the scope of the consulting project.

To address many of these issues the second offering of the course was postponed until Fall 2013. With 20 students enrolled the task of finding small businesses was a challenge. A good compromise was to allow the students to first find and suggest potential clients. This turned out to be a successful plan for the problem. Additional changes included removing the book from the course and incorporating more videos on various topics during the course. Many students expressed interest in a Quickbooks module that will be considered for the next teaching of this course. The overall biggest issue for the instructor is the time commitment. While class does not regularly meet during the last half of the semester, it is still necessary for the instructor to meet regularly with each group as well as the follow up meeting with the client.

The issues that have been identified during this initial course and the second offering will help to improve future class offerings, as small business accounting is an area of study that needs increased focus in today's curriculum in order to produce the most well-rounded accounting graduates.

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A Model of a Business School's Recruitment Efforts

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ABSTRACT

This paper describes a Midwestern, liberal arts university in a remote location that has employed both their faculty and students in the recruitment process. With a standing Recruitment Committee, the School of Business involves faculty at nearly every level of the recruitment process. From traditional planned group campus visits to one-on-one visits, family members and prospective students interact with a faculty steeped in a long-standing involvement with our recruitment efforts. We also utilize student panels, student organizations, individualized classroom visits and employ outreach of personalized communication as parts of a collaborative process that builds our bridge of persuasion across which students make their journey to our campus.

KEY WORDS: recruitment, liberal arts, colleges, higher education marketing.

INTRODUCTION

We are a medium-sized, Midwestern, liberal arts university whose remote location as well as changes in external factors have made recruitment a challenge. One of our unique recruitment efforts is the heavy involvement of faculty in the recruitment process. In particular, our School of Business has a standing Recruitment Committee whose focus is on the recruitment of both accounting and business administration majors. While the Admissions Office conducts the initial outreach to juniors and seniors, the School of Business contributes significantly to recruitment. In the paragraphs below we provide: a literature review, details about our institutional and school characteristics, examine our recruitment challenges and then describe our recruitment efforts and our heavy reliance on faculty, as well as current students, to carry out the entire process.

LITERATURE REVIEW

Although anecdotally marketers in the higher education arena are led to believe that price is the predominant factor in a college-bound student's decision, Quigley, Bingham, Murray and Notarantonio (1999) suggest that price and financial aid packages are not a big factor for students when they apply to college. It is upon acceptance that students begin to realize the limitations of their financial situation. Given this insight, recruiters should implement techniques to ensure that students are aware of the financial burdens as well as the value of the school.

Armstrong and Lumsden (1999) evaluated the print materials that universities use in the recruitment processes to juniors and seniors in high school. While the use of print materials has declined with the increased use of the Internet and social media tools, colleges still create view books, brochures and the like. The students in this study suggest that published recruitment materials include no posed student pictures, but more pictures of actual events and more emphasis on the school's reputation and job placement rates.

Conversely, a survey distributed by USA Group Noel-Levitz (2006) found that students put a higher emphasis on "student centeredness," "campus climate," and "institutional effectiveness" in accordance with their satisfaction at a university. Recruitment efforts should emphasis those attributes (Elliott & Healy, 2001).

The information students *say* they want, and what selection criteria they rank as important is not necessarily reflected in their final choice of a university (Joseph & Spake, 2009). It is not known whether external factors, such as a desired image projected to university officials or to parents, modifies student behavior, but the researchers acknowledge that some stimuli does indeed adjust student behavior. Thus the challenge and goal for the committee was to offer information that would spark questions so the committee could provide the information truly desired by the student to make an informed choice. Additionally, *how* students obtain information to mold their opinions is equally important. Personal interaction during a campus visit, word-of-mouth from both family and friends as well as from high school and university personnel all played a key role in the acquisition of crucial information. Beggs,

Bantham, and Taylor (2008) found that once students received the information, they demonstrated an inability to assimilate, synthesize and apply the information to decision-making about their future.

Focusing more on retention, yet applicable to recruitment, research conducted by Mohrweis (2006) involved the effectiveness of a professor-writing campaign directed at students after their introductory accounting class to encourage them to continue onto intermediate accounting and go onto an accounting career, in other words, recruiting within the university. It was found that the campaign had a higher impact on 'B' students rather than 'A' students. However, an insignificant number of students went on to major in accounting subsequent to the letter-writing campaign. Young (2003) supports the linkage between recruitment and retention in his study of the correlation between choice of major upon admission and student retention.

Universities have become more businesslike in their search for prospective students and have implemented more measures to target the "right" students and put their promotion efforts into the specific recruitment of that target group (Tsai, 2007). Sung and Yang (2008) examined the image of universities in order to measure the student's "commitment and identification with the organization." They found external prestige is much more relevant to perspective students than the school's reputation.

Pampaloni (2010) focuses on the need for colleges to maintain their image to recruit new students. It emphasizes the decision-making factors that college bound students look for in universities. The research conducted at several New Jersey schools concluded that students looked for characteristics such as majors offered, location, and price/value and are much more informed of the facts about each school they are interested in because of their experience with the internet. The study suggests that students are not initially swayed to a school by traditional recruitment means (e.g., postcards and brochures), but those materials may make a difference in the selection from among their favorite schools.

Image appears to be only one of many factors in a prospective student's decision. According to McAlexander and Koenig (2010), university size has an impact on the branding and perception of future students. The research tests the university's size on the branding impact it has with alumni opinion and involvement with the university. The results were overwhelmingly in favor for alumni from small universities. They found that graduates from smaller universities were more connected and involved with their school post-graduation as well as more confident and happy with their degree.

Of equal importance, according to Joseph, Mullen and Spake (2012), is the paradigm students use to evaluate public versus private institutions. Joseph et al. found that the five leading criteria a student uses to evaluate a private institution were reputation, selectivity, personal interaction, facilities, and cost. When a student assesses a public university, the leading influencers were programs, athletics, reputation, cost, housing, and location. Students who plan to consider a public institution measure reputation based on the perception of quality of education and accreditation. At a private institution, students assess reputation based upon perceived name recognition and the "notoriety" of the university and faculty alike. An exploration of the descriptive characteristics unique to our institution will help the reader understand our educative environment.

INSTITUTIONAL DESCRIPTION AND STUDENT/FACULTY CHARACTERISTICS

We are a business school within a medium-sized liberal arts university (approximately 5,700 undergraduate and 290 graduate students). Students are predominately traditional age with 98 percent of freshmen living on campus; the male to female ratio is 42:58. Our campus covers 180 acres with some 42 predominantly ivy covered, red brick buildings including resident halls and a centrally located, large, tree-lined quad used for Frisbee and other time-honored traditions. Less than half a mile away, we have a 54 acre working instructional farm. Our retention rate between freshman and sophomore years is 89 percent. We have the best graduation rate of all public colleges and universities in our state. By the time our students graduate, 92 percent of responding seniors confirmed they had either accepted employment or been admitted into graduate school.

In 1996, the then governor recast our mission to be the premier public liberal arts institution in the state. Our average ACT score is 27 and 92 percent of incoming freshmen have a GPA of 3.25 or higher. We do indeed get the crème de la crème of our state's students. During the past ten years, our students have been accepted into medical schools at a

rate of 70 percent which is 20 percent higher than the national average. Our university has produced the most NCAA Division II Academic All-Americans.

Our location is problematic in that we are in a small rural city (population 17,500) some 90 minutes away from the nearest metropolis and three hours away from St. Louis from where most of our students herald. With more than 250 clubs and organizations, 20 NCAA Division II athletic teams, numerous intramural and club sports as well as a strongly supported Student Activities Board, there are many things to do on and around campus. Some students would argue that our location actually contributes to their academic success because of the lack of distractions associated with a large metropolitan and the distance from home means fewer shoot-home-for-laundry trips for most students.

One unique selling point of our university is the low tuition and significant scholarship opportunities. Our tuition is one of the lowest in the state. Indeed, we cannot increase our tuition beyond a cost of living adjustment without legislative approval. Approximately 95 percent of first-time freshmen receive either a merit scholarship or need-based financial aid. Our overall student-to-faculty ratio is 16:1 and most classrooms on campus cannot accommodate more than 35 students which have held the faculty/student ratio creep to a minimum. Average class size across campus is 24. The School of Business also has some noteworthy characteristics as well.

SCHOOL OF BUSINESS DESCRIPTION

The School of Business has separate AACSB International accreditation in both Business and Accounting. Total enrollment includes 840 undergraduates and 42 graduate students. We offer a Bachelor's in Business Administration with concentrations in Management, Marketing, Finance and International Business. We also offer Bachelors in Accounting as well as a Masters of Accountancy. We have 24 full-time faculty members of whom 21 have terminal degrees. Full-time faculty teach nearly 100 percent of all business and accounting classes. We do have a handful of Graduate Teaching and Research Assistants (GTRAs) in our Master of Accountancy program. While most GTRAs work with faculty on research projects, we do assign a couple to run the lab sections of our 100-level information technology course. In addition, we select one graduate student to teach a 100-level one-credit-hour business computer applications course related to our minor in business administration.

At our university, the age-old rift between the professional schools and the liberal arts is muted due to the significant respect for, and belief in, the liberal arts tradition among the business faculty as well as the business faculty's efforts to incorporate liberal arts into their courses. Faculty are very student centered and know that the liberal arts side boosts our students' ability to solve problems and think critically.

One of the benefits of a medium-sized school such as ours that has primarily traditional–aged students is their access to faculty. We require a minimum of ten office hours for each faculty member although most do more than double that amount. We take pride in being available to students when they need us and most of the faculty are in their offices during the entire business day and beyond. Within the School, we have a number of different award-winning (non-social) fraternities and organizations in which business faculty serve as advisors (Alpha Kappa Psi, American Marketing Association, Beta Alpha Psi, Bulldog Investment Fund, Delta Sigma Pi, ENACTUS, National Association of Black Accountants, and Phi Beta Lambda). In addition, a large number of students engage in paid internships and are active participants in the university's study abroad programs.

The School of Business houses a Peer Mentor program which was created five years ago. In the Peer Mentor program upper-level classmen work with freshmen and sophomores to help them learn the ropes, find their way through the maze that is college and aid with networking and study tips. This is a voluntary program. On average we have approximately eight to ten peer mentors who work with 20-25 students each.

Our business students not only come in with exceptional skills, but they continue to impress with Major Field Test scores in the 95th percentile for more than 15 consecutive years. On the accounting side, for more than 20 years our students have consistently scored in the top five percent of those students that have passed all four parts of the CPA exam on the first try. Even though we enjoy a stellar reputation, recruiting this caliber of student to our campus can sometimes be a challenge.

RECRUITMENT CHALLENGES

Our location presents some drawbacks in terms of recruitment because we cannot offer the number of internship opportunities or shadowing experiences that would come from a larger populous location. Neither do we have ready access to executives or employers for networking and career-fair events that might be available from a school with a more centralized and populated locale. Our admissions center has the difficult task of maintaining relationships with guidance counselors and most high school visits are overnight treks. Student visits to explore our campus, while not impractical, certainly requires a significant time and resource investment. Parent visits and trips home are not spur-of-the-moment decisions because of the duration and expense involved.

While we typically have some 350 international students on campus that are from more than 40 countries, we do not have the level of diversity one would hope to see for an institution our size. The ethnic populations in our state are typically quite small (less than one percent are Hispanic and only about ten percent are African Americans) and recruiting from these populations is an expensive and time-consuming effort, but one the university takes seriously.

Besides location, the state's economy has slumped in recent years which has lowered state revenues significantly. The governor has made steep cuts with a more than 15 percent reduction of our total budget since 2010. Faculty and staff went three years without a raise. This, coupled with fact that even before the salary freeze, faculty were at the lower end of the pay scale compared to our competitors which puts us at a competitive disadvantage with other universities.

The number of high school graduates in our state fell to a nearly all-time low in 2011 which represented a five percent decline in available high school graduates. The decline was expected to continue for five years. This has made recruitment a challenge as well as an opportunity to put more focus and resources on the recruitment of out-of-state students.

While our tuition remains on the low side, college tuition and fees continue to rise. There is still increased competition from our competitors as well as online sources. At the same time, there is increased demand on faculty time. The university has looked to retirements and voluntary departures to cover unpleasant budget cuts. That means there are fewer faculties to carry out a workload that has steadily increased. With exiguous faculty, class enrollments have risen and the number of advisees and committee work has climbed for every faculty member. With a clearer picture of our institution and school now in place, we can now explore our recruitment activities in more detail.

RECRUITMENT EFFORTS

As a small, geographically challenged university we carefully craft our marketing efforts, surpassing the competition in our recruitment endeavors, considering our unique qualities (Beggs et al., 2008). While the Admissions Office carries out the initial recruitment efforts, the School of Business takes a very active role in the process. The School of Business's Recruitment Committee includes three faculty, our in-house academic advisor and two students. In the paragraphs below we detail the process that helps bring the best and the brightest students to our campus even though they have an ever-expanding number of choices.

The university has five official campus-wide visit days per year in which parents and their college-bound children attend a number of events and participate in campus tours and the usual fare offered at most institutions of higher learning. Two faculty volunteers (one from business and one from accounting) participate in each visit day. Faculty volunteers, parents and potential students proceed to a large room in the Student Union. In the room, representatives from all the majors on campus converge. The faculty volunteers come armed with the appropriate banners, exhibits, brochures and pamphlets. The parents and potential students can ask questions and receive advice in a relaxed and fun environment. The 'fair type' atmosphere allows undecided prospective students to narrow their interests. This interaction with faculty is crucial as the family experiences one-on-one time with the very people who will teach their sons and daughters. This exchange is our first step in building the bridge of persuasion – making that all-important first connection. Later in the day, after a campus tour, the families attend a 50-minute academic presentation put on by each school. Students select which presentation to attend based upon which school the potential college student has the most interest. Plenty of signage and student escorts ensure the families and students arrive in the right location and on time.

We conduct the School of Business academic presentation, which includes a student panel, in a large auditorium that seats approximately 200 in which there are two large overhead screens that display identical content. Prior to the beginning of the presentation, while families are seated, a slide show highlights key employers and action shots of the various fraternities and organizations within the School of Business. Members of our student panel distribute information packets, greet incoming families and help seat the visitors toward the front of the auditorium. With families intentionally seated at the front of the auditorium, the presenting faculty can forego the use of microphones and this creates a more intimate atmosphere, increasing our chances to connect with our guests.

The academic presentation was developed with our two distinct target audiences, parent and prospective student, in mind. The Recruitment Committee communicates with parents about their specific worries (Beggs et al., 2008) including price, graduation rates, and future employment opportunities. The portion of the presentation that focuses on answering prospective students' questions is outlined below.

We begin with a brief introduction of the Dean. The Dean gives an official welcome (typically 3-5 minutes) with information about the marriage between the liberal arts and professional education. The Dean introduces the main presenter (a faculty member from the Recruitment Committee) who speaks for 15-20 minutes about school programs, majors, and alumni employment. As potential career earnings ranks as a concern for students in their educational choice (Roach, McGaughey, & Downey, 2011) the information about successful alumni assuages these fears. A slide for each major shows what characteristics draw a prospective to a major, addressing the information needs of the prospective students. For example, under the accounting major we have the following questions: "Do you enjoy solving puzzles? Do you read mystery novels?"

