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To Catch a Trader: A Video Case Study of Insider Trading[1]

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The notion of insider trading is an important issue that investment professionals are likely to face in their careers. Unfortunately, most introductory courses in investments and finance pay, at most, lip service to the topic. For example, insider trading is sometimes just briefly mentioned when discussing the strong form of an efficient market. This paper uses the PBS Frontline show To Catch a Trader as a video case study of insider trading. The video provides students with an entertaining and engaging way to gain a better understanding of insider trading.

Keywords: Insider Trading, Material Information, Ethics, SAC Capital, Steve Cohen, Video Case Study
Disciplines of Interest: Finance, Business Ethics

INTRODUCTION

Training students to understand and behave in an ethical manner is an important part of any business education. New graduates who engage in unlawful activities, whether knowingly or not, may find a promising career derailed, or worse yet, may find themselves doing prison time. Insider trading is a topic that individuals in the investments profession are likely to face, but the topic can be difficult for students to grasp because students need to be able to apply concepts to different types of situations, rather than just recite Securities and Exchange Commission (SEC) regulations. Many textbooks simply provide side boxes in the texts that discuss some ethical issue (see, for example, Gitman et al. 2009). The topic is also commonly mentioned when examining the notion of Fama's (1970) strong form of the efficient market hypothesis (EMH). In this case, textbooks simply present insider trading as a violation of this form of the EMH without delving into the issue itself.

The problem that future investment professionals face is that reading about different ethical situations is not the same as seeing and hearing about them. Some

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[1] Detailed teaching notes for this case can be obtained from the author, Ronald L. Moy, by contacting him at moyr@stjohns.edu.

of the books that are devoted entirely to the topic of ethics in finance (see Boatright 2014; Peck 2011) tend to provide too much in-depth coverage for an introductory course on investments. The PBS Frontline television show *To Catch a Trader* provides instructors with an opportunity to bridge the gap between theory and practice on an important issue that investment professionals are likely to encounter.

LITERATURE REVIEW

The use of videos in the classroom is becoming commonplace as instructors look for additional ways to engage students in a time-effective manner, and the use of videos and video clips can be an efficient and entertaining way for instructors to introduce various topics. Dyl (1991) used the original movie *Wall Street* to illustrate various ethical issues that arise in the field of finance. Moy (2014) uses the popular television show *Shark Tank* to discuss numerous issues in venture capital and entrepreneurship, including valuation, the necessity of having sufficient capital, and the cost of acquiring a customer. Stephen (2015) discusses how short finance video clips can be used to enhance the learning experience on topics such as capital budgeting, dividend policy, and interest rates. Pactwa and Moy (2018) use the movie *Too Big to Fail* to promote discussion and to increase understanding of the 2008-2009 financial crisis. Using the movie, which runs less than 1 hour and 40 minutes, instructors can cover the topic in a fraction of the time it would take to read Sorkin's book (2009), which runs more than 500 pages of text.

OVERVIEW OF *TO CATCH A TRADER*

On January 7, 2014, PBS's Frontline series aired one of several excellent investigative reports that dealt with the financial crisis and criminal activity in the financial markets. This particular show, *To Catch a Trader*, covers insider trading in the financial markets. The video can be found on the PBS website at http://video.pbs.org/video/2365150175/. In addition, a complete transcript of the show can be found at http://www.pbs.org/wgbh/pages/frontline/business-economy-financial-crisis/to-catch-a-trader/transcript-54/. Free and easy availability of the show, and its transcript, makes it easy for an instructor to incorporate its use in the classroom.

The show focuses on Steven A. Cohen, the "King of Hedge Funds," who went from a small-time options trader to one of the most successful hedge fund managers of all time. Cohen founded SAC Capital in 1992 and started generating returns that, supposedly, averaged over 60 percent per year, with the profits being split equally between the clients and SAC. During the late 2000s, federal investigators began a multi-year investigation of insider trading at many Wall Street hedge funds, which eventually led to SAC.

Table 1. Preliminary Questions on Insider Trading*

1.	What is insider trading?
2.	What is inside information?
3.	Who is an insider?
4.	Can a person be a temporary insider?
5.	When is information material?
6.	What are some examples of material information?
7.	When is information public?
8.	What are some examples of when information has become public?
9.	What is tipping?
10.	When is a "tippee" liable for insider trading?
11.	How much knowledge does a tippee need to have before they are liable?
12.	Are investment advisors registered with the SEC required to adopt specific policies and procedures that address insider trading?
13.	What are the consequences of insider trading?

*Adapted from U.S. Compliance Consultants (http://uscomplianceconsultants.com/faqs-insider-trading/). The answers to these questions can be found on the firm's website.

The Frontline show begins with a November 2010 *Wall Street Journal* article by Pulliam et al. on the government's insider trading investigation, which is named SAC Capital (among others, including Citadel, Janus, Wellington, and MFS). The show then flashes back to the events that eventually led investigators to SAC Capital and the *Wall Street Journal* article that began the show. The story is told through interviews with the journalists who investigated the stories, the traders at SAC and other firms, as well as the Federal Bureau of Investigation (FBI) agents and prosecutors who pursued the cases.

USING *TO CATCH A TRADER* IN THE CLASSROOM

Before viewing the videos, instructors may wish to provide some general background information on the issue of insider trading. The site for U.S. Compliance Consultants (USCC) (http://uscomplianceconsultants.com/faqs-insider-trading/) has an excellent page of "FAQs—Insider Trading," which covers general questions on the topic of insider trading. USCC provides answers to the questions, which students can search out or which instructors can use to promote discussion. The questions are provided in Table 1.

In order to engage students during the entire viewing of the show, we follow the approach used by Pactwa and Moy (2018) by providing students with a series of questions (52, in this case) that focus on specific details of the film. In our experience, students gain a better understanding of the "big picture" issues when they are required to focus carefully on minute details of