A panel of six students, representing each major and a variety of co-curricular activities, then take the floor. The students introduce themselves and indicate their hometown, major and concentration, organizational affiliation, study abroad opportunities, internships participation, and employment expectations. The panel typically includes a student who has worked with the Volunteer Income Tax Assistance (VITA) program as well as a Peer Mentor, a member of the Bulldog Investment Fund, and an athlete.

Once the student panel has introduced themselves, the floor is then open to questions. Our underlying principle is that these future students and their parents want to hear from our current students and not from faculty whose job it is to market the university. The academic presentation is less about us talking to them and more about interaction with our current students.

One thing we emphasize during our academic presentation are the students. One of the most effective ways that we stand out from the crowd is that when we brag, we brag about our students' accomplishments and not the faculty's. At many institutions it is all about the quality of the faculty such as what the faculty have achieved, with whom they have consulted, and the breadth and depth of their publication records. At our university, we put the students' success stories at the forefront; it is the students' triumphs about which we boast. They are the stars of our show. We highlight their many activities and leadership roles, their experiences in overseas studies, their immersion into philanthropic activities as well as their laudable academic outcomes.

A timely end to the presentation is necessary to ensure that the families stay on schedule. Members of our student panel escort the families to lunch and those that can, stay and share a meal with them. Prior to the presentation we instruct the student panel members to spread themselves out among the families (no clustering). We engage in a few post-academic presentation activities.

Immediately following the presentation, the faculty members from the Recruitment Committee debrief to make note of any weak areas or changes that we need to make to improve the presentation. In addition, during the presentation we have a clipboard that circulates for students to put their name and email address. The week following the presentation, the Dean will email the families to continue our bridge of persuasion. The inclusion of students to the Recruitment Committee, some two years ago, has proved to be very valuable. Periodically we go through the slide show to update employers, alumni stories and the like and discuss each slide in terms of its merit for inclusion into the slide slow. The student members of the Recruitment Committee attended our academic presentation when they came to our university as high school students so they have excellent insight into what wowed them and what was uninteresting.

Besides official visit days, prospective students and their family are invited to visit campus at their convenience. The prospective students are encouraged to attend a class in their major to experience what it is like to be a college student. Faculty also meet with prospective students and their families, matching major interests with the appropriate faculty member; faculty meet with families throughout the school year, including summer months. These one-on-one interactions are powerfully effective in persuading a student to choose Truman and this connection with a university community member simplifies this decision.

LETTER WRITING CAMPAIGN

Another way in which we involve faculty and current students in the recruitment process is via our letter-writing campaign. Each spring we generate a spreadsheet with the contact information of students who applied, been accepted and professed an interest in the School of Business. We have faculty and members of business student organizations write to these prospective students. Typically, this comes to about 15-20 letters per faculty member and three to five letters per student. We give both the faculty and students suggested letter content and format and urge that the letters be hand written (although that is not a hard-and-fast rule). While letter-writing may, at first glance, not seem the optimal way to establish contact, freshmen focus group members remembered the letters they received. Noted comments from a focus group conducted with first-semester freshmen were: 'a hand-written letter stood out from the other new e-mails and social media attempts to catch my attention,' 'receiving a letter, especially from a student, felt very personal,' and 'I just thought how much time it must have taken to write these letters.' While we also send large-sized post cards to parents promoting prestigious employers and successful alumni, the hand-written letter camping is to pull students in to give them that extra personal touch to help them to choose our institution.

OUTCOMES

The goal of the focus group was to obtain feedback about recruitment efforts at our university as well as other schools considered by the student. Overall, the freshmen felt that the presentation at the visit days were effective, noting specifically the student panel. One student mentioned the immediate connection when realizing one female senior on the panel was from her hometown. Another student commented that hearing all of the panel members' accomplishments was 'a little overwhelming' but encouraged them at the same time. The focus group also noted that the materials distributed at the presentation enabled them to look at the material at their leisure, and answered questions that they had after watching the presentation. Over half of the focus group attendees thought the 'bag' containing the materials was 'fun' and 'useful.'

Data from the Admissions Office supports the Committee members' belief in the effectiveness of their recruitment efforts. In the period from 2010 through fall 2014, the School of Business saw a 4.29 percent overall increase in enrollment, with a 27 percent increase in business administration majors specifically. This correlates with a five percent increase in university enrollment for the same time period, when at least two other schools saw a decrease in enrollment of 10 to 15 percent. In an in-depth interview with the Director of Admissions, she commended the Business Recruitment Committee on their achievements and noted specifically how our activities support the university-wide recruitment efforts.

CONCLUSION

In conclusion, our university, with its own unique challenges from both internal and external factors, has found a way to involve both faculty and students in the recruitment process. We have coordinated our efforts and taken advantage of our internal resources. Budget cuts and the reduced effectiveness of print materials have forced us to utilize the assets we have on hand. The creation of a standing committee to address the ongoing recruitment threats we face as both a university and a school has given us the political heft we need to push through changes that might not have taken place otherwise. The existence of committee structure also gives members a legitimate venue to recognize their service endeavors. Our efforts have paid off. We have maintained and even grown our school's enrollments in the face of a declining number of high school graduates and budgets that have been stretched exceedingly thin.

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The Role of Knowledge in the Effectiveness of Business Ethics Education

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ABSTRACT

The mechanisms by which subjects' ethical attitudes are changed through their experiences with a typical business ethics education are examined. It is hypothesized that the positive change in attitudes will be greatest for those students who actually retain factual knowledge and whose attitudes are such that they attend to ethical issues in their environment. Therefore scores on a test of factual knowledge and awareness of ethical issues reported in the news media were expected to be related to students' attitudes toward ethical dilemmas in business. Those students with more knowledge were expected to be more likely to perceive ethical violations as being "very unethical" and to also be more aware of such ethical violations in their environment, as reported by news media. This is viewed as the first step toward them being more likely to exhibit ethical behavior themselves. Partial support was found for the hypotheses.

Keywords: Ethics, ethics education, ethical attitudes

INTRODUCTION

The extent to which "soft skills" are important, can be measured, and are changeable are continuing issues that affect everyone involved in management education. These issues are made even more salient by the Association to Advance Collegiate Schools of Business's (AACSB's) exhortations to assess such skills and report attempts at improvement. Particularly difficult is the measurement of students' "ethics." An AACSB Education Task Force (2004), while acknowledging that business schools are only one source of influence on students' ethical education, recommended that the AACSB, "support and encourage a renaissance in ethics education and exercise its leadership role to ensure the commitment of business schools." Among the more beneficial outcomes of the AACSB's focus on ethics has been the creation of an Ethics/Sustainability Resource Center which provides links to tools, publications, events, etc. which educators may access to improve their efforts in these regards.

As further evidence of the importance of ethical education to business students, the "Principles for Responsible Management Education (PRME)" initiative (unpreme.org) has been launched as a result of a collaboration between the United Nations and a consortium of major business school deans. Signatories to the PRME initiative agree to implement six principles which are aimed at encouraging the ongoing development and implementation of academic activities to teach students to be "future generators of sustainable social, environmental, and economic value for business and society."

Although there is a preponderance of opinion that ethics should be a part of a business education, differences of opinion exist as to what ethical knowledge, beliefs, values, or behaviors, entail; how they should be "assessed," and even if they can be changed in an educational setting. Summaries of the work done to assess business ethics, generally conclude with statements to the effect that although some studies have documented some positive effects, the extent to which educational experiences have actually had long lasting effects on individuals' behavior is largely unknown (Arlow & Ulrich, 1988; Ford & Richardson, 1994; King, 1983; Payne, 2006;).

In a frequently cited study, Arlow and Ulrich (1988) found that business school graduates and executives ranked family training as the most important, and school-university training as the least important influence on their ethical behavior. After graduation, business school graduates believed university training became less important in influencing ethical conduct. The percentage of those surveyed who ranked such training among their top three choices, dropped by more than 50% after graduation. As pointed out by Arlow and Ulrich (1988) this is probably because the graduates' attitudes became more likely to reflect those of their co-workers and the cultures of the companies for which they worked. The respondents recognized that their educations had had some effect on their ethical awareness, but that had waned upon receiving other (perhaps more relevant) information. This has severe consequences for the assessment of ethics education in that whatever beneficial impact is made on students may not be long lasting without efforts to reinforce the newly learned attitudes and behaviors. Ethics needs to be made a salient part of students' lives. As suggested by Arlow and Ulrich (1989) the depth of change in individuals needs to be increased, perhaps by exposing students to business ethics earlier in their education.

Perhaps the expectations of what can be accomplished by business educators should also be tempered. Ronald Alsop of the Wall St. Journal has voiced the opinion of many in commenting that, "… most 27-year olds are unlikely to change their moral compass very much. But they can certainly learn about the kinds of ethical challenges they are sure to face in their business careers and strategies for coping with them in a responsible manner (Alsop, 2006, p. 12)." Alsop also quotes, Paul Glasserman as saying, "The problem with ethics is that it's such a loaded word. What we want to give students are strategies for protecting their integrity in the workplace. We aren't trying to teach them right from wrong."

Others have focused on the approach that is taken to business ethics education and have suggested mechanisms by which it can be made a more central part of individuals' lives. Brady (1990) presents strong arguments for the value of historical examples as a foundation for a business ethics education. He points out anecdotally that the average age of business ethics exercises is about 15 years and that the perception seems to be that, "old problems are no longer problems." Brady persuasively argues that a shift in focus to classical historical examples of ethical quandaries will counteract the "faddish" nature of business ethics education, increase the esteem of the field as being one that has developed (and hopefully improved) over time, and perhaps most importantly will lead to the realization that many ethical issues are systemic rather than the result of random events concocted by nefarious characters. On the other hand, Brady also believes that studying history, "…may promote the identification of business heroes and heroines" and that this might lead to longer-term influence on individuals' lives

Rest (1986) and others have suggested that the failures of traditional business ethics education arise from a focus on outcomes (evaluating the decisions) rather than the process. He proposes a four stage model of ethical behavior: perception, judgment, formation of intent, and actions taken leading to ethical conduct. Actually realizing that one finds himself or herself in a situation involving an ethical issue is obviously crucial to what follows. Judgments concerning the appropriate reactions, formation of an intent to behave "ethically," and one's eventual conduct depend entirely on one's categorization of the event and one's perceived role in determining its outcome. Perhaps students need to spend more time learning about the characteristics of ethical dilemmas, the specific situations in which they occur, and identifying their role in them rather than on philosophical abstractions.

Jones (1991) concurs with Rest's (1986) basic model and further discusses how the perceived intensity of a particular issue can affect whether someone believes it is their responsibility to take action, an obvious precursor to one's ethical action, or lack thereof. Rest (1986) also believes that dissonance must be created between students' personal beliefs and what they perceive to be happening around them, their social realities. They must accurately perceive and retain information about such realities and how others have responded before this dissonance will be created. Only after such dissonance has been created will they be motivated to change their attitudes to correspond with the "proper" ethical choice.

Jones (1989) argues forcefully and persuasively for the value of ethics education in business. He once again asserts that the first step in such educational efforts is to teach students to recognize moral issues. Afterwards they can, "legitimize ethical concerns in their minds, be exposed to ethical theories, and be given practice in informed moral discourse." However, students must first be provided with the vocabulary that is necessary to defend their ethical positions. In this regard, the goal of ethics education is not to make individuals more ethical or socially responsible. Those values are hopefully already instilled in college students by some prior part of their life experience. The ethics training provided by business schools should hopefully provide them with "intellectual fortification…and attendant moral courage" (Jones, 1989) to defend their ethical positions. These feelings are compatible with King (1983) who believes that the likelihood of students' moral introspection and the "buttressing of their moral courage," may be enhanced by ethics courses. Shenkir corroborates these beliefs in his statement that, "Ethics education may not make people act ethically who want to act unethically. However, ethics education can help people act ethically who want to do so" (Shenkir, 1990, p. 30). Discussions of theories, case analyses, and exams cannot be expected to cause students to behave more ethically, although, if that were to happen, all the better. Such educational experiences should however, make the students more aware of the existence of ethical dilemmas, provide them with a framework for discussing them, and increase the likelihood that socially acceptable outcomes are, at a minimum, recognized.

Perceiving and properly categorizing the situation are also central to Meisel & Fearon's (2006) discussion of the importance of critical thinking skills to ethical decision making. In their view, much unethical behavior is due to decision makers believing that they are operating under conditions of low uncertainty. However, in reality many business decisions are made under conditions in which there is a range of possible futures, or complete ambiguity.

Many of the decision-making tools provided in a traditional business education that are aimed at objectively and rationally analyzing situations do not allow for a complete analysis of the potential unethical outcomes of decisions made under such conditions. Therefore, a precondition of students making ethical decisions is the development of their critical thinking skills. At a minimum, critical thinking requires cognitive skills and affective dispositions. Cognitive skills are interpretation, analysis, evaluation, inference, explanation, and self-regulation. Affective dispositions include inquisitiveness, concern to become and remain well-informed, alertness to opportunities to use critical thinking, confidence in one's abilities to reason, open-mindedness regarding divergent worldviews, honesty in facing one's own biases, and willingness to reconsider and revise views where change is warranted (Facione, 2004).

Training in business ethics may definitely play a role in the acquisition of the basic cognitive skills and provide a supportive environment in which the affective dispositions may arise. Sims and Brinkman (2003) suggest that this be thought of as a developmental process. Following their curriculum design model, undergraduate students would be exposed to a range of moral issues to increase their sensitivity to them, while courses for more advanced students could focus on analyzing more specific organizational examples. Students need to be given training that goes beyond implementing corporate codes of conduct because situations are sure to arise for which there is no easy answer in the code. Tyler and Tyler (2006) note that, "if an individual is not sensitive to and able to identify the ethical issues raised, then he or she clearly cannot be expected to respond in the most ethically appropriate manner." Studies by Morris (2004) and Haywood, McMullen, and Wygal (2004) have documented that students may lack of awareness ethical issues in the workplace and their roles in relation to them. "…some students recognize the importance of ethical issues and are willing to actively engage in problem solving, whereas other students appear unable to comprehend that ethical concerns may even be present in a situation."

Tyler and Tyler (2006) present a transtheoretical model which focuses on individuals' awareness of ethical issues and their ability to choose to act in an ethical or unethical manner. According to this model individuals begin in a "precontemplation" stage in which they are unaware of the existence of many of the potential ethical concerns in their lives or how to deal with them. They move through a "contemplation" stage in which they are open to learning experiences to increase their awareness and then on to "action" and "maintenance" stages where they acquire ethical decision-making skills and develop them. It is important to note that progress is not made without the ability to perceive and analyze the situation.

Based upon the above, the research reported below was aimed at a tentative explanation for why some students may have been more affected by their business ethics education than others. Vendemia and Kos (2013) documented the apparent failure of Youngstown State's business ethics education to have a lasting effect on students' attitudes from the first course in the program to the last. The current effort begins with the beliefs that those attitudes may have been affected earlier in the program (closer in time to their taking the Professional Ethics course) and that the change may have been more salient for those who retained more specific knowledge about ethical concepts and who remained cognizant of ethical issues being discussed in the world around them.