Table 2. Questions for *To Catch a Trader*

1. In November 2010, what did Donald Longueuil do when he heard hedge fund SAC was being investigated? Who did Longueuil work for, and what was his position there? In a recorded conversation, to whom did he tell this story?
● He pulls out the hard drives with incriminating evidence, puts them in separate bags, and tosses them in random garbage trucks. SAC Capital, Trader. Noah Freeman, his colleague.
2. What is Rule 10b5-1? When asked by the prosecutor, did Cohen claim to be familiar with the law?
● Rule against insider information. No, he asked to have it explained. Called it very vague, and up to interpretation.
3. How is insider trading defined?
● The use of "material, nonpublic information" to trade stocks. Proprietary information that can affect a company's stock price.
4. Where did Steve Cohen go to school? When did he graduate?
● Wharton. Late, 1970s.
5. Where did Cohen begin his career? Was this a top-tier firm? What was his position? What else can you find out about Gruntal? (Hint: see http://archive.fortune.com/magazines/fortune/fortune_archive/2003/03/03/338360/index.htm and http://www.bloomberg.com/bw/articles/2012-12-07/where-hedge-fund-mogul-steve-cohen-learned-to-trade)
● Gruntal. No, middle tier. Trader. Seedy history. Went bankrupt after 9/11 WTC bombings.
6. When did Cohen leave Gruntal to start his own hedge fund?
● 1992.
7. What were hedge funds originally created for?
● Originally meant to be uncorrelated with the market ("hedged"). Not supposed to outperform the market. Allowed wealthy individuals to diversify their holdings and protect themselves from wide swings in stock prices. "Park" some money in a hedge fund.
8. What year did hedge funds explode in popularity with big returns?
● 1998-1999. . . the height of the dot.com boom.
9. What does the industry standard "2 and 20" mean?
● Fees of 2% of assets under management + 20% of profits.
10. How much did SAC charge its customers?
● 3% of assets under management + 50% of profits.
11. How many losing months did Cohen have in his first seven years? What was the worst decline?
● Three. 2%.
12. What was Cohen's strategy called? What did it involve?
● Information-driven hedge fund. Get as much information as possible to make money on the upside or the downside depending upon the information release, such as earnings, or M&A, or FDA drug approval.
13. What does the term "edge" mean?
● Information you have that others do not have.
14. Fill in the blanks: "There is a reason you know, that no one else does, _____ or _____, to buy the stock."
● Legal. Illegal.
15. Who is Raj Rajarathnam?
● Founder and CEO of the Galleon Group.
16. Why are hedge fund managers so popular with Wall Street brokerage firms?
● By trading every day, they generate a lot of commissions for the brokerage firms.
17. What is a "first call"?
● Brokers' best customers get the "first call" with information, such as earnings estimates, mergers and acquisitions, or other significant news.
18. How much was Cohen's Hamptons beach house worth? Where else did he own property?
● $62 million. 35,000 square foot mansion in Greenwich, CT and multiple apartments in NYC, including a $115 million duplex in midtown.
19. By 2008, how much was Cohen worth? What else is Cohen famous for collecting? (Hint: see http://www.forbes.com/sites/afontevecchia/2013/03/26/hedge-fund-billionaire-steve-cohens-155m-picasso-isnt-his-first-multi-million-piece-of-art/ and 2010 Vanity Fair article http://www.vanityfair.com/news/2010/07/steve-cohen-201007).
● $8 billion. Art.
20. How many shares of Amazon did Turney Duff purchase? What information caused him to buy the shares? How much money did he make? When did Duff leave Galleon?
● 100,000. Jeffries is going to upgrade Amazon in 6 minutes. Made almost half a million dollars. 2001.
21. While reviewing trading records, how many years later did UBS discover a suspicious hedge fund? In relation to Question #20, why are these dates important?
● Five (around 2006). Lag in discovery shows the lack of internal controls. Traders were long gone after their activities were uncovered.
22. What did Sedna Capital do that was illegal?
● Suspected of violating rules regarding "friends and family" money. Allocated winning trades to friends and family and losing trades to others (the public).

Table 2. Questions for *To Catch a Trader* (continued)

23. Who ran Sedna Capital?	
• Rengan Rajaratnam, brother of Raj.	
24. Who is Roomy Khan? Was she "known to the bureau" before this investigation?	
• Silicon Valley executive who once worked at Intel. Agrees to become informant for the FBI. Yes, she was involved in insider trading in the past and was punished. Now, she's at it again.	
25. Who is David Slaine? When did the FBI move in on him? What was the result?	
• Trader at Galleon. June 2007. Provides information on Raj Rajarathnam's inner circle.	
26. When did the FBI begin listening in on Galleon's phones?	
• Late, 2007.	
27. Why is insider information hard to determine from wiretap recordings?	
• When talking about stocks all day long, it can be hard to discern what is an illegal discussion.	
28. Who is Danielle Chiesi?	
• Had an affair with an IBM executive who gave her inside information on the computer industry.	
29. Who is Rajat Gupta? What company's boards did he sit on?	
• Respected businessman (retired head on McKinsey) who passed inside information to Raj Rajarthnam on Buffett's surprise $5 billion Goldman preferred stock investment (during the October 2008 credit crisis). Proctor & Gamble, American Airlines, Goldman Sachs.	
30. What did Raj do with this information from Rajat?	
• He loaded up on Goldman stock.	
31. What happened to Rajat Gupta? To Raj Rajarathnam?	
• Convicted, but now appealing: http://dealbook.nytimes.com/2012/06/15/rajat-gupta-convicted-of-insider-trading/?_r=1. Controversy was circumstantial evidence.	
• Serving 11-year sentence for insider trading.	
32. What is an "expert network" consultant?	
• Independent research firm that hooks up middle-level company employees with investors, so employee can provide an overview of what is happening in the industry. Oftentimes leads to insider information being passed on (questions about orders, drug pipelines, number of trucks in the parking lot, etc.)	
33. What types of fees do expert networks charge?	
• Up to $5,000 for a one-hour conversation. Some hedge funds paid up to $1 million/year for expert networks.	
34. How did the FBI learn that expert networks were also used for insider trading?	
• Used cooperatives to join and record calls.	
35. In what type of business was Primary Global Research (PGR) engaged? Where were they headquartered? What tech companies are also headquartered in this Silicon Valley town? Are they still in business?	
• Expert network. Mountain View, CA. Google, Symantec, Intuit, Mozilla, etc. It appears so: http://www.pg-research.com/	
36. Who is Winnie Jiau? Where was she born? From which university did she graduate?	
• PGR expert consultant. Insider in tech world, especially with those companies with in operations in Asia. Born in Taiwan. Went to Stanford.	
37. Who called Winnie for information on upcoming orders? To whom did he pass on that information? How much does he claim to have made on Winnie's information?	
• Noah Freeman, SAC Capital. Donald Longueuil (his colleague and best man at his wedding). $5 to $10 million.	
38. What happened when Jiau received a $500 gift certificate to a women's clothing store? (For more details, see http://dealbreaker.com/tag/primary-global-research/)	
• She sent it back and asked for Cheesecake Factory gift certificate and live lobsters.	
39. When did the FBI move in?	
• May 2010.	
40. Who is James Fleishman? How much time did he serve?	
• Sales VP, PGR. Spoke to FBI informant as to PGR process. 14 months	
41. How long was Jiau's sentence? What about Freeman?	
• 4 years. Began cooperating, hasn't been sentenced yet.	
42. Which SAC portfolio manager was arrested in March 2013? Why?	
• Michael Steinberg. At SAC 10 years and traded mostly tech stocks. Sold Dell on illegal insider information and was convicted in December 2013.	
43. What type of drug did SAC portfolio manager Matthew Martoma have insider information about? What two companies were developing the drug? Over the course of 2008, what did SAC do with these two stocks?	
• For Alzheimer's. Elan and Wyeth. Took large, unhedged, long positions in both.	
44. Who is Greg Kappes?	
• Pharmacist and private investor who bought $1.2 million of Elan shares.	

Table 2. Questions for *To Catch a Trader* (continued)

45. How much did Elan's price fall after the news about the drug? What percent drop was this?
● $14.12. Down 43%.
46. How much money did SAC make on Elan? How did they do this?
● $275 million. In the days before the clinical trial results were released, Maratoma received a PowerPoint presentation with unfavorable insider information. So, they stated unwinding their long positions and shorted the stock.
47. What Michael J. Bowe's (plaintiff's attorney) impression of Steve Cohen's answers about SAC's compliance manual on insider trading?
● In my opinion, he was purposely vague and pretended as if he had no idea.
48. When did the SEC bring civil charges against Cohen for failure to supervise his traders?
● July 2013.
49. In November 2013, what happened to SAC? Are they still in business?
● As a corporation, it pled guilty to insider trading. SAC can no longer take money from outside investors. Rebranded itself Point72 Asset Management to reflect its headquarters at 72 Cummings Point Road in Stamford, CT).
50. How large was the fine on SAC (and Steve Cohen, as the sole owner)?
● $1.8 billion.
51. Was Steve Cohen ever charged with insider trading?
● No.
52. What is criminal negligence? Why can't criminal negligence be used against a finance company?
● A willing intent to violate the criminal laws. Can't bring criminal cases against <u>people</u> for negligence. Requires Congress to change the laws.

the film. Looking for small details requires that students remain focused on the show. Table 2 provides a list of questions and answers that students can be asked to answer during the viewing of the show. Instructors can pick the number of questions they deem appropriate for keeping students engaged during the entire viewing.