METHOD

Subjects of the study were sixty-seven students in two sections of the Fundamentals of Management course taught by the author during one semester at Youngstown State University. Only students who had previously taken, or who were concurrently taking, the Professional Ethics course taught in the Philosophy department were included in the analyses. All of the subjects completed the Ethical Behavior Survey (Ruch & Newstrom, 1975) toward the end of the semester in which the course was taught. Additionally, subjects completed an ethics quiz which sampled their knowledge of common terms relating to ethics (10 items, e.g., price fixing, utilitarianism, fair trade, etc.) and ethical issues that had recently been in the news (10 items, e.g., pay discrimination at Wal-Mart, General Motors ignition issue, high speed trading firms, etc.). The students' G.P.A.s and grades in the Professional Ethics course were obtained from their transcripts. This information was available to the author electronically and students were informed that the information was being accessed to place them into groups to complete course assignments and for the purposes of educational research. The combined sections were made up of 42 males and 35 females. Among these students there were 21 accounting majors, 19 management majors, 11 marketing majors, and 16 non-business majors. The average G.P.A. of the students was 3.12. In most respects this sample was quite representative of the student body in the school of business at Youngstown State.

RESULTS

Students scored relatively well on the measures of ethics terms and ethics events. Their mean scores on these measures were 5.73 and 5.8 respectively. They also had quite positive scores on the measure of ethical attitudes. They were asked to respond to 17 statements describing potentially unethical behaviors in terms of how unethical they actually perceived them to be on a five-point scale from 1 (very unethical) to 5 (not at all unethical). Therefore, the lower their scores, the stronger their presumed ethical attitudes would be, and potentially the more likely they would be to avoid committing such acts. The reactions to the 17 items were combined to create 6 categories of behaviors and the students mean responses were as follows: Personal use of company resources (2.57), Passing blame (1.70), Bribery (2.18), Falsifying information (2.0), Padding expenses (1.66), and Deception (2.24).

In examining the correlations among the knowledge measures (Table 1), it does appear that the Professional Ethics course has had some lasting effects. There was a significant correlation between the grade the students received in that course and their scores on the ethics terms measure (r = .29). However, this did not carry over to them being aware of ethics events in the media as the correlation between their course grade and the awareness measure was not statistically significant.

The role of the ethics course and subsequent knowledge in affecting the student's attitudes toward unethical activities was disappointing. The one correlation that was significant was that between grade in the ethics course and attitude toward "padding expenses" (r = - .30). This indicated that the higher the students' grades in the course, the more likely they were to view this activity as being unethical. However, there were a few other correlations that were "in the right direction." Grades in the ethics course were somewhat related to attitudes toward "falsifying information." Knowledge of ethical events was somewhat related to attitudes toward "bribery." Finally, knowledge of ethical terms exhibited correlations with attitudes toward "bribery" and "padding expenses" that were not significant, but were "in the right direction."

Table 1: Correlations among indicators of knowledge and ethical attitudes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) Personal Use										
(2) Pass Blame	.52***									
(3) Bribery	.49***	.50***								
(4) Falsify	.56***	.67***	.39**							
(5) Pad Expenses	.29*	.31*	.25*	.21						
(6) Deception	.58***	.59***	.42***	.54***	.21					
(7) G.P.A.	.01	-.13	-.05	.01	-.22	-.10				
(8) Ethics Grade	.09	-.06	.16	-.10	-.30*	.00	.44***			
(9) Ethics Events	.17	.04	-.11	.10	-.06	.17	.11	.09		
(10) Ethics Terms	.02	-.06	-.13	-.01	-.18	-.03	.50***	.29*	.49***	

*p < .05 ** p < .01 *** p < .001 (all two-tailed tests)

CONCLUSIONS

Although the current investigation did not provide strong evidence for the role of knowledge in strengthening students' ethical attitudes, there were enough encouraging indications to continue this line of research. Much of the failure to discover relationships could lie in the weakness of the knowledge measures. Both measures (of terms and events) could be greatly improved simply by lengthening them. Some effort also needs to be taken to link the knowledge of terms and concepts to the specific events in question and the specific attitudes being measured. This

would increase the likelihood of discovering relationships as well as being a more realistic model of the educational process.

Perhaps the strongest suggestion to be made echoes that of many other writers and researchers in this field, and that is to incorporate ethical topics throughout the curriculum to emphasize the strongly held belief that ethics should play a central role in everyone's professional life (Payne, 1993). As a powerful example, Ingols and Shapiro (2014) describe in great detail their school's efforts to embed an ethics-based program in their MBA curriculum and extensive measures to assess its results. Their faculty work together to create and revise assignments that are embedded in the curriculum, develop rubrics for assessing students' work, and collaborate to ensure as much as possible that a valid measure of the quality of ethical decision making results. After several iterations of implementation, review, and revision, their rubrics become guideposts throughout their curriculum for assessing students' ethical development. Ingols and Shapiro (2014) describe what seem to be yeoman-like efforts to implement such a process, but perhaps that is what is required.

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Designing the Business Strategy Game to Promote Strategic Thinking and Student Engagement: An Application of the Four Disciplines of Execution

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ABSTRACT

Strategic thinking and student engagement within a team using business simulations are widely recognized as problems in business strategy classes. There is also a concern that business schools are not preparing students with the necessary teamwork skills that are transferable to the workplace. In this paper, we propose a framework for developing effective teams and team leaders in business strategy classes by implementing McChesney, Covey, and Huling's (2012) Four Disciplines of Execution. The proposed framework will be instrumental to effective strategic thinking and student engagement within a business simulation.

Keywords: Strategic Thinking, Student Engagement, Business Strategy Game, Four Disciplines of Execution

INTRODUCTION

In business simulations, a lack of student engagement and strategic thinking by all members within a team can be a problem in terms of effective student learning. The literature suggests that creating an appropriate classroom environment and focusing on the role of the instructor can enhance strategic thinking and student engagement (Gosen & Washbush, 1999, 2001, 2004; Sanders, Boss, Boss, & McConkie, 2011; Pandey & Nagesh, 2013). According to Cadotte (1995), strategic thinking requires a student's understanding, selection, and coordination of tactical options in order to achieve a desired outcome while involvement has been found to be correlated with increased learning (Randel, Morris, Wetzel, & Whitehill, 1992). In contrast, however, is Goosen's Know Little Decision Making Thesis, which suggests that students can be successful in simulation games even if they "know little" about the rules and underlying business theories, driving them (Washbush and Gosen, 2002). Accordingly, if students are not involved with their team, it is possible that successful game play may not impact the learning typically found in experiential exercises. Finally, there is an ongoing concern that business schools are not preparing students with the necessary teamwork skills that can be transferred to the workplace (Gardner & Korth, 1998; Riebe, Roepen, Santarelli, & Marchioro, 2010). Thus, in this paper we propose a framework for developing effective teams and team leaders in business strategy classes by implementing what McChesney, Covey and Huling (2012) refer to as the Four Disciplines of Execution. The proposed framework will be instrumental to effective strategic thinking and student engagement within a business simulation. While the framework is proposed using the Business Strategy Game (Thompson, Stappenbeck, Reidenbach, & Thrasher and Harms, 2013), it could also be used with other business simulations.

According to Covey (2004) the pains that companies suffer when executing strategy include a lack of communication, duplication of effort, misalignment between departments, criticism and blame, lack of responsibility, defensiveness, extra cost, rework, customers caught in the shuffle, hurt feelings and unrealized expectations. Baring a few of these characteristics, student teams running simulated companies experience most of these same execution gaps. Like great companies, student teams can close the execution gap by unleashing a disciplined team of people who are tightly focused on a few clear core objectives. John Kotter (2008) of Harvard Business School verifies this success pattern in his classic studies of highly effective business leaders. Observing the daily work of general managers known for getting results, he finds that two things they have in common is that they focus totally on a limited agenda of clear core objectives that are measurable, and they keep their people constantly moving forward on those objectives. Accordingly, Covey (2004)) has developed a measurement instrument called the xQ that measures the alignment of work teams to key goals by gauging organizational compliance with six principles of execution**:**

1. *Clarity*. Do people know the organization's few critical objectives? Do they understand those goals? Do they understand that these goals are "wildly important" and must take precedence over the "merely

important" or the "merely urgent"?

2. *Commitment.* Are people energized and committed to the goals? Do they feel ownership for them and involvement in setting them? Do they buy in to the realism and feasibility of the goals?
3. *Translation into Action***.** Do people know what to do about the goals? Are they clear on their own individual roles in achieving them? Do they know how to turn goals into daily tasks?
4. *Enabling*. Does the organization educate and equip people to execute? Does the organization actively seek and remove barriers to execution?
5. *Synergy*. Do people work well with each other and with other teams? Do they "clear the path" for each other? Can they speak candidly with each other about key issues? Do they consistently come up with new or better ways to execute?
6. *Accountability*. Do people actively and regularly account to each other for the commitments they make? Can they honestly report their good and bad results to each other?

THE FOUR DISCIPLINES OF EXECUTION

To put these principles into action, McCheney, Covey & Huling (2012), have developed a process and written a book called *The 4 Disciplines of Execution: Achieving Your Wildly Important Goals*. This process can be used as the premise for giving Business students the skills they need to execute a strategy and to help prioritize their time. *The 4 Disciplines of Execution* can be used in the Strategic Management classroom for teams using the Business Strategy Game or the simulation of their choice. There are four basic rules that students in teams can follow to help translate their business strategy into action within the business simulation. If students apply the 4 Disciplines of Execution, teams will produce remarkable results by tapping the desire to win that exists in most individuals. The 4 Disciplines for the student teams are as follows:

Discipline 1 is the discipline of focus and finish line. Student teams can only achieve extraordinary results when they are clear about what matters most. Focus is critical. Students need to set a Wildly Important Goal (WIG) that will help them perform in their business simulation. The goal is set in terms of getting from "X to Y by When**."** Focusing on the Wildly Important Goal requires you to go against your basic instincts as a student and focus on less so that your team can achieve more. Early on in the business simulation, the professor can give his/her students one extremely important goal that they should focus on instead of trying to significantly improve everything all at once. This is called a "wildly important goal" (WIG) to make it clear to the team that this is the goal that matters most. Failure to achieve it will make every other accomplishment seem inconsequential. But setting the WIG is not enough. Every WIG must contain a clearly measureable result, as well as the date by which the result must be achieved. For example, in Year 11 you may want your students to focus on gross margin. A gross margin focused WIG might be: "Increase gross margin from 45% to 50% by the end of Year 14." This "X to Y by When" format recognizes where you are today, where you want to go, and the deadline for reaching that goal. As deceptively simple as this may seem, many students often struggle to translate their strategic concepts into a single "X to Y by When" finish line. But once they've done it, both they, and all the team members, have gained tremendous clarity. See a list of possible goals and a recommended time frame using the Business Strategy Game (Table 1). It is important for students to narrow their focus. This is not only hard in the beginning, it is hard to sustain because students are drawn to many ideas on how to successfully run their simulated company. While these innovative ideas may be important, without focus the team cannot succeed. Team leaders must learn to say "no" or "not now" to new ideas until the results on the strategy have been achieved.

Discipline 2 is the discipline of leverage. Leverage involves having students focus on lead measures rather than overall results. Teams in the Business Strategy Game are most often measured and awarded points based on results (i.e., EPS, ROE, Credit Rating, Image, and Stock Price), and over time, most of their focus is on these outcomes. Unfortunately, focusing on the outcome alone doesn't drive the highest performance. Many students using business simulations will try to "play" with the numbers to get to their desired outcome. Thus, discipline two asks student teams to put a disproportionate focus on the measures that will lead to results. So how can students find the leverage they need to get extraordinary results in the Business Strategy Game? They do this by setting very specific lead measures around the wildly important goal (WIG). Each student on the team can fill out a Work Compass form (see Form 1) where they must identify "how to" improve WIG results. For example, using gross margin as a WIG, students can access the help screens to get information on how to increase productivity, lower reject rates and/or materials cost, and lower overall shipping costs. The Business Strategy Game has a very comprehensive index of help screens that when given a specific goal, each student can research one lead measure and help improve

performance on the WIG (see Table 1 for a list of possible lead measures and a recommended time frame using the Business Strategy Game).

Discipline 3 is the discipline of engagement. The new AACSB International standards put a lot of emphasis on the importance of enhancing student engagement in the business school. Faculty members may have the authority to make events occur in the classroom; however, it is also desirable for students to have passion and engagement around the learning process. As a faculty member, one technique you can use to improve passion and engagement in the Business Strategy Game is to help your students design a compelling scoreboard that visually tracks the team's progress on lead measures and WIGS. The scoreboard activities can potentially change the culture in the classroom from authority-driven compliance to passion-driven commitment where the students are more committed to themselves and to others on their team for achieving important goals. It moves the emphasis away from the faculty member keeping score for the teams to the teams keeping track of their own progress. In order to be most useful, a team's scoreboard has to be simple, visible, have the right lead measures, and inform the team immediately if they are winning or losing in terms of progress on these measures. The primary requirement for an effective execution scoreboard is that it is designed to motivate the team to win the "game" of achieving their most critical goals.

Discipline 4 is the discipline of accountability. Each member of the student team will need to keep each other accountable for producing the work that is required to have success around their scoreboard. No matter how brilliant the student's plan or how important their goal is each week, nothing will happen until all of the team follows through with consistent action. Each week students have a WIG session in which they report on how they will help improve the WIG results based on the lead measure research they performed that week. During the WIG session, the team clarifies any action items and potential future commitments needed from the group. Then, the students make the actual decision within the Business Strategy Game. Discipline 4, however, can only happen because Disciplines 1 through 3 set up a winnable Business Strategy Game. The role of the fourth discipline is to develop shared accountability among members of the team. When accountability only exists between each team member and the faculty member, its effect is limited, but when team members feel accountable to each other, their performance shifts from points on their grade to becoming personally important. Students will work hard to avoid disappointing their professor, but they will work harder to avoid disappointing their team. The result is a dramatically increased level of performance and follow-through.

PROCEDURE FOR IMPLEMENTING IN A BUSINESS STRATEGY CLASS

Detailed below are step-by-step instructions for applying the Four Disciplines of Execution to the Business Strategy Game:

1. Assign students to their simulation teams for the Business Strategy Game (Thompson, Stappenbeck, Reidenbach, & Thrasher and Harms (2013a) or full enterprise simulation of your choice. This exercise works best with 3 students per team, but larger groups can be used at the discretion of the instructor.
2. Use one week as a "practice" period for learning the simulation. During the practice period the following may occur:
    - Instructor will discuss the dynamics of the simulation
    - Students will be quizzed on the Player's Guide
    - Teams will play two (2) practice rounds of the simulation
    - Instructor will then reset the game and official play will begin
3. Instructor distributes Work Compass forms to each individual
4. Instructor assigns "Gross Margin" as the first widely important goal (WIG) for each group to focus on for the period of years 11 – 14 (the Business Strategy Game begins at year 11).
    - Students should focus on the thought that if they don't do this right, then nothing else matters.
    - Team completes Part 1 of the Work Compass form by setting the WIG parameters for Gross Margin (see Work Compass form):
        - Establish X to Y using clearly measurable results
        - Indicate by when (when will goal be accomplished)?
        - Students work on this portion of the Work Compass form as a team, but each student fills out their own copy of the Work Compass form

        - Assign each group member one of the following lead measures to investigate: Worker productivity, reject rates, and shipping costs (see Table 1)
    - Individually: During the week, each student on the team individually fills out Part 2 of the Work Compass form for the lead measure they were assigned:
        - Students should look at help screens to identify "how to" improve WIG results for their assigned lead measure:
            - How to increase productivity
            - How to lower reject costs
            - How to lower overall shipping costs
        - Each student will indicate tasks to accomplish in order to improve performance on the assigned lead measure and move the scoreboard.
5. Team Weekly WIG session
    - Each student reports on how they will help improve performance on the WIG through the research they've gathered on their assigned lead measure.
    - During the first WIG session, teams develop a scoreboard to track weekly progress on each lead measure contained in the WIG (A spreadsheet or graph is commonly used as the scoreboard).
    - Each week, teams should spend about 15 minutes updating and reviewing the scoreboard information before making the next round of decisions.
    - Teams complete Part 3 of the Work Compass by identifying action items based on the weekly WIG session. In this section of the Work Compass, students should specifically state what decisions they are going to make based on information shared at the WIG session. In Part 3, teams should clarify any future commitments needed from the group during the week as well.
    - Teams submit weekly simulation decisions for processing.
6. Instructor collects Work Compass forms for "Gross Margin" and scoreboards from all groups at the end of Week 14.
7. The Instructor assigns "Return on Equity" as the second widely important goal (WIG) for each group to focus on for the period of years 14 – 18. Repeat steps 3 through 5 for this WIG assigning each group member one of the following lead measures to investigate: Net Margin, Inventory Turnover, and Capital Structure (see Table 1).
8. Instructor collects Work Compass forms for "Return on Equity" and scoreboards from all groups at the end of Week 18.
9. The Instructor assigns "Image Rating" as the third and final widely important goal (WIG) for each group to focus on for the period of years 18 - 20. Repeat steps 3 through 5 for this WIG assigning each group member one of the following lead measures to investigate: Corporate Social Responsibility, Market Share, and Quality Rating (see Table 1).
10. Instructor collects Work Compass forms for "Image Rating" and scoreboards from all groups at the end of Week 20.

Table 1: Lead Measure with Decision Year for Business Strategy Game

Wildly Important Goals	Lead Measure #1	Lead Measure #2	Lead Measure #3	Optimal Decision Point
Increase Gross Margin from 45% to 50% by Year 14.	Worker Productivity	Reject Rates and/or Materials Cost	Shipping Costs "Exchange Rates, Tariffs, Warehouse Costs"	Year 11-14
Increase Return on Equity from 15% to 20% by Year 18.	Margin Analysis "Net Margin"	Inventory Turnover "Adequate Days of Inventory to Meet Delivery Time"	Capital Structure Including Stock Buybacks and Dividend Policy "Retained Earnings"	Year 14-18
Increase Image Rating from 70 to 75 by Year 20.	Corporate Social Responsibility and Citizenship as a Percent of Revenue	Percent Market Share	Quality Rating	Year 18-20

Form 1 – Modified Work Compass

Part 1 – Team Activity: WIG
WIG:
X to Y by When:

Part 2 – Individual Activity: THIS WEEK'S FOCUS	
What must I must accomplish this week to move the scoreboard?	
Lead Measure	To improve the WIG we will (increase or decrease)….
Task	
Task	
Task	

Part 3 – Team Activity: TEAM COMMITMENTS
Record the action items developed during the WIG session

CONCLUSION

In this paper, we offer a framework which may be instrumental in improving strategic thinking and student engagement within a business simulation. It represents an effective way to teach business students to achieve and execute at a level of excellence that should be expected in a business strategy class, as well as the business world. Student teams are encouraged to focus on a few clear core goals that if not achieved could make other accomplishments seem inconsequential. They are also taught to distinguish between all the daily clutter and what really matters.

Today, accredited business schools are challenged to put a great deal of emphases on student engagement and innovation. Student academic and professional engagement occurs when students are actively involved in their educational experiences, in both academic and professional settings, and when they are able to connect these experiences in meaningful ways. Innovation occurs when students are challenged to think differently, try new methods of learning and embrace experimentation and creativity. Incorporating The Four Disciplines of Execution into the Business Strategy Game represents an important way to improve the innovation and engagement of business students.

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Incorporating Financial Planning Case Studies into the Undergraduate Curriculum

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ABSTRACT

Case study approaches to financial planning represent the opportunity to assess the degree to which students have truly internalized the technical aspects of their coursework. At the same time, such courses offer the ability to assess students on their development and mastery of skill sets that are not typically part of an undergraduate curriculum, yet are seen as particularly important to employers: the ability to analyze data and recommend action, written and verbal communication skills, just to name a few. This paper presents a blueprint for the design of a case study class that provides the instructor the ability to assess students' verbal, non-verbal and written communication skills as well as their problem solving abilities in a personal financial planning context.

Keywords: Financial planning, case studies, money management, course design

INTRODUCTION

Education in personal financial planning is offered in many forms at the college/university level. Some institutions offer single course survey treatments of the topic in an effort to prepare graduates for managing their money after college. Typically, these courses deliver foundation information in topics such as credit management, budgeting, insurance, investments and income taxes. Other institutions have gone a step further and offer fully developed degree programs in the area. CFP Board of Standards (www.cfp.net) maintains a registry of academic programs offering certificates or degrees in the financial planning area and that meet the Board's education requirement for certification as a financial planner. Currently, over 300 programs nationwide are registered with CFP Board.

Certification of a given program serves as an assurance to students that they have had appropriate exposure to a wide-ranging list of topics that the Board deems critical for success as a financial planner. Broadly speaking, the topics can be broken into five main topic areas: income taxes, insurance, investments, retirement planning and estate planning. Students graduating from any one of the Board-registered programs therefore can be confident that they have attained the base level of preparation needed to successfully sit for the national certification examination administered by CFP Board.

However, exposure to and mastery of this content base on an examination is not sufficient by itself to indicate the potential for success as a financial planner. In particular, success as a planner will depend to a large degree on the student's ability to conduct a client meeting. This activity tests the student/planner's ability to perform a number of skills well: they must demonstrate the ability to quickly establish sufficient rapport with the client that the client feels comfortable disclosing private financial information. Further, the meeting provides a test of the student/planner's ability communicate complex topics to the client in terms that are easily understandable to a novice. The student/planner must also show the ability to monitor and interpret correctly non-verbal cues (their own as well as the client's), and have ability to communicate the results of the meeting in written form in follow up letters to the client. As a result, beginning in 2011 the Board began requiring a capstone course which requires students to independently develop a comprehensive financial plan. We believe that the case study format best brings home to the student the lesson that the client's financial life is an interconnected system. That is, when building a financial plan, changing one area of the client's finances will often cause changes in other realms.

This paper is designed to illustrate one possible design for a financial planning case study course that incorporates the elements described previously. The course was designed as a "capstone" learning experience as envisioned by CFP Board, to be taken after the student has completed instruction in the various technical aspects of the field and has taken dedicated classes in income taxes, insurance, investments, retirement planning and estate planning. With that foundation assumed, no further instruction in these content areas is intended in this course (though such instruction will nevertheless take place organically as the course progresses). The focus here is on learning the

interpersonal aspects of conducting a client meeting and the follow-up. In this regard, the course moves beyond the Board's requirement of simply developing the financial plan to communicating the plan, both verbally and in writing. This is a skill set that most comprehensive financial planning firms will demand and yet it is a skill set that many undergraduates have not had an ability to practice, much less master, prior to their graduation.

THE CASE METHOD

Background and Development

Instruction utilizing the case study approach has its origins in the study of business. In 1920, Dean Edwin Gay at Harvard Business School identified a teaching philosophy to guide the school for years to come. He stated, "The school should equip the student for business by providing a background of facts and principles and by giving the student training for practice in dealing with business problems…" Today, case studies have been adapted to online courses, virtual classrooms, and face-to-face classes. In the typical case-study application, students are presented with a case, assume the role of decision maker, and read and reflect on case information. They typically work in teams to discuss their findings, identify alternatives and eventually suggest a course of action. Students do the majority of the talking with the professor serving as a facilitator. A team approach to discussing a case adds information from students who have diverse business experiences. Faculty believe student participation is important and about 50% of a student's grade is based on their participation (Yeaple, 2012). The case method has been so successful that most prominent business schools – such as Darden Business School, IESE Business School, INSEAD, and the Richard Ivey School of Business -- have adopted the case method (Case Centre, 2014).

Application

A case tells a story, typically reflecting real life events, and is often written with a clear focus that relates to a specific problem (Case Centre, 2014; Swanson & Morrison, 2010). It is often referred to as a problem based learning strategy (Brooke, 2006) or a Deep Structure Learning method (Swanson & Morrison, 2010). Cases can be used for classroom discussions, individual analysis, team activities, and/or written assignments. While this paper focuses on a stand-alone case design, many courses supplement lectures with case studies to help students understand basic course concepts.

Swanson & Morrison (2010) have identified three applications for using cases in the classroom. 1) Historical Narration: The case tells the story of what a company or entity has done by providing information about the situation or environment, describing how managers discovered the problem, identifying possible courses of action considered by company officials, and stating how the company responded. The use of a historical narration allows students to learn by analyzing what the company did and how the decision has worked. 2) Acquiring Specific Skills: This application of a case provides students with background information in order to 'answer' a question that the professor has constructed. It may require students to conduct research, use and analyze data, etc. The case becomes a real-life simulation and helps students acquire skills (such as how to analyze data) and to gain knowledge (understanding better how a specific system works. This could relate to course topics such as how distribution systems work, how consumer markets change, impact of globalization, etc.). 3) Decision making: The case tells a story, but does not clearly state an issue or problem. In this application students must discover the problem, and then identify possible alternatives, establish criteria to evaluate alternatives and then select a solution.

Brooke (2006) identifies 3 ways in which cases can be used in a classroom or online. Cases can be very short -- just a few paragraphs focusing on a specific problem – or longer in order to provide complete information about the company to students. 1) Cases can use a discussion approach that has students collaborating to identify the problem and develop solutions. 2) In a debate approach, students are divided into two groups representing opposing views. After discussion, students may change their viewpoint or become more understanding of an opposing viewpoint. 3) In a trial approach, students work in teams to write an introductory statement which are posted for all students to read. Then each team writes a rebuttal to the opposing team's introductory statement and poses a new question to the opposing team. The posing of additional questions may be reiterated according to how much time is permitted to discuss the case.

This paper focuses on a course structure requiring students to acquire a specific skillset and utilize a discussion approach: students are shown that often there are multiple solutions to a single problem and taught that creativity in formulating solutions is an asset.

Benefits
There are a number of advantages to students when a case method approach is incorporated in the classroom.

- Students become active learners when they are involved in identifying problems, developing solutions, and recommending a course of action (Brooke, 2006).
- Students learn some very specific skills that employers often expect students to have. Skills include: thinking critically, analyzing, finding appropriate resources, developing problem solving methods and decision making skills, & using writing and presentation skills (Brooke, 2006, Case Centre, 2014, Swanson & Morrison, 2010).
- Students view courses using the case method more positively than those courses that do not use this approach (Swanson & Morrison, 2010). Students indicate that they think the course is more fun, cases bring a reality to the classroom, and they benefit from the experience of others (Case Centre, 2014).
- Faculty indicate that the case method allows students to apply what they are learning, that discussions may result in eye-opening revelations, and students become engaged in discussing the real challenges that companies face (Case Centre, 2014).

Limitations and Criticisms
The case method is not always an easy approach for faculty to incorporate into their classes and as a result there are some concerns about using this teaching method.

- To be most successful, faculty need to have a constant source of new cases that reflect current issues. This requires continuous research in developing and writing new cases (Case Centre, 2014).
- Faculty may need to put in additional time preparing for class by reading the cases, developing a teaching strategy, deciding on learning objectives and critical questions to be addressed (Case Centre, 2014).
- When a high percentage of students' grades rely on participation in case discussion, students compete for class time (Yeaple, 2012).
- Students may be at a disadvantage in adding to the discussion if they do not have work experience (Yeaple, 2012).
- Due to regulatory and legislative changes, cases may be dated and no longer relevant. This requires faculty to constantly be aware of such changes and either alter the case or locate a replacement that is suitably up to date.
- Faculty are concerned that since there are often no correct or right answers to a case issue that students may not clearly understand the learning objective or 'takeaway' from the case discussion (Yeaple, 2012). Thus, it is incumbent on the professor to be sure students understand the course concepts or tools that are being applied and the skills that students are obtaining by doing the analysis.
- The case method may not be well suited to courses in which specific, unique, correct answers are required (Yeaple, 2012).

DESIGN OF THE COURSE

This course was designed to address two primary objectives: giving students a working familiarity with a commercially available financial planning software package while additionally providing them with "hands-on" experience and instruction in conducting client meetings. Typical undergraduate financial planning curricula provide students with the opportunity to strengthen their technical knowledge in the financial planning field, but the nature of these stand-alone classes encourages students to compartmentalize learning. That is, by studying investments, retirement planning, income tax and estate planning as separate and discrete content areas, it is difficult to appreciate how changes in one facet of a client's life might create ripple effects that cause unintended consequences in a fully developed financial plan.

The design of this class allows for the development of a holistic view of the financial planning process. Further, the typical college graduate leaves their undergraduate institution with a wealth of technical knowledge, but normally has had no experience whatsoever with the application of that knowledge in a "real-world" environment. Employers increasingly expect that young planners be capable of not only determining what strategies need to be employed to meet a client's goals, but also ask that these recent graduates be capable of explaining the rationale and benefits of that strategy to the client in terms that can be readily understood by a financial novice. The design of this course

allows students the opportunity to gain experience (both first hand and vicariously) in both skillsets by requiring them to conduct and manage client meetings.

This course was also designed to expose students to a popular, widely-utilized financial planning software program. A good portion of the early part of the course involves getting the students familiar with entering data into the program and generating the reports that form the foundation for their ultimate recommendations to the client.

By virtue of this design, once students have completed the course they are in a much better position to market themselves to future employers. They have had direct experience working with a financial planning software package (which may well be used by their employers) and will have had direct, hands-on experience running face-to-face client meetings. In this way, the design builds upon the theory of experiential learning developed by Kolb (1984) which contends that learners best expand their knowledge base and skill set by direct interaction with their environment. Kolb argued that one of the better ways to enhance learning was to recreate, as nearly as possible, the decision making environment that the student would ultimately face. This course is a direct effort to accomplish that objective. This course is designed to provide students with an opportunity to experiment and learn from their mistakes in an educational environment.

Overall Structure

The class is normally divided into teams of 3-4 students each for the purpose of working the case to completion, a process that will consume the entire semester. Each team is considered a "company" that a hypothetical client family has retained for the purpose of building a financial plan. Prior to the start of the semester, it is necessary to identify individuals external to the class (preferably strangers to all) who are willing to act in the roles of this client family. This role play requires no technical expertise, and is largely limited to asking questions of the students when recommendations being made or the justifications for those recommendations are unclear. Beyond asking for simple clarification, the role of the actors playing the individual family members is very limited and (out of courtesy for their service) little else should be expected of them. To facilitate discussion in the client meetings described below, it is often helpful for the demographic information presented in the case to mirror the actual demographics of the actors involved.