Once students have viewed the show and answered the questions from Table 2, instructors can focus students on the big picture questions provided in Table 3 that encompass insider trading.

The big picture questions give students an opportunity to think about and discuss some of the most important insider trading issues, including a hedge fund manager's need for information, the fairness of sentences in insider trading, and whether the resources used by the FBI to catch these cheaters was worth the expense. Additionally, instructors who would like to delve more deeply into the topic of insider trading can use some of these questions topics for research papers (e.g., see question 7 in Table 3).

CONCLUSION

To Catch a Trader provides instructors with an opportunity to introduce the issue of insider trading in an entertaining and engaging way. Students are not only made aware of the issue but also gain an understanding of the great lengths the government will use to catch these types of white-collar criminals, including the use of wire taps and informants. Instructors can use the video to promote classroom discussion on the gray areas that surround the information those analysts and hedge fund managers seek in order to perform their duties.

Table 3. Big Picture Discussion Questions

1) Discuss the stock market environment during the late 1990's when hedge funds exploded. How do you think this contributed to the need for an information edge?
2) Discuss the stock market environment when federal investigators began their late 2007 wiretaps on Galleon's phones. Again, how do you think this contributed to the need for an information edge?
3) Were the sentences fair? Does it make sense to indict a company and not the founder and CEO of a company known to be a "veritable magnet of market cheaters"?
4) Considering the number of years this investigation took, and the results, was it worth it? For example, the money and time the government spent following these people to even know how they took their coffee . . .
5) Is it fair to pay for information? What about high frequency trading then? Is it fair that some traders can afford to have the technology to receive data faster than others? How is this a level playing field?
6) Should the laws be changed?
7) In 2016, the Supreme Court agreed to hear a case about what constitutes illegal inside information. To prove an act of tipping is illegal, the Supreme Court stated in 1983 in Dirks v. S.E.C., "the test is whether the insider personally will benefit, directly or indirectly, from his disclosure." In Salman v. United States, Bassam Salman was convicted on trading on information he received from his brother in law, even though the tipper apparently received no personal benefit. In a related case, New York-based Second U.S. Circuit Court of Appeals in U.S. v. Newman, the court said prosecutors had to prove a recipient of an inside tip knew the confidential information came from an insider and that the insider disclosed the information for a tangible benefit. That decision overturned the convictions of hedge-fund managers Todd Newman and Anthony Chiasson. (see http://www.nytimes.com/2016/08/02/business/dealbook/supreme-court-could-rewrite-insider-trading-law.html) Should prosecutors need to show a benefit to the tipper in order to obtain an insider trading conviction?

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Acknowledging the "M" in MIS: Managing a Data Breach Crisis

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This paper presents a pedagogical approach designed to enhance student understanding and appreciation of the challenges that business leaders face when confronted by a data breach. The approach uses a simulated data breach, complete with the initial report, continuous changes of status, defined activities, and responses to urgent and stressful outside forces referred to as "injects." The paper begins with a discussion of the history of data breaches and the trajectory of hacking incidents in both number and scale. High-profile incidents are used to make the point that while preventative tactics are employed and constantly improving, data breaches are the new norm and "defending the castle" tactics are necessary but not sufficient. In an environment where data breach is inevitable, business students need to understand the management of a breach. In the absence of premier practices in the area of crisis management, companies, customers, and jobs are lost. Despite the technical framework/language of a data breach, the issue is one of high-quality management in all business disciplines. In this approach, technologists, lawyers, executives, HR personnel, client business managers, and corporate communications specialists are all required to execute in lockstep to contain the damage. Beyond the management of a data breach from an operational perspective, the approach reinforces the criticality of highly visible leadership and clear, focused communication.

Keywords: Hackers, Data Breach, Crisis Management
Disciplines of Interest: Business Management; Operations Management; Security; MIS

INTRODUCTION

Technology is the proverbial two-edged sword. Despite enabling tremendous advancements in human interaction on many fronts, the internet, especially accessed via wireless communication, has created a playground for hackers of all stripes. Hackers have many motivations ranging from entertainment (taunting their targets) or simply making a name for themselves (akin to tagging a neighborhood

wall) to stealing proprietary or sensitive data for personal gain. To be sure, there are black hat hackers (malicious) and white hat hackers (management allies helping to ferret out system exposure), but the boundaries are dotted at best, with many hackers crossing and straddling the lines.

Rouse [2016] defines a data breach as "an incident in which sensitive, protected, or confidential data has potentially been viewed, stolen, or used by an individual unauthorized to do so. Data breaches may involve payment card information (PCI), personal health information (PHI), personally identifiable information (PII), trade secrets, or intellectual property."

The attacks themselves come in many flavors, including viruses, malware, Trojan horses, network backdoors, and the implementation of other dangerous technology. Hackers, as it turns out, can even steal passwords and encryption keys by listening to PCs, dampening fan noise using "Trojan horse" software [Liszewski, 2016]. The resulting breaches can result in the loss of critical data, business interruption, burdensome disclosure requirements, regulatory scrutiny, third party litigation, and loss of reputation [Breaux et al., 2014]. As an example of how all of these objectives can merge, hackers stole sensitive customer information from the most famous name in infidelity, namely AshleyMadison.com, and posted the data online. To the embarrassment of many, the files included account details and logins for some 32 million users of the social networking site, touted as the premier site for married individuals seeking partners for affairs. Seven years worth of credit card and other payment transaction details were also posted [Zetter, 2015].

In another high-profile incident, during the 2016 Democratic National Convention, it became clear that the Democratic National Committee email system was hacked. Subsequent email releases served to embarrass the committee and forced the resignation of four high-level operatives, including the committee CEO, CFO, communications director, and party chairwoman [Meyer, 2016; Ausick, 2016].

Data breaches of large retail chains have also drawn attention to the magnitude of the issue. In December 2013, Target reported a breach of its customer data files. In order to gain access to customer credit and debit card numbers, hackers installed malicious software on point-of-sale systems in Target stores. The card-skimming malware compromised the identities of 70 million customers and 40 million credit and debit cards. In very small increments, Target eventually revealed that more than 40 million customer files were compromised [Kerr et al., 2014]. The upshot was that Target senior executives lost their jobs, likely due more to the management of the breach and the resulting bad publicity and customer loss of confidence than to the actual technical lapse.

Subsequently, other eyebrow-raising breaches were reported, including Home Depot (via the same malware used in the Target attack), JP Morgan Chase, and Community Health Systems (operator of 206 U.S. hospitals). As a result of such breaches, a Russian crime ring has amassed a collection of stolen internet credentials, including 1.2 billion user name and password combinations [Kerr et al., 2014], the

criticality of which is enhanced by the fact that 39 percent of users employ the same password for all accounts [Kaspersky Report, 2016].