In designing the course, it was felt that six client meetings would be most manageable during a 15-week semester and would help the students best integrate their coursework into a cohesive whole, as required by CFP Board of Standards. As a result, this course design requires that individual meetings be held to discuss the following topics: cash flow/financial assessment, insurance, income taxes, investments, retirement planning and estate planning.

Each team/company is assigned the responsibility of scheduling and conducting meetings pertaining to at least one of the content areas described above (the exact number depends on the size of the class). With smaller classes, it may be necessary to assign more than one client meeting (and coverage of more than one topic area to each team). The design of the course around six meetings with teams of 3-4 students in practical terms limits the size of any one section to 18-24 students.

The lead author's experience has been that it is best for the instructor to assign students to teams/companies. By doing so, the instructor is in a position to ensure that the knowledge base of every team is roughly comparable. In the ideal, every member of every team will have had coursework in each of the five financial planning content areas. In the less than ideal (and more typical) situation, it will be important to ensure that at least one member of every team has had dedicated coursework in each of these areas. That is, every team should have at least one member with dedicated coursework in insurance planning; at least one member with dedicated coursework in investments, and so on such that each team has at least one "expert" in every content area. While it is unlikely that any one student will have had all five foundation courses it is critically important that each of the content areas have been covered by at least one person on each team.

The Case Narrative

The case narratives used in each iteration of the course were all drafted by the lead author of this paper, who is a CFP® professional. This addresses one of the previously expressed concerns surrounding use of the case study approach; in particular that legislative and regulatory changes quickly make old cases obsolete. Much of the content of the narrative is designed to dovetail with the data entry requirements of the software. The case is fairly detailed and normally runs between 6-10 pages, containing a detailed description of the financial status of a fictitious and

hypothetical client family. This description also includes personal information on the family members (names, ages, titling details on specific assets) and expands to discussions of cash flow, insurance policies, investment holdings, retirement plans, income tax information, and estate planning objectives. The case is written to provide sufficient information on hobbies and other personal information regarding the "clients" that rapport-building through conversation during the meetings should be an easy task.

Many exercises that are presented as case studies are simply narratives followed by a set of problems, each of which has a very definite correct answer. In such a design, the case is really nothing more than an elaborate problem set. This course was intentionally designed around a case narrative that is open-ended enough to allow students to be creative when developing solutions and to allow them to understand from the other groups that often multiple solutions exist to a single financial planning issue.

The course proceeds based on the assumption that the client family has retained the services of the student's firm to develop a comprehensive financial plan. The firm's responsibility is to identify any problems that exist with respect to the family's financial affairs and to devise and propose remedies to those problems. The absence of clearly defined questions is intentional: it moves the students out of their comfort zone and makes the class something more than an exercise in problem solving. Indeed, part of the feedback that the instructor needs in order to evaluate the degree to which students have internalized their prior classroom training centers on whether the students can uncover and identify hidden problem areas from the description in the case narrative and propose solutions that are appropriate to the client. The instructor should be careful to plant numerous potential problems in the narrative for the students to find and bring forward for discussion. Those teams that are most successful at uncovering the unseen obstacles would presumably be evaluated more positively than those teams/companies that struggle in this regard.

Software and the Generation of the Analysis

Much of the first month of the semester is spent in a computer lab familiarizing the students with the software package selected for use in the course. Some vendors will provide copies of their programs free of charge to educational institutions to support instruction, and these vendors are likely the best option for a class such as this.

As the students will be unfamiliar with the software, the instructor must be reasonably well-schooled in its operation in order to offer clear instruction and guidance. Students should be taken through the data entry process, and taught how to generate and interpret reports. Their challenge, upon which their assessment is based, is how well they are able to identify problems from the information contained in the reports that are generated and propose appropriate solutions.

Once any existing problem areas are identified in the six content areas, it is left to the teams to identify appropriate solutions to those issues and present them to the clients. It is important at this stage for the instructor to keep in mind the purpose of the course, which is to assess how well the teams and the individual students have internalized their previous coursework. Assistance and feedback from the instructor prior to the meeting with the client family that is too specific will result in plans and recommendations that mirror the instructors' proposals and will stifle classroom discussion and critique. In short, the instructor must allow the students the freedom to struggle and to make mistakes while pursuing answers to a very generally stated objective. That said, maintaining such a position is not likely to make the instructor popular with the students enrolled in the class

Mock Client Meetings

Once the responsibility for each client meeting has been assigned, it is left up to the individual teams to contact the individuals who are role-playing the family to schedule the meeting. By necessity, the conducting of a separate meeting with these individuals will require time to be spent outside of the normally scheduled class period.

Normally, the responsibility for conducting each meeting is assigned to two students from each team, acting in tandem. Since one of the goals of the course is to provide the opportunity for interaction with clients, assigning two students to run each meeting effectively doubles the supply of student "face time" with the client. In addition, since this is the first experience with client meetings that most students will have had, it was felt that assigning two students to conduct each meeting would provide a small sense of security for each in the inevitable situation where one student "freezes up". Having a partner present provides a safety net, reduces student anxiety and ensures that

the client meeting doesn't grind to an unexpected and abrupt halt because of an inability to field a particular question.

Each client meeting is recorded on video. During the next regularly scheduled class meeting, the video recording is played back for the entire class. The purpose of this review is twofold. First, it gives the instructor the opportunity to correct statements made in the meeting by the team members that were incorrect, to point out errors of omission as well as errors of commission and to critique the structure and conduct of the meeting. Second, the reality is that with multiple teams working the same set of data, different teams will develop different solutions to the problem at hand. This video replay of the meeting gives the members of those teams who did not participate in the conduct of the meeting an opportunity to present their solutions and receive feedback. It may well be that multiple solutions are reasonable within the confines of the case, but the discussion that results is an invaluable learning tool as it forces each of the respective teams to defend the rationale that they used to develop their recommendations. Even if multiple solutions are appropriate and technically correct, the very discussion of the thought process that led to a different conclusion has value from an instructional perspective.

This portion of the course has proven to be challenging to manage. By the end of their undergraduate curriculum, most students have been conditioned to passively absorb the information presented in lecture (Kester, 1999). The design of this course, by contrast, depends on and forces the students to engage with each other, defend their own solutions and probe for support underlying the solutions of others. Most undergraduates are reluctant to engage in this process, even if they are well prepared, lest this engagement be seen by the other groups as confrontational thus provoking retaliatory treatment. Therefore, the instructor should strive for commentary between the groups to be one of inquiry, to allow the groups to learn from each other. Critical comments are best reserved for and to, the instructor.

Client Letters

Following each meeting, each team/company is required to submit a 4-6 page letter describing and summarizing the issues that were discussed during the client meeting and the recommendations that were made. For the team that actually conducted the meeting, the letter will summarize what actually took place during the meeting and the topics and recommendations that were discussed. The other teams/companies are responsible for writing letters summarizing their best guess as to how the meeting would have gone, had it actually taken place (topics discussed, recommendations, solutions, etc). The letter writing aspect of the class is designed to assess the students' written communication skills. In a practical sense, such letters serve as a written record of and reminder to a planner of what was discussed and serve as protection against any potential future litigation that might be brought by the client or their heirs. Often, regulatory agencies will ask to see evidence of what is being recommended to clients in order to judge its appropriateness in light of statutory considerations.

Letters are typically collected from all teams at the beginning of the class period in which the video of the meeting is critiqued. In this way, the teams are prevented from adding items to the letter that come up in the discussion and review of the video; either in the case of adding previously omitted material or deleting material that was shown to be inappropriate given the client's situation.

SHORTCOMINGS OF THE CURRENT DESIGN

The most glaring weakness of the current design is that an individual or couple must be identified who is/are willing to act in the role of the hypothetical client and sacrifice six evenings and 6-9 hours of their time during the course of the semester. This is a significant sacrifice in light of the fact that the individual or couple in question is getting no direct benefit from participating in the class and playing the role of the client. The downside of this is that we have typically seen a drop in motivation and engagement on the "client's" part as the semester progressed. A possible solution to this might be to use the "client's" actual financial data as a base to the narrative and add miscellaneous and hypothetical problems to the narrative to assess the students' ability to spot such problems. However, this solution creates other issues, not least of which is potential institutional liability in the event one of the actors puts a recommendation into play and suffers harm as a result. One other possible solution would be simply to go live: that is, to invite members of the community in to work with the students using 100% actual client data rather than a fictional narrative. Our concern here is that very clear liability issues arise for the institution under this design. The school's legal counsel would definitely have to be consulted before this option was exercised.

Another weakness is that with only six client meetings in the semester, each team is necessarily restricted in terms of the number of meetings they will be assigned to conduct. For example, if three student teams exist, each team will be responsible for conducting two client meetings. If each team consists of four members, then under the current design each individual student will only have the opportunity to be present at one client meeting. In this scenario, the student in question would have no opportunity to learn from the critique received during the meeting and demonstrate improvement over time. One solution to this dilemma would be to have each team/company assigned their own "clients" but this requires that the instructor identify multiple individuals willing to play the role of "client" for the duration of each semester. Understandably, locating enough "clients" so that each team has their own would be a daunting task. Further, from an instructional standpoint, any variation in the educational experience presented the individual teams serves to complicate the assessment process. If each team has different "client" couples, the interaction patterns between client and planner will necessarily be altered, and assigning valid grades to the different teams becomes increasingly complicated. If interactions are strained and weak between one student team-client pairing, while that existing between a different pairing is particularly strong and robust, the instructor must have a means of determining whether the weakness in the first relationship is due to the students or to the clients, and alter the assessment accordingly. In short, it seems that the fewer variables that exist in these models, the more valid the assessment process will become.

In addition, the instructor needs to be constantly aware of managing expectations of the students enrolled in a course designed as described in this paper. It has been noted that because of the unstructured nature of such courses, the nebulous process of identifying problems and the potentially numerous ways in which the problems can be addressed, students can be left feeling less satisfied than in a traditional, lecture based course (Kester, 1999). In a problem-centered environment, there is one distinct correct answer, and generating that answer provides the student with a very concrete sense of accomplishment. When dealing with a case-study approach, there are often numerous solutions that may be simultaneously possible and appropriate, and therefore that sense of completion is often lacking for the student. In this design, the instructor must be constantly reinforcing this point. That is, while some solutions generated may be grossly incorrect and inappropriate (and should be recognized as such) the instructor must be aware that the students will be seeking validation of their approach, and in the absence of clearly inappropriate advice, this should be given.

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Price Discrimination: A Classroom Exercise

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ABSTRACT

Price discrimination is a common topic in most introductory courses in microeconomics. These students have experienced markets where multiple prices are charged, such as movie theaters. However, they find that neither the discussions nor graphical presentations used in most textbooks to be very helpful in explaining how price discrimination works to increase profits. This paper uses numerical examples that clearly demonstrate how the effective use price discrimination results in higher profits.

Keywords: price discrimination, pricing strategy**,** elasticity of demand

INTRODUCTION

Nearly all collegiate business programs require a principles of microeconomics course. Such a requirement is appropriate, as microeconomics provides the theoretical foundation of how a firm operates in various market settings. The common thread in microeconomics is how the firm determines price and output when the objective is profit maximization.

Unfortunately, many students fail to see the connection between microeconomic theory and the courses that are taken later in their business program. For instance, marginal cost, a critical concept in their first (and perhaps only) course in microeconomics, is often never mentioned again outside of this course. This is akin to an actor in a play that fails to return to the stage after the first act. We would never refer to that character as "the star" of the production. Their role was minor, at best. Students are justified if they question the importance of the concept, thinking, "If marginal cost were so important, why don't we hear about it anymore?" It is natural for students to conclude that marginal cost's significance is confined to economics and does not extend to the other management or marketing courses. Thus begins their process of storing course content in "silos" instead of integrating that knowledge across the business disciplines. Such compartmentalization of knowledge does not hurt the student because business faculty often do not reach across the disciplines for classroom examples.

Some topics, however, readily lend themselves to integration in multiple courses. One such topic is price discrimination. Price discrimination, charging at least two different prices for the same good or service, is a frequent topic in the principles of microeconomics class. Many texts use examples of first degree price discrimination (perfect price discrimination), where each consumer pays their maximum reservation price. (For instance, see Mankiw, 2011, Krugman and Wells, 2012, or Bade and Parkin, 2014, among others.) This approach has two problems. First, since this is their first course in microeconomics, these students have only recently become comfortable with determining a single price in a monopoly. Suddenly shifting to individual pricing is beyond their grasp at this time. Students also cannot conceive of a market where individual buyers are all charged different prices. However, these students readily identify with third-degree price discrimination (where at least two prices are charged for the same good) because they have experienced it. They readily volunteer examples, such as movies that have different admission prices for children and adults, airline tickets that are more expensive the closer the departure is to the purchase, and college tuitions, with in-state and out-of-state rates.

This paper provides several classroom examples of price discrimination. The exercise, which was designed for a principles of microeconomics class, could also be used in a marketing or management class during the discussion of how price should be used to place the product. The exercise incorporates the assumptions of non-competitive markets, the law of demand and price elasticity of demand. It can be used in the first microeconomics class as well as marketing and business strategy later in their program.

PRICE ELASTICITY OF DEMAND

Elasticity of demand is a factor in the effective use of price discrimination, which integrates yet another topic from microeconomics into the discussions in subsequent classes. Elasticity of demand measures the percentage change in quantity to the percentage change in price. The formula for elasticity of demand is:

Elasticity of demand = $E_D = \%\Delta Q/\%\Delta P$

A percentage quantity response greater than the percentage price change ($E_D>1$) is referred to as elastic demand. If the percentage change in quantity is less than the percentage change in price ($E_D<1$), then demand is said to be inelastic. Price discrimination raises the price to customers who are not price sensitive (demand is inelastic) and lowers the price to customers who respond more to changes in price (demand is elastic). Even though price and quantity vary inversely (law of demand), elasticity of demand is always referred to as a positive number.

The principle determinant of elasticity is the number of effective substitutes. The more options available, the more consumers respond to a price change of one product by shifting to another product. Effective advertising either persuades consumers that a specific product is a good substitute for a competitive product, or strives to convince consumers that their product is so unique that no substitute should be considered. (A review of elasticity at this point in the course should prove helpful when the topic shifts to advertising strategy.)

This classroom exercise uses numerical examples to illustrate the effect that price discrimination has on revenues and profits. However, the mathematics required is simple arithmetic (not calculus), which should calm even those students with serious math phobias. Finally, the example is not graphical, so the results do not depend on how a curve is drawn. Too often, a graph meticulously derived by the professor on the board (or screen) in the front of the classroom does not get reproduced accurately in a student's notes with the tangencies and/or intersections in the right places. Thus, the conclusions the student should infer from the discussions are not supported by the graph they have in their notes. This confusion leads to frustration, which is not conducive to learning.

REQUIREMENTS FOR PRICE DISCRIMINATION

Price discrimination as a pricing strategy is not an option for all firms. Several factors need to align before it is possible to charge more than one price. However, where it is possible, it is highly profitable. The first requirement is that the firm has some degree of control over their price. Perfect competitors selling homogeneous products, such as an agricultural commodity (i.e. wheat), take the price from the market and do not even set one price, so price discrimination is not an option for them. In addition, the consumers must have different elasticities of demand for the product, as the price will be increased or decreased depending on the buyer's elasticity. The firm must be able to segment their customer base along these elasticities. If the elasticity of demand difference depends on the buyer's age, then the seller must be able to look at a buyer and determine which age category they are in. Finally, resale of the product is not possible or feasible. If the customer who receives the item at the lower price could resell it to a customer whom you would charge a higher price, then you would lose the high-priced end of your market to these resellers.

CLASSROOM EXAMPLE

Example # 1: Consider an airline that flies a route using a plane with a 500-seat capacity. The airline employs a single-price strategy and sells each seat for $600, yielding a total revenue of $300,000 per flight. Costs are 80% of sales ($240,000), so profits are $60,000 per flight. If the firm meets the price discrimination criteria above, we can show how engaging in price discrimination can raise revenues and profits.

Assume there are two identifiable customer groups: leisure travelers and business travelers. The leisure travelers have elasticities of 4.0 (elastic demand), while the business travelers have an elasticity of .02 (inelastic demand). For simplicity's sake, assume the market is evenly divided between the two groups, with 250 units purchased by each group. Since the number of airline seats is fixed, costs are also fixed, so any change in revenue translates directly into a change in profit, further simplifying the analysis.

The exercise begins by increasing the price to the inelastic customers by some arbitrary amount, such as 50%, or to $900. Since the elasticity for this group is 0.2, a 50% increase in the price will result in a 10% decrease in the quantity they wish to buy ($0.2 = \%\Delta Q/\%\Delta P = 10\%/50\%$). The decrease in sales by 10% equates to 25 units (10% x

250), so sales in this portion of the market fall to 225. Total revenues, however increase from $150,000 ($600 x 250) to $202,500 (225 x $900).

To maintain output, the unsold 25 units must be sold in the elastic market. For quantity demanded to increase from 250 to 275, the price must fall. How much must price decline to increase quantity demanded by 10%? Since elasticity of demand is 4.0 in this market, a 10% increase in quantity requires a 2.5% decrease in price (4.0 = %ΔQ/%ΔP = 10%/2.5%). This makes the new price $585 (($600 x (1 – 2.5%). The new total revenue in the elastic market increases from the original $150,000 ($600 x 250) to $160, 875 ($585 x 275). Summing both markets, total revenue has risen from $300,000 to $363,375 ($202,500 + $160,875), a 21% increase in sales revenue. Since costs remained constant at $240,000, profits have more than doubled, rising from $60,000 to $123,375.

Example #2: Consider the airline example above, but with a slight twist. Instead of the market being evenly divided between the customer groups, assume that leisure travelers account for 60% of the seats (300 seats) and business travelers buy the other 40% (200 seats). Since the initial quantities in each market segment is different, then an equal absolute change in quantity will translate to different percentage changes in quantity.

As before, the price is increased for the business traveler (inelastic market segment) from $600 to $900, a 50% increase. Since the elasticity is 0.2, this will again cause quantity to decline by 10%, or 20 seats, to 180 tickets sold at the new price. Revenues rise from $120,000 ($600 x 200) to $162,000 ($900 x 180). Since the elasticity of demand for leisure travelers is 4.0, selling an additional 20 seats to leisure travelers (a 6.67% increase in quantity) requires the price to decline by 1.67% to $590. Total revenue from leisure travelers increases from $180,000 ($600 x 300) to $188,800 ($590 x 320). Revenues from both market segments have increased from $300,000 to $350,800 ($162,000 + $188,800), with profits increasing by $50,800 as well.

Example #3: Assume a local movie theater has a 200-seat capacity and charges a $10 per ticket. This yields maximum total revenue of $2000 per show. If the total cost per show is $800, then the profit is $1200 if the show is sold out. Further assume that the movie's patrons can be classified into two distinct groups: children (under 12-years old) and adults (those over 12). Each group buys 100 tickets per show, so each market segment provides $1000 of revenue. These two groups have differing price elasticities of demand, with children having an elasticity of 3.0 and adults having an elasticity of 0.6.

Price discrimination requires a price increase where market demand is inelastic, so the owner raises the price from $10 to $13 for the adults, a 30% increase in price. Since the elasticity is 0.6, a 30% price increase will be accompanied by an 18% decrease in quantity, or a decline from 100 to 82. Total revenue has increased from $1000 to $1066 ($13 x 82). The elasticity of demand in the children's segment of the market is 3.0. In order to sell these additional 18 seats to children (an 18% increase in quantity), the price must decline by 6%, or 60¢, which makes the new price $9.40. Total revenue for this market is now $1109.20 ($9.40 x 118). Total revenue from both markets has risen from $2000 to $2175.20, an increase of 8.76%. Profits have increased from $1200 under the single price system to $1375.20 with price discrimination, a 14.6% increase.

IMPLEMENTATION

I use this exercise after introducing the concept of price discrimination. I remind the class of the law of demand as well as the formula for price elasticity. We work through several examples together so they can see that revenues and profits increase when multiple prices are charged. I then ask them to form small groups of three or four students and give them another example to complete. I go from group to group and assist them if they are uncertain as to the next step. Next, a homework problem reinforces the learning process, as they must initiate and complete the problem without any prompting from me. Finally, I give them a brief in-class quiz (less than 10 minutes) to show to them and to me their level of understanding. Students having trouble are encouraged to stop by the office for additional assistance. A similar problem is on their next test, and they usually perform quite well.

COMMON MISTAKES

The most common mistakes (aside from not using the correct formula for elasticity and/or careless math errors) students seem to have in this example is changing the price or quantity the appropriate percentage but in the wrong direction. They may correctly calculate that a 50% price change requires a 10% quantity change in the inelastic

market, but fail to realize that if price increases, quantity will decrease (the law of demand). Their thinking seems to be that if price goes up, then selling more will at this higher price will greatly increase revenues. While they cannot be faulted for this logic, it does overlook the law of demand, which states price and quantity demanded are inversely related.

Another common mistake is to confuse which market should be given the higher price. This is where the mathematical aspect of the exercise is most enlightening. If price is lowered by 50% in the inelastic market, quantity will increase by 10%. The new total revenue is now $82,500 ($300 x 275), which is lower than the original $150,000. If the quantity in the elastic market must decline by 10% to accommodate the higher quantity in the inelastic market, then the price must increase by 2.5%. This will produce total revenue of $138,375 ($615 x 225), which is also less than the original $150,000. Some students will realize that this implementation of price discrimination is inconsistent with maximizing profits. However, many will fail to compare the original (pre-price discrimination) revenues with those after the price changes. This mistake will remind the student to evaluate whether their answer is reasonable, and not just to copy the number in the calculator's display.

CONCLUSION

This price discrimination numerical exercise highlights a common topic from microeconomics. The exercise also reinforces the law of demand and the profit maximization motivation of the firm. Using specific numbers clearly shows that the claim, effective price discrimination increases profits, is true. This example can also be used in marketing and strategic management, demonstrating how the business disciplines are integrated and, hopefully, begin to break down the "silo mentality" of many business students.

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How Teaching Statistics can be Optimized as a Directed Iterative Process

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ABSTRACT

This paper analyzes the relationships between typical undergraduate business statistics subjects and how they are used in downstream courses and beyond, using commonly taught business and economics courses as stations for reinforcing statistical concepts through applications. The role of accreditation in steering statistical applications is considered, with three levels of accreditors allowing programs to self-select into teaching, application, and research. The traditional approach of training undergraduate business majors for careers in industry, with possible graduate training later in the career, is the example used in this paper.

Keywords: statistics, business, education, iterative learning

INTRODUCTION

Statistics is viewed as an important subject for undergraduate business students. Why it is important and at what points in the curriculum it should be taught is the subject of this paper. The first section of this paper will briefly explore accreditation standards and their treatment of statistical concepts. The second section will take a historical perspective to summarize why business curricula have evolved the way that they have done so in the United States. The third section will consider how statistical concepts are treated in a representative business curriculum. Finally, we emphasize the necessity of considering the target market at each point of curricular design so that the teaching of business statistics is optimized.

Multiple accreditors?

Statistics is a required course in most business schools. However, it is not a required course, *per se*, of business curriculums by business accreditors. The three major business accrediting organizations, AACSB International - The Association to Advance Collegiate Schools of Business founded in 1916, The Accreditation Council for Business Schools and Programs (ACBSP) founded in 1989, and The International Assembly for Collegiate Business Education (IACBE) founded in 1997, do not explicitly require courses in business statistics.

In the case of AACSB, whose focus includes resources and research, in the previous standard, among topics typically found in general management degree programs, it would expect to find "statistical data analysis and management science as they support decision-making processes throughout an organization." (Standard 15 [April 25, 2003 and revised January 31, 2012]) However, in the 2013 standard, the appearance of the word "statistic" occurs in a broader context in the General Business and Management Knowledge Areas, which should include "Information technology and statistics/quantitative methods impacts on business practices to include data creation, data sharing, data analytics, data mining, data reporting, and storage between and across organizations including related ethical issues" (Standard 9, April 8, 2013).

An alternative specialized business accreditor, the Accreditation Council for Collegiate Business Schools and Programs (ACBSP), which focuses on teaching excellence, lists "Quantitative Techniques/Statistics" among the subjects in the Undergraduate Common Professional Component for institutions to follow (ACBSP Standards and Criteria for Demonstrating Excellence in Baccalaureate/Graduate Degree Schools and Programs, Criterion 61.3, p. 46 [Original December 2010, Revision I, June 2014]). The manual makes very clear that the burden is on the institution to show how the subject is covered if it is not the subject of a stand-alone, core, course.

The newest business accreditor, focused more on mission-based performance, the International Assembly for Collegiate Business Education (IACBE), specifically listed "Quantitative methods/statistics" as business tools in the Common Professional Component that the organization expected to be covered in accredited institutions using its Self-Study Manual (amended 2011).

During most of its history, AACSB's approval was viewed as attainable only by top research institutions. This was a result of the influence of the German university model that took American higher education by storm during the nineteenth century and reached its full force before the First World War (Veysey, 1965). There is no doubt that the dominant influence on American research institutions when AACSB was founded was *science* and that the standard was modeled on that of a science curriculum. Clark Kerr, former president of The University of California at Berkeley called this period "the golden age of the research university." (Kerr, 1992) We conjecture that AACSB was traditionally the accreditor of choice for graduate school-bound students who would need courses in calculus and mathematical statistics in order to succeed in graduate school later. We consider this approach to higher education as "the traditional approach," even though it bears little resemblance to the method of the Classics as prescribed by traditional non-German European universities. These traditional students sought programs at "research" institutions as classified by the Carnegie system of higher education classification. Such programs naturally had elements in common with science programs that already existed at such institutions in order for the business programs to gain acceptance from colleagues across campus. And, as noted earlier, two other business accreditation organizations now exist.

We suggest that these changes have allowed institutions the flexibility of targeting different customers in addition to the traditional undergraduate business student. For a more complete comparison of the three accreditors, please see Brink, et al, 2012.

The "different customers" alluded to above would include *nontraditional students*, such as institutions that cater to working adults and frequently provide evening and online instruction. We simply observe that this trend is an outgrowth of the academic godfather of modern adult education, Malcolm Knowles. A student of John Dewey's, Knowles was a tireless advocate of Piaget's constructivism, i.e., "students learn better by constructing rather than by receiving knowledge." [Piaget (1978), Garfield and Ben-Zvi (2009)] In his seminal work, *The Modern Practice of Adult Education*, Knowles maintained that adults learn differently than do children and learn better by actively doing than by passively receiving lectures (Knowles, 1970). This approach, which Knowles popularized as "andragogy" (adult learning) and contrasted with "pedagogy" (child learning), may be viewed as the antithesis of the traditional approach outlined earlier.

An economic explanation for the existence of three different business accreditation bodies is that institutions vote with their feet. As in the Tiebout model of where one chooses to live, students and their employers self-select into which type of institution best meets their needs (Tiebout, 1956). The emergence of alternative accreditations is a market phenomenon that gives customers more choice. *If customers are rational*, then the outcome is optimal.

A different dimension requiring optimality

Given that there are different types of institutions, with different students and customers, and different educational philosophies, how should statistical concepts be taught and/or applied? To answer this question presupposes a particular type of institution and philosophy. We explore the example of a traditional undergraduate business curriculum in which students may at some later date enter an MBA program. This particular set of examples may be adapted to nontraditional programs, as in Parry and Horton (1997), but the lockstep nature of such programs poses some other questions whose answers are beyond the scope of this paper.

A few examples of business statistical topics, and the courses in which they can provide either entry or departure points for learning iterations, follow in the next section.

Accounting

Sampling/Hypothesis Testing/Type II Error (Auditing)

Economics

Price Indexes (Macro), Forecasting (Regression) (Managerial)

Finance

Security Analysis and Portfolio Management, Insurance and Risk Analysis

Management

Control Charts/Type II Error, Acceptance, Sampling, Forecasting (Regression)

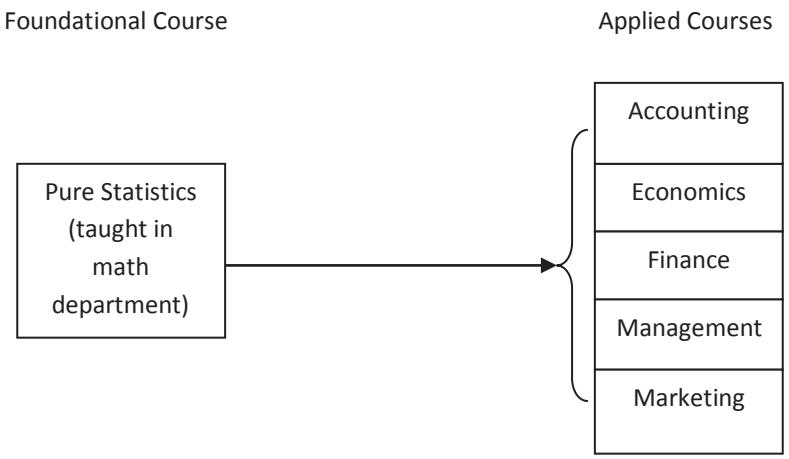
Marketing
Opinion Polling, Consumer Research

The implications for the order of business school curriculum are significant. This order can be used to improve the efficiency of business and economics education by established proper order of prerequisite and course outcomes.