Organizations impacted by a data breach may face fines or other penalties in addition to the costs of future breach prevention. Furthermore, breached companies can incur legal expenses resulting from potential liability exposure [Gatzlaff and McCullough, 2010]. According to Romanosky et al. [2014], the odds of a firm being sued are 3.5 times greater when customers suffer financial harm. Small or ill-equipped firms can be forced into bankruptcy due simply to the astronomical cost of forensic analysis to determine the scope of the damage. Shareholders are watching very closely.

PATTERNS OF DATA BREACH

History and Trajectory

Data breaches did not begin when companies began storing their protected data digitally. In fact, data breaches have existed for as long as individuals and companies have maintained records and stored private information. Before computing became commonplace, a data breach could be something as simple as viewing an individual's medical file without authorization or finding sensitive documents that weren't properly disposed of [Lord, 2016b]. As data became digitized and stored in larger quantities in the 1980s, the ability to access mass numbers of records at one time was possible. Ultimately, a black market emerged which monetized stolen records. The new environment attracted hackers and provided a platform for sharing techniques [Brown, 2016].

As a result, laws and regulations such as HIPAA (the Health Insurance Portability and Accountability Act of 1996) [Lord, 2015] or the PCI Data Security Standard [Lord, 2016a] have been created to provide guidelines for companies and organizations handling certain types of sensitive consumer information. These regulations provide a framework for the required safeguards, storage, and use practices for handling sensitive information. According to Sullivan and Maniff [2016], 47 states have enacted laws requiring breached organizations to both disclose breaches to the public and notify impacted customers. But these rules don't exist in all industries, nor do they effectively stop data breaches from occurring. Worse, the risk level is rising significantly: "Growth in the Cloud" [2017] estimates that 94% of all computer workloads (and related data) will be cloud-based by 2021.

How many data breaches have occurred? Data breaches have become larger in number and impact [Lord, 2016c]. Several experts [Verizon Enterprise, 2016; Bosch, 2013; Privacy Rights Clearinghouse, 2016] and other media outlets have attempted to name the largest data breaches in history. According to Statista [2015], which reports on the number of data breaches and records exposed in the United States, the number of cyber attacks is on a steep upward trend. In 2005, for instance, 157 data breaches were reported in the United States, with 66.9 million

records exposed. In 2014, 783 data breaches were reported, with at least 85.61 million total records exposed, representing an increase of nearly 500 percent over the 2005 number.

Bosch [2013] has created a graphic of the largest data breaches in history. Lord [2016c] notes that this timeline illustrates whether breaches were the result of hacks, accidental publication, inside jobs, lost or stolen computers, lost or stolen media, poor security, viruses, malware, or unknown causes.

While the Experian/Court Ventures incident is often cited as the largest data breach in history [Tschopp, 2014; Finkle, 2014], there are certainly many other data breaches that have gained widespread recognition as having substantial impact, or, at minimum, threat of potential impact, on consumers. As an example, in 2008 and 2009, a New Jersey-based payment processor, Heartland Payment Systems, was breached through malware that was planted on Heartland's network, recording credit card data as it arrived from retailers. This data, obtained through Heartland's payment processing services for more than 250,000 businesses, was then exposed to cybercriminals. This data breach is regarded as the largest credit card scam in history [Palermo, 2015].

For 2016, the government/military sector retains the lead in the number of records exposed. The sector has suffered 34 data breaches so far this year, representing about 43.4 percent of the total number of records exposed and 6.3 percent of the incidents. More than 5.6 million records have been compromised in the government/military sector to date in 2016 [Ausick, 2016].

Even captains of industry are not safe from data breaches. In July 2016, Jack Dorsey, CEO of Twitter, was hacked [Lawler, 2016]. He was fortunate in that the breach resulted in a friendly warning. Social media accounts of Sundar Pichai, CEO of Google, and Facebook's Mark Zuckerberg have also been compromised [Lawler, 2016]. Mark Zuckerberg has recently acknowledged covering his PC's camera lens due to the imminent danger of software commandeering computing devices for spying purposes. LifeLock CEO Todd Davis confidently published his Social Security number, taunting would-be hackers, to illustrate the power of his service to block a breach. He was hacked 13 times [Zetter, 2010]. LifeLock was ultimately fined by the Federal Trade Commission for deceptive advertising. Todd Davis resigned.

Focus on the Healthcare Industry

Much attention is paid to data breaches with direct financial impact, such as credit information and identity theft. However, another sector with much at stake in both personal privacy and financials is the healthcare industry. Since the pedagogical approach described below uses a scenario based in the healthcare industry, a focus on that industry is in order.

For years, health information has been stored on paper and the "security through obscurity" model has been protecting it, but now that it is being digitized and monetized it is the new big target. Why? A PHI record is worth ten times what

payment card information (PCI) and personally identifiable information (PII) data is worth on the black market because:

- In a country where health care is a privilege, not a right, people will gladly pay whatever the hackers are asking in order to get far more expensive services and drugs for free. Desperate customers are the best customers.
- Con artists buy the PHI information, buy drugs in someone else's name, and then sell them again on the black market for a profit.
- The most valuable PHI data is that for the elderly, because not only are they more vulnerable in the digital age due to inexperience, but they are also expected to be less healthy. A spell of illness with many expensive services raises few questions.

The writers of HIPAA, in their overwhelming concern to avoid federal data centralization, decided to put the safety of patient data in the hands of *each* doctor/provider/insurance company instead of in the hands of IT experts. When healthcare records were managed on paper, exposure required a series of labor-intensive steps, but, now that data is moving online, exposure is effortless and enabled by technology. Yet, organizations that do not have expertise with the technical aspects of data security are being tasked to protect patient data.

Also, for a given patient, PHI data distributed across multiple doctors/hospitals raises yet another concern. There is no facility to centrally monitor the data, as you can for financial records. Many services claim they can perform this function for a monthly fee, but the technology does not back the claim. As an example, in February 2015, hackers broke into the healthcare giant Anthem's servers and stole up to 80 million records. Anthem is the parent company of several well-known healthcare providers, including Blue Cross and Blue Shield. The attack utilized a Trojan (which appeared to be helpful software but had malicious intent) with keylogger software (a utility that can identify and record user keystrokes) that enabled the attackers to obtain passwords for accessing the unencrypted data. This breach was particularly devastating because it included the theft of millions of medical records that will surely be sold on the black market [Sporck, 2017].

Furthermore, companies that manage large PHI databases have a software problem. Their systems are built upon no-longer-supported technologies (languages, operating systems, database management systems), or are boutique software designed just for their needs. As a result, known security vulnerabilities (related to those aging technologies) are not being closed.

According to the Ponemon Institute [2016], nearly 90 percent of healthcare organizations had a data breach in the past two years, and nearly half or 45 percent had more than five data breaches in the same time period. For the second year in a row, criminal attacks are the leading cause of data breaches in healthcare. In fact, 50 percent of healthcare organizations reported the nature of the breach to be a criminal attack; 13 percent reported a malicious insider.

In 2016, the medical/health care sector experienced 34.4 percent (185) of all data breaches to date. The number of records exposed in these breaches totaled nearly 4.5 million, about 34.4 percent of the total as of July, 2016 [Ausick, 2016]. While no company wants to suffer a data breach, healthcare providers and their business associates stand to lose even more from a data breach, with penalties under HIPAA for inadequately protecting personal health information.