ALTERNATIVE METHODS FOR INTRODUCING STUDENTS TO STATISTICAL CONCEPTS

Originally taught in the U.S. as a course for mathematics majors, statistics is readily applied to everyday life. However, a leading mathematical statistics textbook (Hogg and Craig, 1978) postpones any discussion of sampling until Chapter 4. Their rigorous outline of sampling (about one page in length) concludes with "It is to be hoped that this known number (statistic) can in some manner be used to elicit information about the unknown parameter. Thus a statistic may prove to be useful." (Hogg and Craig, 1978, p. 123) We earlier referred to this theoretical treatment of statistics in which any practical applications are postponed until later courses the *traditional* approach to teaching statistics. It follows the relatively non-iterative, science, approach, proceeding in a linear fashion from the initial course in pure math stat to the more applied courses downstream and portrayed in Figure 1 below:

Figure 1: Traditional "Scientific" Approach to Teaching Business Statistical Applications



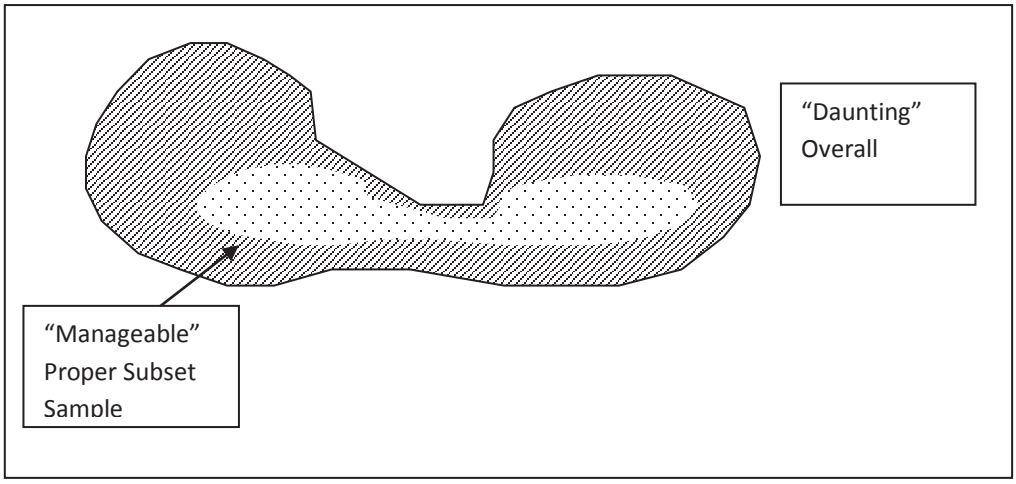
In such a traditional, "scientific," approach, rigor of statistical application is left strictly to the faculty members who own the body of knowledge in each of the applied subjects. This discretion is particularly appropriate in traditional programs, where full-time professors who view themselves as content experts in their fields are more common than in nontraditional programs, in which adjunct instructors who view themselves as real-world facilitators tend to be more common. We speculate that no iteration between theory and application, through a re-visiting of statistical theory, naturally takes place in *either* situation simply because it is hit-or-miss, depending on the marketing or accounting or other subjects' faculty members' research interests and level of rigorous application from *their own* previous educational experiences. Alternatively, in the nontraditional approach, little feedback between courses by content experts takes place, since most of the courses are taught by part-time faculty members.

Where a strong tradition of rigorous application exists, as in a traditional research institution, this approach may coincidentally prove to be optimal. For highly-ranked programs, for example, this approach may be best because it concentrates on the highest common denominator of student with high entrance examination scores which demonstrate heightened aptitude for self-starting. For doctoral programs, this approach may be best because it forces students to dig much of the material out of an exhaustive reading list on their own and because it relies on older, doctoral, students' wider experiences and prior training as pre-existing iterations of statistical training as a frame-of-reference. Absent these pre-existing iterations from undergraduate degrees or specialized work experiences, we posit that the lack of context for such an approach make it difficult for students trained in this way

to apply their statistical training in new and innovative ways. For accountants, engineers, and technicians, this is probably a good thing because they adhere to generally accepted standards in their statistical work. For social scientists, this may be a *de facto* curse that limits the graduate's ability to apply what she has learned, resulting in behavior akin to mental myopia.

An excellent starting point with undergraduate students taking their first course in statistics is to characterize statistical decisions as *how to make valid inferences about unobservable population parameters from observable sample statistics*. Using the Venn diagram below (Figure 2), an instructor can make a visual connection for the students by explaining that sampling is the art of trying to get a good representation of a daunting universe by taking smaller, manageable, pieces of it as representative of the overwhelming whole.

Figure 2: Sample Representation in Classical Statistics



Knowing that traditional undergraduate students' experience is somewhat limited, the wise statistics instructor will search diligently for examples from everyday life as well as from business disciplines to make connections for students. An example of the former might be: "If you had a dollar in your pocket at the beginning of your walk through the woods and don't have it anymore at the end of the walk, how much of the path should you retrace to find the missing money before you give up?" A follow-up could be: "Does it matter which part of the path you retrace first?" Another follow-up could be: "Does the amount of money you lost matter, in that it affects the effort that you expend or additional area you cover in order to retrace your steps (re-sample)?" These kinds of questions are important at the outset of a study of statistics because they attract the students' attention by raising questions that they themselves have likely asked before. Rather than remaining an abstruse study of Greek letters and symbols, statistics becomes something vitally applicable to problems of important to everyday people.

Students of educational psychology will recognize elements of Piaget's constructivism here. Rather than play the role of facilitator, as some advocates of Knowles' andragogical method [Knowles (1970)] espouse, the approach we take is more of the instructor as master. This is consistent with the analysis of ill-structured problems analyzed in Jonassen (1994). For an application of the iterative constructivist approach in modeling business strategy, see Capelo and Dias (2009). For a discussion of the use of problem-solving in teaching statistics, see Hillmer (1996).

Examples of the latter type, applications of statistics to business disciplines, are best left to subsequent weeks of the course or even to later courses. It is these latter types of examples that make up the body of this paper.

Applications to Accounting

A particular use of statistics is in auditing which establishes whether or not an organization maintains financial records according to accepted accounting practices. With a large number of items to be audited, an auditor will choose to use representative samples (proper subsets) in lieu of a census. This is a direct application of the situation portrayed in Figure 2.

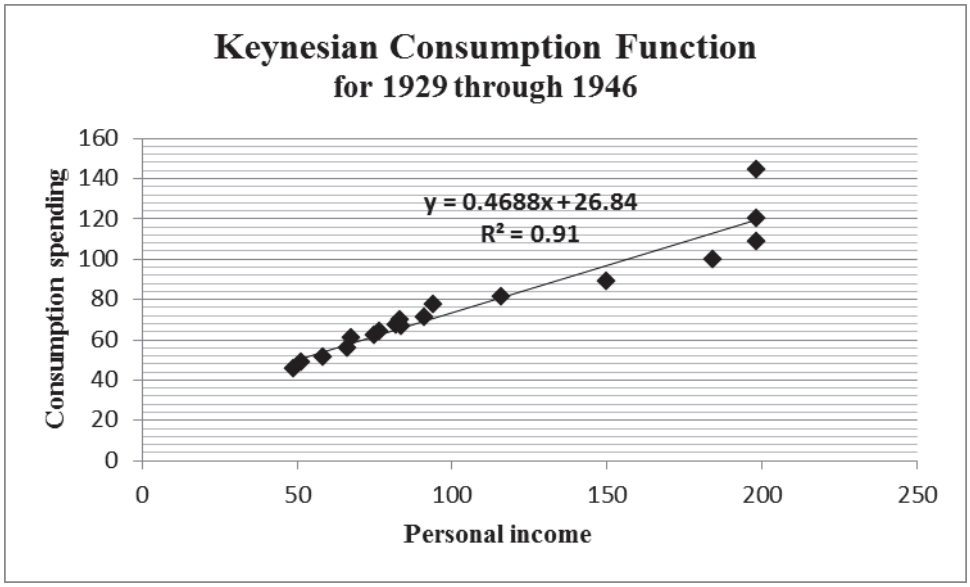
A subsequent use of statistical methods in auditing is classical inferential statistics in which a null hypothesis is selected and the sample data used to either reject or fail to reject the null. The typical null hypothesis for auditing is that the organization's accounting practices are acceptable. If the auditor finds no evidence of failure of the null hypothesis, typically at the ninety-five percent confidence level, then she or he certifies the accounting practices. However, this requires a thorough auditor to recognize an additional statistical concept: that of Type II error (acceptance of a false null hypothesis). Through inadequate or non-representative sampling, the sample indication of acceptable accounting practices may not be a valid representation of the true parameter outcome of poor auditing practices. Without familiarity with Type II error, an auditor is handicapped into thinking that simple hypothesis testing has only two possible outcomes when, in reality, there are four (H_0 rejected, H_0 not rejected, Type I error, Type II error). A classic reference on the *subtleties* of hypothesis testing is Chernoff and Moses (1959). However, such classic references are typically designed not for most business students, but rather science-minded students who happen to be studying business.

Applications to Economics

Of course, empirical work is required when economists test hypotheses from theoretical models using out-of-sample data. No less important are the theoretical underpinnings of the economic models themselves. An example from macroeconomics, the idea of a price index, helps students to deal with the Aggregation Problem. At one time considered the Holy Grail of economics, the solution to the Aggregation Problem would ideally link the policy implications of Macroeconomics to the micro-foundations of individual markets (which Phelps, et al. (1970) is a standard work). As it stands now, macroeconomic models tend to be *ad hoc* characterizations of economic systems using representative agents or other fictions to try to bridge the gap between microeconomics and macroeconomics. In contrast, the consumer price index (CPI) is a workable approach to aggregating prices of a subset of individual goods and services into a market basket-wide weighted average of prices. To understand how CPI does (and doesn't) work requires the macroeconomics student to understand that a representative market basket is really nothing more than a workable sample from an unwieldy population.

Also in macroeconomics, Keynesian multiplier analysis relies on the idea of a linear consumption function (see Figure 3). This concept is typically introduced using an *ex post* scatterplot of consumption data plotted against national income data. The consumption function as the line of best fit is best understood in the context of simple linear regression that students should already have covered in an introductory statistics course.

Figure 3: Scatter-plot of Consumption Spending against Personal Income, 1929-1946



Beyond introductory business core courses, a junior-level course in managerial economics raises the students' awareness that they need yet more statistical tools to go further in their understanding of economic phenomena. A parsimonious example of this is the Decomposition Method of forecasting. A few of the hundreds of common references to the Decomposition Method are found on pp. 16-18 of Holden, Peel, and Thompson (1990), pp. 245-253 of Seo (1991), and pp. 190-197 of Salvatore (2004). Using a *multiple* linear regression context as opposed to the simple linear regression context of the Keynesian Consumption Function example mentioned above for Principles of Macroeconomics, the student can be required to estimate a secular time trend, seasonal dummy variables, and cyclical dummy variables using a sample in which only the variable to be forecasted and the time periods in which the observations occur. After subtracting away the time trend, seasonal components, and cyclical components, the student should be left with only regression residuals that are distributed randomly as white noise. In the next iteration of statistical tool-kit courses, MBA students can better understand the need for non-parametric tests of randomness and goodness-of-fit (runs test, Kolmogorov-Smirnov tests, Root Mean Square Error tests) in showing whether or not their previous uses of the Decomposition Method have yielded truly optimal results (random residuals). Other commonly-covered advanced tools in junior-level economics courses include Von Neumann-Morgenstern expected utility maximization and empirical estimation of demand relationships. These topics in a managerial economics course can all help to motivate the more advanced statistical requirements at the graduate level. An enthusiastic teacher of such a class can thereby whet future MBA's appetites for such topics as spectral analysis, stochastic dominance, and non-linear regression.

Applications to Finance

Statistics is also important in finance. Statistical knowledge is presumed in standard texts such as Block and Hirt (2008) and Brigham and Houston (2004). Market indices such as the Dow Jones Industrial Average and S&P 500 are commonly used to represent broad movements in the stock market. Monte Carlo analysis is sometimes employed by financial planners to help individuals assess the probability of reaching retirement or other financial goals. Alpha is a statistical measure of excess performance contributed by a portfolio manager; beta measures the systematic risk of a stock relative to the market as a whole. While many other specific examples might also be cited, statistics is particularly relevant in the areas of portfolio management and insurance.

A basic principle in security analysis and portfolio management is the tradeoff between risk and return: the greater the risk, the greater the expected return, and vice versa. Statistics are commonly used to estimate returns and assess the riskiness of an investment or portfolio. Average annual returns are properly calculated as geometric, rather than arithmetic, means. Understanding the difference is a prerequisite for meaningful comparisons of returns in individual years to an average annual return over a longer period. Furthermore, expected returns for a security or portfolio of securities may reflect expectations about returns under multiple potential economic environments. An expected value calculation therefore enables an estimate of investor returns when faced with an uncertain outcome.

Standard deviation is widely recognized as a primary measure of the risk associated with an investment. Investors do not like uncertainty. Because standard deviation measures dispersion from the mean, it is utilized as a measure of the variability from the expected return. The higher the standard deviation, the more variability and thus the more uncertainty associated with a particular security or portfolio of securities. Standard deviation and expected returns form the framework for Modern Portfolio Theory, which attempts to identify the optimal combination of risk and return for a portfolio. As investors attempt to identify securities in which to invest, they frequently begin by determining how to allocate assets among various types of investments, or asset classes. The determination of an appropriate asset allocation for an individual investor is achieved through an analysis of the expected returns, standard deviations, and co-variances of the assets considered.

Expected value and standard deviation are also important concepts in the field of insurance. Insurance companies calculate expected losses and use the estimates to set premium costs. The more the variability in potential losses, the greater the uncertainty borne by the insurer, and the higher the premiums paid by policyholders. The statistical processes used to estimate losses not only shape decisions made by insurance companies, but are also important to anyone who carries insurance.

The importance of statistics in insurance stems from the role of insurance in risk management decisions. Risk management is the process of identifying risks and selecting methods to eliminate or reduce those risks. When the loss associated with a risk is potentially large, an individual or company may decide to transfer that risk to an insurance company. An insurer may be willing to accept the risk if the probability of its occurrence can be

estimated with some certainty. Although the insurance company will expect some losses to occur, it benefits from the law of large numbers, which one author (Rejda (2008), p. 39) has labeled the "mathematical foundation of insurance". Based on the central limit theorem, the law of large numbers suggests that losses can be more accurately predicted when a large number of policyholders are insured for the same risk. As the accuracy of loss estimates increases (as the sample approaches the census), the insurer can better plan for expected losses and set premiums accordingly.

Loss forecasts may be conducted with various statistical tools. Prior loss data may be used to compute the mean and standard deviation of expected future losses. A probability distribution of potential losses can then be constructed to give the insurer better insight into the range of potential outcomes. Finally, regression analysis is sometimes used to analyze the impact of key policyholder characteristics on the probability of a loss. With the probability of loss acting as the dependent variable, the insurer is better able predict potential losses for a sub-sample of policyholders. This topic segues quite well into motivating Bayesian analysis as an analysis tool for the next level that student may encounter, for example an MBA or an actuarial exam.

Applications to Management

Statistical concepts are the foundation of operations management. Quality assurance using control charts, acceptance sampling plans, and regression as planning tools require extensive knowledge of statistical analysis. Control Charts have been used since the 1930s to determine whether a production process is stable (variation attributable to chance) or unstable (variation attributable to some causal factor). Two well-known control chart types are mean charts and fraction-defective charts. Both of these are actually applications of confidence intervals. Using an initial sample of items, the analyst constructs a control chart and assumes that the resulting sampling statistic is an acceptable approximation of the desired population parameter. Testing whether or not each sample observation tends to indicate stability (null hypothesis) or instability involves the same hypothesis testing issues that we considered in our section on Accounting (including Type II error).

Acceptance sampling conducts quality control on input items, treating pre-determined quantities as batches. If the batch is acceptable, by conforming to the initially-accepted sample, then the items are used in the optimized production process. If the batch is unacceptable then the batch will either be sent back *en masse* to the supplier or inspected by census. Two well-known published tables for acceptance sampling are the Dodge-Romiq Tables and the U.S. Military Standard Tables. Like the topic of loss distributions mentioned in the previous section on insurance applications, this sampling issue can be used to motivate students to subsequently study Bayesian inference and re-sampling methods.

The use of regression analysis for forecasting is common in management practice. Using an existing sample, regression analysis fits (typically linear) equations that express a dependent variable in terms of one or more dependent variables. For example, an automobile manufacturing needing to forecast future sales might express sales as a function of several independent variables, $X_1, X_2, \ldots, X_n$, as in Equation 1:

$$\text{Sales} = f(X_1, X_2, \ldots, X_n) \quad (1)$$

The independent variables might be such items as personal income, employment, and price indexes. As in the previous cases we have considered, the analysis is hoping that the sample dataset that is used as the basis for future forecasts is representative of the unobservable population. If it is not, then the out-of-sample forecasts are likely to diverge further and further from the estimates that the regression approach leads to using the non-representative sample statistics.

Applications to Marketing

Opinion polling, particularly in election years and regarding high-profile political issues, has high visibility and can draw in students, particularly if one is interested in constructivist approaches to learning.. Results are reported and discussed in regional and national media including newspapers and television. A few of the more frequently cited polls are Gallup, Rasmussen, and Zogby. University and media-sponsored polls are also highly regarded by large portions of the public. A key component of such polls is the margin-of-error (MOE) which is nothing more than sampling error as presented within an elementary statistics course. As successful students of elementary statistics learn, a larger sample size (other things the same) results in a smaller margin of error and more reliable estimate of the population parameters using the sample statistics.

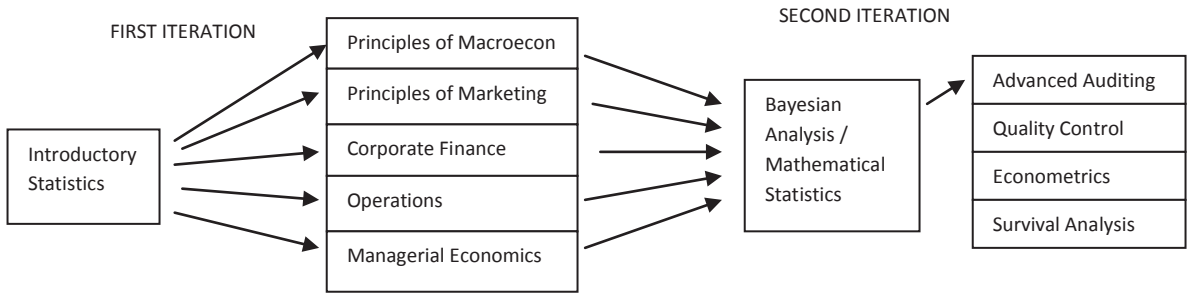
Perhaps more important yet, at least to the business student, is the study of marketing research. Identifying and reaching target markets is essential for any company. A leading introductory marketing text, Armstrong and Kotler (2011), relegates all equations and formulas to an appendix at the end of the book, but introduces students to the differences between primary and secondary data and the use of surveys in the body of Chapter 4 in a section on marketing research. In the same chapter, a section entitled "Sampling Plan" introduces students to the idea of "studying a small sample of the total consumer population" and mentions that the sample should be representative of the population as a whole (p. 116). This is the total extent of the use of statistics in the introductory marketing course that uses Armstrong and Kotler as the primary text.

A SYNTHESIS THAT CAN FURNISH A ROADMAP (AND BEYOND)

Figure 3 demonstrates the relationship of the introductory statistics class to the rest of the business curriculum. The placement of the courses can be debated according to the primary mission of the program (undergraduate versus graduate, specialized training, etc), but the iterative nature of the subjects becomes apparent when the more advanced topics are considered. An iterative process is supported by student perception as presented in McAlevey and Stent (1999). This is also consistent with the analysis of Garfield and Ben-Zvi (2009). The order in which subjects should be taught and the resources necessary for successful product development in a nontraditional business program context were explored by Parry and Horton (1997). Of course, the real-world work experience and well-known aversion of nontraditional students to mathematical training pose different opportunities and challenges for business curriculum designers in those types of programs. For example, nontraditional programs probably do not need internships, since students in such programs already work in environments in which statistical concepts can be applied.

The more difficult debate is the degree of real-world application that is necessary for the student to gain the proper context for iterating to the next, higher, level. Is a third-year internship optimal, or is a first-job from which the student then proceeds on to either an MBA or a professional certification, such as a Series 7 license, CFA, CFP, CLU, or other designation? If these or other types of "laboratory" experiences are helpful in achieving the program's mission, then a third or fourth iteration to the process outlined in Figure 4 is necessary before a student can apply statistical concepts efficiently, effectively turning a roadmap into more of a global positioning system.

Figure 4: Iterative Process for Statistics Concepts



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Manuscript Guidelines, Submission and Review Process

TOPIC AREAS (BUT NOT LIMITED TO THESE):

- Course design – current courses, new courses, new trends in course topics
- Course management – successful policies for attendance, homework, academic honesty …
- Class material
  - o Description and use of new cases or material
  - o Lecture notes, particularly new and emerging topics not covered effectively in textbooks
  - o Innovative class activities and action-learning – games, active learning, problem based
- Major or emphasis area program design that is new or innovative.
- Assessment – all aspects including AACSB and university level assessment strategies and programs
- Integration of programs or courses with other academic disciplines
- Internship programs
- Business partnerships
- Successful student job placement strategies
- Any topic that relates to higher education business education.

SUBMISSION AND REVIEW PROCESS:

Copyright

- Manuscripts submitted for publication should be original contributions and should not be under consideration with another journal.
- Authors submitting a manuscript for publication warrant that the work is not an infringement of any existing copyright, infringement of proprietary right, invasion of privacy, or libel and will indemnify, defend, and hold Elm Street Press harmless from any damages, expenses, and costs against any breach of such warranty.

Prepare your manuscript

- See the Style Guideline page for specific instructions.
- Articles must make a contribution to business education innovation.
- Manuscripts should be limited to 8 to 10 pages or less, although longer will be accepted if warranted.
- Articles can be either regular research papers, or shorter notes that succinctly describe innovative classroom teaching methods or activities.
- Manuscripts should be completely finished documents ready for publication if accepted.
- Manuscripts must be in standard acceptable English grammatical construction.
- Manuscripts should be in MS Office Word format. Word 2007 files are acceptable, as are earlier versions of Word. If you are using a new version of Word after Word 2007, save in Word 2007 format.

Submit your manuscript

- Manuscripts may not have been published previously or be under review with another journal.
- Submit the manuscript attached to an email to **submit@beijournal.com**
- We will respond that we have received the manuscript.
- Article submissions can be made at any time.
- Submission deadlines: September 15 for December issue, March 15 for June issue.

Manuscript review

- The editor and reviewers will review your submission to determine if 1) the content makes a contribution to innovative business education, 2) is of the proper page length, 3) is written in proper grammatical English, and 4) is formatted ready for publication.
- Submissions not meeting any of these standards will be returned. You are invited to make revisions and resubmit.
- If the submission meets the standards, the manuscript will be sent to two reviewers who will read, evaluate and comment on your submission.
- The editor will evaluate the reviews and make the final decision. There are 3 possible outcomes:
    - Accept as is.
    - Accept with minor revisions.
    - Not accepted.
- Reviews will be returned promptly. Our commitment is to have a decision to you in less than two months.
- If your paper is not accepted, the evaluation may contain comments from reviewers. You are invited to rewrite and submit again.

If your paper is accepted

- Minor revision suggestions will be transmitted back to you.
- Revise and send back as quickly as possible to meet printer deadlines.
- Upon final acceptance, we will bill you publication fees. See www.beijournal.com for latest per page fees. Sole author fees are discounted.
- The fees include all costs of mailing a copy of the issue to each author via standard postal ground.
- Delivery to locations outside the continental US will cost an additional $10 per author for 5 day delivery.
- Faster delivery methods are available for US and international delivery. Contact the editor for a specific pricing.
- All publication fees should be remitted within 10 business days of acceptance, if possible.
- If you decide not to publish your paper with BEI Journal after submitting payment, we will refund publication fees less $200 to cover costs of review and processing.
- Cancellation cannot occur after the paper has been formatted into the final printer's file.

Manuscript Style Guide and Example

An example is providing following these instructions.
This style guide represents style guidelines in effect for future issues.
Authors are responsible for checking for correct grammar, construction and spelling. Authors are also responsible for formatting pictures, tables, and figures such that a pdf black and white file sent to the publisher will reproduce in a readable manner.

General Setup:

- All fonts: Times New Roman. 10 point for text. Other sizes as noted below
- Margins: 1 inch on all sides of 8½x11 inch paper size.
- No headers or footers.
- Avoid footnotes unless absolutely necessary.
- Page numbering bottom centered.
- No section breaks in the paper.
- No color, including url's. Format to black. No color in tables or figures. Use shading if necessary.
- All pages must be portrait orientation. Tables and figures in landscape orientations should be reformatted into portrait orientation.
- All paragraphs should be justified left and right, single spaced, in 10 point Times font, no indent on first line, l line between each heading and paragraph.
- One line between each paragraph.

Titles, Authors, and Headings:

- **Title centered 14 point bold**. One line between title and author's name.
- Authors: centered, 12 point. Name, affiliation, state, country.
- One line space to **ABSTRACT** (title 10 point, bold, all capitalized, aligned left; text of abstract 10 point, no bold)
- After **ABSTRACT**, one line space, then **Keywords**. Followed by one line space to first major heading.
- **HEADINGS, MAJOR**, 10 point, bold, all capitalized, aligned left.
  The specific headlines will be based on the content of the paper, but major sections should at a minimum include an abstract, keywords, introduction, conclusion, and references.
- **Sub-headings**: 10 point, bold, first letter capitalized, no line to following paragraph. Align left.
- *Third level headings: Italic*, 10 point, first letter capitalized, no line to following paragraph. Align left.
- **Keywords:** heading: 10 point, bold, first letter capitalized, no line to following paragraph. Align left. Your list of keywords in 10 point, no bold.

Tables, Figures and Graphs:

- All fonts 10 point.
- Numbered consecutively within each category. Table 1, Figure 1 etc.
- Title: 10 point, bold, left justify title, one space, then the table, figure, etc.
- Example: **Table 1: Statistical Analysis**

References:

- APA format when citing in the text. For example (Smith, 2009).
- References section: 8 point font, first line left margin, continuation lines 0.25 inch indent. Justify left and right. No line spacing between references. List alphabetically by first author.
- Specific references: Last name, First initial, middle initial (and additional authors same style) (year of publication in parentheses). Title of article. *Journal or source in italics.* Volume and issue, page number range.
- Example: Clon, E. and Johanson, E. (2006). Sloppy Writing and Performance in Principles of Economics. *Educational Economics*. V. 14, No. 2, pp 211-233.
- For books: last name, first initial, middle initial (and additional authors same style) (year of publication in parentheses). *Title of book in italics.* Publisher information.
- Example: Houghton, P.M, and Houghton, T.J. (2009). *APA: The Easy Way!* Flint, MI: Baker College.

Example (note that this example represents a change from previous style guides)

Evidence to Support Sloppy Writing Leads to Sloppy Thinking

Peter J. Billington, Colorado State University - Pueblo, Colorado, USA (12 point)
Terri Dactil, High Plains University, Alberta, Canada

ABSTRACT (10 point, bold, all capitalized, left justified)

(text: 10 point Times font, no indent, justified, single space, 150 words maximum for the abstract)
The classic phrase "sloppy writing leads to sloppy thinking" has been used by many to make writers develop structured and clear writing. However, although many people do believe this phrase, no one has yet been able to prove that, in fact, sloppy writing leads to sloppy thinking. In this paper, we study the causal relationship between sloppy writing and sloppy thinking.

Keywords: sloppy writing**,** sloppy thinking **(10 point, bold title, first letter capitalized, left justified).**

INTRODUCTION (10 point, bold, all capitalized, left justified).

The classic phrase "sloppy writing leads to sloppy thinking" has been used by many to make writers develop structured and clear writing. However, since many people do believe this phrase, no one has yet been able to prove that in fact, sloppy writing leads to sloppy thinking. Is it possible that sloppy writing is done, even with good thinking. Or perhaps excellent writing is developed, even with sloppy thinking.

In this paper, we study the writing of 200 students that attempts to test the theory that sloppy writing leads to sloppy thinking.

PREVIOUS RESEARCH

The original phrase came into wide use around 2005 (Clon, 2006), who observed sloppy writing in economics classes. Sloppy writing was observed in other economics classes (Druden and Ellias, 2003).

RESEARCH DESIGN

Two hundred students in two business statistics sections during one semester were given assignments to write reports on statistical sampling results. The papers were graded on a "sloppiness" factor using…

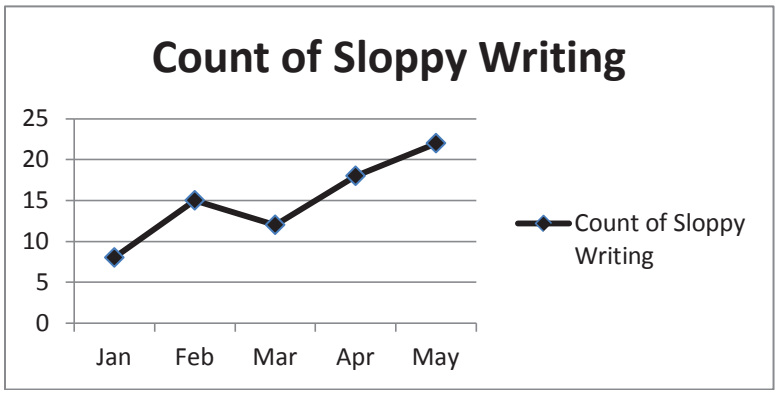
Data Collection (Sub-heading, bold but not all caps, 10 point, aligned left, bold, no line after to paragraph)
The two hundred students were asked to write 2 short papers during the semester…

Data Analysis(Sub-heading, bold but not all caps, 10 point, aligned left, bold, no line after to paragraph)
The two hundred students were asked to write 2 short papers during the semester…

DISCUSSION

The resulting statistical analysis shows a significant correlation between sloppy writing and sloppy thinking. As noted below in Figure 1, the amount of sloppy writing increases over the course of the spring semester.

Figure 1: Sloppy Writing During the Semester



The count results were compiled and shown in Table 1 below.

Table 1: Counts of Good and Sloppy Writing and Thinking (bold, 1 line after to table, left justify)

	Good Thinking	Sloppy Thinking
Good Writing	5	22
Sloppy Writing	21	36

*-Indicates significance at the 5% level)

As Table 1 shows conclusively, there is not much good writing nor good thinking going on.

CONCLUSIONS

The statistical analysis shows that there is a strong relation between sloppy writing and sloppy thinking, however, it is not clear which causes the other…

Future research will try to determine causality.

REFERENCES (title10 point, all caps, bold, align left, one line to first reference)
(1line spacing) (All references 8 point, indent second line 0.25 inch, justify left and right)

Clon, E. (2006). Sloppy Writing and Performance in Principles of Economics. *Educational Economics*. V. 14, No. 2, pp 211-233.

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(short bio section optional, can run longer than these examples; removed before sent to reviewers)

Peter J. Billington, Ph.D., is a professor of operations management at Colorado State University – Pueblo. His research interests span from lean six sigma to innovative education.

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