DEFENDING THE CASTLE—DATA BREACH PREVENTION

Research into the root causes of data and security breaches [Verizon Enterprise, 2016] reveals three main types:

- Benevolent insiders
- Targeted attacks
- Malicious insiders

In many cases, breaches are caused by a combination of these factors. For example, targeted attacks are often enabled inadvertently by well-meaning insiders who fail to comply with data or security policies, which can subsequently lead to a data breach.

The following is a composite list of tactics [Jacobs and Schain, 2010; Hayden, 2012; Kerr et al., 2014; Lawton, 2015; Prince, 2016; Lord, 2016b] designed to prevent data breaches by addressing the major causes:

Employee Training

Consider the following incidents: between February and March of 2014, eBay requested that 145 million users change their account passwords due to a breach that compromised encrypted passwords, along with other personal information. Hackers gained access to eBay accounts through stolen login credentials. The credentials did not come from customers themselves but instead came from eBay employees. Also, analysts believe that the Sony breach in 2014 [Sporck, 2017; Sony, 2014] began with a series of phishing attacks targeted at Sony employees. These phishing attacks worked by convincing employees to download malicious email attachments or visit websites that would download malware into their systems. This type of attack used social engineering, where phishing emails appeared to be from someone the employees knew, thus tricking them into trusting its source. Social scientists [Ramamoorti, 2008] use the term social engineering to explain the incidents above. In this context, a social engineer finds it easier to compromise people than computer systems. A CIO Magazine study reported that 30 percent of Americans will open emails, even when they know the message is malicious [Ragan, 2013]. Only intense, repeated employee education can slow this phenomenon.

End user security awareness training, when done often, is a huge benefit, especially when it changes the culture of the company to be more security minded. As an example, per the Kaspersky Lab report [2016], 63 percent of users use easy-to-guess passwords unless *explicitly* blocked from doing so. Training insiders also helps eliminates many mistakes that can lead to a breach, as well as helps employees notice odd behavior by malicious insiders or fraudsters.

Encryption

Laptop theft is a top cause of data breaches and losses [Wikina, 2014]. Yet, there are only four states that require disclosure if that data is not encrypted. Having a good encryption policy that is rigorously enforced on employee laptops is key. Also, employers should ensure that only encrypted data is downloaded to portable storage devices.

Management of Portable Data

Crosscut shred paper files before disposing of private information. Also, destroy CDs, DVDs, and other portable media. Deleting files or reformatting hard drives does not erase data. Instead, use software designed to permanently wipe the drive, or physically destroy it. A data breach impacting the U.S. military was one result of not following this basic rule, with 76 million records compromised in 2009 as the result of lost or stolen media.

Many breaches are caused by the theft or loss of data backup tapes. A remote data backup service allows the company to use the Internet to back up safely and effectively without ever using tapes that can be lost or stolen.

Intrusion Detection and Prevention

Intrusion detection and prevention (software and processes) should be used for all mission-critical systems and for systems that are accessible via the Internet, such as Web servers, email systems, servers that house customer or employee data, active directory servers, or other systems that are deemed mission critical.

Content Filtering

There are many breaches that occur when insiders access a malicious or compromised web site. Being able to block where insiders go is key to a good security policy. Employers should restrict employee use of computers to business, not permit use of file sharing peer-to-peer websites, and prohibit the use of unapproved software on company assets.

Vulnerability Assessment

Organizations should perform regular vulnerability assessments against every system in their network, both internal and external. Employers should restrict

access to employees who need to retrieve private data, conduct rigorous employee background checks, and never give access to temporary employees or vendors. Periodic assessment by a team of white hat hackers is advisable.

Patch Management

Many IT employees will simply enable Microsoft updates and believe everything is good. What about other operating systems? What about other third-party applications? The majority of malware is designed to take advantage of vulnerabilities in applications. It is also critical to update virus and spyware definitions daily since, ironically, in most cases where attacks are launched through an application, a patch is already available.

Security Information and Event Management

Employ a security information and event management program that correlates data across all systems to detect anomalous behavior, such as large pulls against a database during non-working hours, access by IP addresses from a geographic areas that the company does not operate in, and other behaviors that deviate from established norms. Staff an operations center with security experts and technologists to interpret the system findings and determine next steps for action and potential remediation. Combine that ability with data loss prevention (DLP) technology with which one can set rules and, based on those rules, block content the company does not want to leave the network.

Threat Intelligence Handling

Since hackers typically target specific technologies, industries, companies, or regions, subscribe to a real-time threat intelligence feed. This can ensure timely preparation and response to a threat.

Cyber Insurance Policy

An appropriately sized cyber insurance policy may be the difference between going bankrupt and displaying prowess during a breach. These policies typically cover legal and investigative costs, as well as potential hacker "payoffs."

ASSUMPTION OF BREACH IS THE NEW NORM

Even with the rigorous implementation of the tactics described in the previous section, the world's largest companies still suffer massive data breaches impacting millions of consumers. According to Hayden [2012] and Birkner [2015], assumption of breach is the new norm. If a hacker wants to get in, they will get in. According to German [2016], typical enterprise security architectures are seri-

ously outmoded. The predominant strategy now is to slow them down so you can respond and/or force them to leave a digital trail you can use to find them or at least determine what they have done. "Defending the castle" tactics are necessary, but not sufficient to prevent data breaches [Densham, 2015].

And so, in the face of a data breach, an enterprise must be prepared to manage the concomitant business fallout. The intent of the pedagogical approach described in this paper is to train future managers how to work in a corporate team environment to contain the damage associated with a data breach. The improper or incomplete handling of such emergencies results in failed businesses, compromised customers, and lost careers.

DESCRIPTION OF THE PEDAGOGICAL APPROACH

This approach, which can be applied in both undergraduate and graduate management information systems (MIS) coursework, facilitates the examination and management of a data breach. The chosen scenario is rooted in the healthcare industry, but the approach and all business and technical concepts apply directly to any industry. The approach's success is based upon creating a memorable event and on highlighting the initial shock and the evolving, escalating impact of a data breach. The main components of the exercise are the description of the breach, "changes of status" (such as an employee inciting the hacker via social media), "moves" (such as the team gathering to begin an investigation into the origin, legitimacy, and extent of the damage), and "injects" (such as CNN picking up the story and a key customer demanding an update). The entire exercise is timed using a master timeline.

Contained in Appendix A are the teaching notes and case analysis questions that can be utilized to conduct an exercise simulating the aftermath of a data breach. The appendix contains the goals of the exercise, list of participant roles, rules of engagement, a master timeline for conducting the exercise, description of the seminal event, the major actions, and the surprise injects of outside turbulence. Although the professor and students in an MIS course would likely be familiar with the technical terms used in the exercise, Appendix C contains a brief glossary.

From the perspective of future corporate managers, as reflected in Appendix A, the case can be used to reinforce a number of learning outcomes, including:

- Familiarizing students with the components of an incident response plan.
- Highlighting the criticality of communications during any serious business exposure.
- Highlighting the need for role/responsibility clarity during a data breach.
- Learning how to handle tradeoffs between maximizing profit and reducing risk.
- Learning how to prepare for unexpected crises.
- Highlighting the need for teamwork and trust in a corporation.

This pedagogical approach, which focuses on experiential learning, is supported in the literature as effective in achieving the desired learning outcomes [Berte and Jones, 2013; Forman, 2012; Grandzol & Wynn, 2011; Stoner et al., 2015; Remidez and Fodness, 2015; Fang and Chen, 2016; Canhoto and Murphy, 2016; Theriou et al., 2016; Tunstall and Lynch, 2010]. This approach (with small changes in specifics) would also be useful in a business course other than MIS (such as organizational theory, strategy, or communications) or as a corporate team-building exercise.

The best sessions feature student groups discussing their piece of the exercise with a healthy dose of melodrama (as encouraged by the instructor). The drama of the exercise can be enhanced further by the execution of an optional prequel exercise (described in Appendix B), which is ideally conducted before the topics of hackers and data breaches are introduced in the course. In this exercise, student groups are tasked with allocating resources to many MIS objectives, only some of which would facilitate the management of a data breach. Which objective will be prioritized—the implementation of a new sales support system, acquisition of faster desktops, or possibly the development of a communication plan for use in case of a data breach? These choices will have major implications as the "injects" occur. As the data breach exercise proceeds, students will understand and begin to appreciate the impacts of prior management choices.

CONCLUSION

The paper began with a discussion of the history of data breaches and the trajectory of hacking incidents in both number and scale. High-profile incidents were used to make the point that while preventative tactics are employed and constantly improving, data breach is the new norm and "defending the castle" tactics are necessary but not sufficient. In an environment where data breach is inevitable, business students need to understand the management of a breach. **In the absence of premier practices in the area of crisis management, companies, customers, and jobs are lost.** Despite the technical framework and language of a data breach, in all business disciplines the issue is one of high-quality management. The paper presented a pedagogical approach designed to enhance student understanding and appreciation of the challenges that business leaders face when confronted by a data breach. The approach uses a simulated data breach, complete with the initial report, continuous changes of status, defined activities, and responses to urgent and stressful outside forces referred to as "injects." In this approach, technologists, security experts, lawyers, executives, HR personnel, client business managers, and corporate communications specialists are all required to execute in lockstep to contain the damage. Beyond the management of a data breach from an operational perspective, the approach

reinforces the criticality of highly visible leadership and clear, focused communication.

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APPENDIX A

Teaching Note—The Data Breach Incident Response Team Simulation

Overview

Despite preventive techniques, processes, and technology, data breaches are well within the realm of possibility for any company. Ironically, the greater proportion of the resulting damage is not done by the hackers but by mismanagement of the crisis. This same principle applies to corporate accounting scandals (Enron and WorldCom), contaminated food ingredients (Taco Bell and Chipotle), product design issues (Toyota airbags and Volkswagen engine-control software) and embarrassing email leaks (Sony and the DNC). Some brand crises have been managed brilliantly, such as Tylenol in 1982, and some very poorly, such as Tylenol in 2008. **Initial damage is compounded by the lack of quick discovery, repair, executive transparency, honesty, and communication.**

Course Usage

The primary audience is a class of business students, either at the undergraduate or graduate level, who are taking an MIS or related course. This pedagogical approach is recommended to be used while students are engaged in coursework in the management of a corporation's technical assets, especially data security and protection. In general, the professor can use the theoretical data breach as a vehicle to enhance student understanding of the custodial responsibilities related to customer data and the consequences of managerial decision-making.

Teaching Objectives

The teaching objectives of this session are much more than providing technical understanding of data breach management. They are to:

- Familiarize students with the components of an Incident Response Plan.
- Highlight the criticality of communications during any serious business exposure.
- Highlight the need for role/responsibility clarity during a data breach.

- Learn how to handle tradeoffs between maximizing profit and reducing risk.
- Learn how to prepare for unexpected crises.
- Highlight the need for teamwork and trust in a corporation.

Description of the Session

This session involves a series of steps that facilitate a focused in-class discussion simulating the management of a data breach. Although the activities depicted would, in actuality, play out over a period of days, the exercise lasts 2.5 hours, but can be adjusted to accommodate available class time. The session is guided by a master timeline, within which "moves" are made by the team to address key issues and respond to "changes of status." The moves are punctuated by "injects" which are interruptions (urgent and usually tension-filled) from outside the team. The intent of the structure is to imitate a real crisis.

Advance Preparation

Reading Assignment

In preparation for the session, each student in the class is asked to read about the current state of data breaches. Each student will also be asked to focus on the healthcare industry since the language of the exercise will be expressed within the context of that industry. Students are also asked to familiarize themselves with relevant terminology. **The first two sections of this article and Appendix C (which provides a brief technology glossary) are explicitly designed to fill that role.**

Staffing the Incident Response Team

The instructor appoints a team (or potentially two teams if the prequel exercise described in Appendix B is elected) of students to be senior management of a company named Medco. The roles are:

- Controller
- General Counsel/Legal
- Chief Technology Officer
- Chief Information Security Officer
- Client Business Manager
- Privacy Officer
- Public Relations
- CEO
- COO
- CIO
- Sales and Marketing
- Human Relations

The instructor provides the following guidelines for the team:

- Research the responsibilities of the role you are playing.
- Read and understand the questions associated with the "moves" in the master timeline.
- Assume the world situation is essentially similar to today.
- Meet prior to the exercise to understand the roles of each member. Also, determine how the team will operate.

Conducting the Exercise

Setting the Stage

The instructor announces the players, including the members of the Incident Response Team and the companies which are directly involved:

- The name of the breached company: Medco.
- The name/role of a relevant third party: Southland Corp. (an offshore company that processes MEDCO data).
- An explanation of CryptoLocker software.

The instructor describes current business conditions:

- There is an upcoming Medco board meeting.
- An earnings report for Medco is imminent.
- The Federal Reserve is due to adjust prime interest rates.
- Wall Street is nervous.

The instructor announces that the breach described and the companies involved are all fictitious.

The instructor announces the breach:

"A hacker known as D1g1talOverlordX has posted 1,000 instances of PHI to the net, claiming Medco as the source of the data. Medco is not the only victim, however. Many sets of PHI have been posted, naming United, Aetna, and other healthcare companies as their sources."

The Exercise Begins: The Incident Response Team has been summoned and meets to deal with the breach. From this point forward, the exercise is guided by a master timeline which is broken into major "moves." The master timeline is contained in Table A1.

Table A1. Exercise Master Timeline

Time	Activity	Inject	Move and Discussion
00:00-00:05	Introduction/Goals/Rules		
00:05-00:20	Instructor sets the stage. Instructor announces breach. Incident Response Team meets.		
00:20	Change of Status 1 is announced. Move 1 and discussion begin.		Move 1: PHI is posted on the internet and discussed on IRC.
			• Is Southland liable? Do they have cyber insurance?
			• Do we know if they have access to Medco client data?
			• If so, which clients, and should we contact them?
			• Does technology have the logs to confirm?
			• Can we contain them?
			• Do we have to engage external legal support, given the low amount of data?
			• Are we proactive about HIPAA notification?
00:22		Privacy Officer Inject	
00:24		Legal Inject	
00:26		CEO Inject	
00:28		Sales and Marketing Inject	
00:30-00:40		Response to Injects	
00:40	Change of Status 2 is announced. Move 2 and discussion begin.		Move 2: The magnitude of the breach gets clearer.
			• Does the number of records change anything?
			• Are external legal and PR firms engaged?
			• Are we getting the appropriate advice for media coverage?
			• Are the call centers prepared to answer questions?
00:45		Human Resources Inject	
00:50-01:00		Response to Inject	
01:00	Change of Status 3 is announced. Move 3 and discussion begin.		Move 3: An employee angers the hacker via social media
			• Does Medco have a social media policy in place?
			• Knowing that we have angered the hacktivist, how do we prepare?
			• How are we controlling the message with our teams and other employees?
01:05		Sales and Marketing Inject	
01:08		Public Relations Inject	
01:10-01:20		Response to Injects	
01:20	Change of Status 4 is announced. Move 4 and discussion begin.		Move 4: A denial of service (DOS) attack is launched, locking out clients.
			• How do we detect DOS?
			• Who contacted us or did we notice?
			• Can the traffic be redirected?
			• Can we handle a widespread attack?
			• Do we have the ability to reach clients and employees?
			• How long it will take to troubleshoot and bring systems back online?
01:25		Technology Inject	
01:27-01:30		Response to Inject	
01:30	Change of Status 5 is announced. Move 5 and discussion begin.		Move 5: CNN picks up the story.
			• Is the call center operational?
			• Has a website been proposed?
			• Do we know what we need to do from a HIPAA point of view?
			• Do we have an appointed spokesperson to speak for Medco?
			• Have all clients been alerted?
			• Are we prepared for the volume?
			• Are we in touch with other victims?

Time	Activity	Inject	Move and Discussion
01:45		Technology Inject	
01:50-01:55		Response to Inject	
01:55	Change of Status #6 is announced. Move 6 and discussion begin.		Move 6: Medco Files are locked and held for ransom.
			● Do we have a tool to contain malware?
			● Are we able to reach all employees to warn them?
			● Are all machines equally valuable? Do we know what data is where?
02:00		COO Inject	
02:05		Technology Inject	
02:05-02:15		Response to Injects	
02:15-02:30	Summarization		
02:30	Wrap-up		

In each case, the "moves" are motivated by a "change of status," which is announced by the instructor. As an example, the exercise begins with the Incident Response Team responding to Change of Status 1, which is as follows:

> **"The Medco Chief Information Security Officer (CISO) sees on the IRC channel that the threat has been confirmed and that the PHI data posted originated from a compromised third party, namely Southland Corp."**

In this case, the team needs to address the questions listed on the master timeline under "Move 1. " The complete list of changes of status is as follows (Table A2):

During each move", the team is interrupted by one or more "injects," which can be introduced by a student not on the Incident Response Team. That student should be coached to "speak over" anyone who is speaking, including the instructor (which reinforces the external nature and time insensitivity of the inject).

As an example for Move 1, there are four injects. The inject directed to the CEO is:

> **"The Chairman of the Board is calling with questions and wants to know how Medco will respond."**

The complete list of injects is as follows (Table A3):

Summary of the Exercise

The instructor reinforces the basics of transparent executive leadership, honest communication, and teamwork. The instructor observes that although the data

Table A2. Exercise Changes of Status

Change of Status No.	Change of Status
1	The Medco Chief Information Security Officer (CISO) sees on the IRC channel that the threat has been confirmed and that the PHI data posted originated from a **compromised third party, namely Southland Corp.**
2	After further investigation, it is confirmed by the legal and technology teams that the data posted on the net is at least 500,000 unique instances of PHI originating from Medco. The hacker responsible (**D1g1talOverlordX**) claims to be angry about the broken U.S. healthcare system and sees all healthcare-related companies as part of the problem. **The hacker is a hacktivist.**
3	Michael Jones, a Medco employee who is part of the investigation, takes his thoughts to **social media** and vents about the unfairness of the hack and claims the hacker to be the true villain, thereby **further inciting** the wrath of this hacktivist.
4	Technical alerts start pouring in, indicating **abnormal traffic** on the firewalls. Clients report they are having issues connecting to the network. Medco is experiencing a **devastating** Denial of Service (DOS) attack.
5	The CIO learns that **all call centers are down**. The impact of the DOS attack continues and the incident makes the news on CNN. **Medco is highlighted as having the most data exposed.**
6	The desktop support team alerts the Incident Response Team that a wave of phishing emails has been sent to **anyone with a LinkedIn** account naming Medco as their employer. The phishing emails have been successful in **activating CryptoLocker** on at least **1,000 employee machines and servers** so far. Files are being held for ransom.

was compromised by a third party, Southland, the breach will always be considered a Medco failure.

The instructor makes the following comments about the injects:

- It is critical to understand the legal requirements concerning data breaches. What level of security incident requires notification and to which clients? Should you be proactive or conservative in your external notifications, given that you likely will not have all the facts upon discovery?

Table A3. Exercise Injects

Associated Move No.	Person/Group to Lead Resolution	Description of the "Inject"
1	Privacy Officer	Given the amount of data exposed, who needs to be alerted and when?
1	General Counsel/ Legal	Medco's cyber insurance carrier heard about the hack via Twitter and wants to know if you wish to open a claim.
1	CEO	The Chairman of the Board is calling with questions and wants to know how Medco will respond.
1	Sales and Marketing	In order to gain favor with a client, one of Medco's employees has allegedly reached out to alert them of the incident. The client is calling for an update.
2	HR	A disgruntled consultant who was recently released from an offshore support team went to work for Southland.
3	Sales and Marketing	A client calls and has threatened to cease sending data unless the issue is resolved within the next 24 hours.
3	Public Relations	A reporter calls and says that an employee familiar with the breach claims that Medco has lost data before. How do you respond? How do you control the message?
4	Technology	How do you respond to the DOS attack and troubleshoot the problem without writing over log files needed for forensics later?
5	Technology	How do you prioritize resolving the DOS attack versus the data breach?
6	COO and CFO	Will you pay the ransom demanded by CryptoLocker? They are demanding $500,000 in bitcoins to be transferred within 72 hours.
6	Technology	Can the locked data be recovered from backups without paying the ransom?

- During a security incident and potential breach there will be a lot of noise, misinformation, and conflicting agendas. It is vital for the Incident Response Team to stay focused and cohesive.
- Companies should engage the appropriate support vendors (external legal counsel, PR firms, and forensic experts) to help guide them through the breach. Ensure that the key players have met prior to an incident so they are best prepared. With widespread breaches, there is often a run on services, so contracts containing specific service-level agreements with the support vendors are key.

- Have a Bitcoin account set up in advance in the case the worst happens and hackers need to be compensated to retrieve data.

Finally, the instructor asks the following questions:

- What was learned about corporate-wide coordination and communication with customers, employees, the public, and the press? The instructor should emphasize the price paid for informal communication during a crisis, such as upsetting customers and irritating the hacktivist.
- If the prequel exercise was deployed, what was learned about the cost/benefit of disaster preparedness? If a real cyber security crisis hits, what would the company want to say it had done to prepare?
- How should any company balance making business decisions that maximize profit and efficiency while adequately reducing risk?

At the conclusion of the exercise, the members of the Incident Response Team will be drained; similarly, for the remainder of the class. The impression has been made. Managing any crisis, especially a data breach, is daunting. **The instructor emphasizes that "it is a management challenge, not simply a technical one."**

APPENDIX B

Optional Prequel Exercise: Tactical Plan Priority Setting

A multidisciplinary planning team has been asked to set priorities for the next year. Table A4 holds alternative potential projects with the project costs computed for the year. The assignment is to select projects with a total expense not to exceed $750,000.

The instructor divides the class into multidisciplinary teams. Each team will be comprised of representatives from each of the following corporate disciplines:

- Legal
- HR
- Product Development
- Customer Service
- Corporate Communications
- Sales and Marketing
- Security
- Technology

The instructor informs the teams that the costs listed are first-year expenses. First-year costs for projects requiring capital expenditures have taken depreciation expense into account.

Table A4. List of Candidate Projects

Candidate Project	First-Year Cost	Selected (Yes/No)	If Yes, Record Cost
New laptops for the programming group	150K		
Diagnostic equipment for the network engineers	20K		
Sales automation software	50K		
Development of incident response plan	25K		
Major upgrade for current product	100K		
Development of a new product demanded by the marketplace	200K		
Operational improvements at the datacenter	150K		
Upgrade of customer demo/briefing center	75K		
Maintenance of current products to meet federal standards	60K		
Knowledge database for the call center	70K		
Data identification and classification program	50K		
Policies and standards refresh	80K		
Employee security awareness training	110K		
Data encryption initiative	40K		
Disaster recovery and business continuity planning	120K		
Team Name/Number		**Total Cost of Selected Projects**	

Note: Two teams with vastly different project selections would provide an interesting competitive environment for the exercise in Appendix A.

APPENDIX C

Glossary of Technical and Industry Terms

Bitcoin—a decentralized digital currency not backed by any government.

Black hat hacker—a hacker who "violates computer security for little reason beyond maliciousness or personal gain."

CryptoLocker—a program that targets all versions of Windows. When started (usually via deception such as phishing), it will encrypt certain files. Then it will display a CryptoLocker payment program that prompts the victim to send

a ransom to be paid, typically within 72 hours, in order to decrypt the files. The ransom must be paid using Bitcoins.

Data loss prevention (DLP) software—software designed to detect potential data breaches and prevent them by monitoring, detecting and blocking sensitive data while being used, stored or travelling on a network.

Denial of service (DOS) attack—an attempt to make a machine or network resource unavailable to its intended users, such as by temporarily or indefinitely interrupting or suspending services of a computer connected to the Internet. It is analogous to a group of people crowding the entry door or gate to a shop or business and not letting legitimate parties enter into the shop or business, disrupting normal operations.

Encryption—the process of encoding messages or information in such a way that only authorized parties can read it.

Hacker—someone who seeks and exploits weaknesses in a computer system or computer network.

Hacktivist—a hacker who breaks into a computer system for a politically or socially motivated purpose.

HIPAA—the federal Health Insurance Portability and Accountability Act of 1996. The primary goal of the law is to protect the confidentiality and security of healthcare information.

Internet Relay Chat (IRC)—a system which provides a way of communicating in real time with people from all over the world. The system is divided into channels, including one dedicated to data breaches called #hack.

Internet Protocol (IP) address—a numerical label assigned to each device (e.g. computer or printer) participating in a computer network that uses the Internet Protocol for communication.

Keylogger—a type of surveillance software that has the capability to record every end-user keystroke.

Malware—short for malicious software—is any software used to disrupt computer operations, gather sensitive information, gain access to private computer systems, or display unwanted advertising.

Network backdoor—a method, often secret, of bypassing normal authentication in a product, computer system, or algorithm. Backdoors are often used for securing unauthorized remote access to a computer.

PCI—Payment card information.

PHI—Personal health information.

Phishing—the attempt to obtain sensitive information such as usernames, passwords, and credit card details (and sometimes, indirectly, money), often for malicious reasons, by masquerading as a trustworthy entity in an electronic communication.

PII—Personally identifiable information.

Trojan/Trojan horse—any malicious computer program which is used to hack into a computer by misleading users of its true intent.

White Hat Hacker—a hacker who breaks into protected systems and networks to test and assess their security. White hat hackers use their skills to improve security by exposing vulnerabilities before malicious hackers (known as black hat hackers) can detect and exploit them.

A Taxonomic Guide to University-Level Writing Assignments

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Educators have long noted a significant decline in the quality of written work received, especially in higher education. The popular press frequently cites evidence that employers of recent graduates, especially those from business schools, are increasingly dissatisfied with the level of the employee's so-called "soft skills," especially in terms of written communication. This paper presents a simple taxonomic approach to concept ideation and organization that can help transition student writers to a higher level that will help them in school and beyond.

I. INTRODUCTION

While the debate over whether or not higher education is worth the cost probably started on the North American continent when Harvard University was chartered in 1636, it certainly continues into the 21st century. With college tuition continuing to rise and student indebtedness increasing to the trillion-dollar range (Federal Reserve, 2015), students (as well as their parents) expect a payoff for the time and money invested, while employers grumble that college graduates lack the skills necessary to successfully handle the requirements of contemporary careers.

Proponents argue that college graduates have higher rates of employment, better pay, more career options, and are more productive than do those without such education (Davis, Kimball, Gould, 2015; Tamborini, Kim, & Sakamoto, 2015; Abel & Deitz, 2014; Pew Research Center, 2014). Others lament that the cost of college leaves students with unmanageable debt, unable to fulfill the dream of buying a house/getting married/having kids or saving for the future (Laitinen, 2015; Grace, Kenna, & Aud, 2014; Baum, Ma, & Pays, 2013; Brown & Caldwell, 2013; Matthews, 2013; Fitzgerald, 2012; Heller, 2012; Thompson, 2012; NPR, 2011; Smith, 2011; Ponnuru, 2010; Golden & Katz, 2008). Notwithstanding either position, all seem to recognize that SAT scores

have continued a long-term downward trend recently hitting the lowest level in 10 years (Anderson, 2015).

Further, the popular press as well as research reports are filled with stories that note that college graduates lack specific skills that are necessary for success in the world of work. Soft skills, including the broad "communication" arena, but more precisely "writing skills," are consistently (and abundantly) mentioned as lacking. In business schools, employer complaints about writing skills have forced curricular changes that put more emphasis on writing. Reductions in employer training expenditures have resulted in a shift of expectations that students be prepared *when they start their careers*, putting additional pressure on colleges. Employers have long advocated that essential writing skill is a threshold skill for hiring and promotion, even while they believe few graduates reach that threshold (Hart Research Associates, 2015; Selingo, 2015; Bentley University, 2014; Adecco, 2013; Chegg, 2013; Fischer, 2013; White, 2013; Schwartz & Sharp, 2012; Arum & Roksa, 2011; USDOE, 2011; WSJ, 2011; Holland, 2009; Sanoff, 2006; Bartlett, 2003; CollegeBoard, 2004; Tanyel, Mitchell & McAlum, 1999).

What is worse is that this is not something new. For the last decade, deficiencies in writing skills have been noted (Casner-Lotto & Narrington, 2006; Quible & Griffin, 2007; NCEE, 2009). Anecdotally, you can ask any university professor if their students can write at the level expected, and you'll get a resounding response—usually negative. One survey of members of the United States' largest public relations organization confirmed significant dissatisfaction by corporate supervisors with the writing performance of entry-level practitioners across all measured categories of writing (Cole, Hembroff & Corner, 2009).

As the world becomes increasingly interconnected through digital distribution and the Internet, the level of writing skill proficiency needed continues to rise worldwide. As the OECD notes in its 2013 study, *OECD Skills Outlook,* "Given the centrality of written information in all areas of life, individuals must be able to understand and respond to textual information and communicate in written form in order to fulfill their roles . . ." (OECD, 2013, p. 52). Though this paper describes a pedagogical innovation within the context of U.S. higher education, its application worldwide could certainly be considered.

II. THE ISSUE

Given the lack of writing skill documented above, there can be a gap between the level of writing proficiency that an instructor expects on an assignment and what students deliver. It could be that this gap is a result of unclear instructions about the assignment, though because of the widespread nature of the gap, it is more probably thought to be a failure on the part of the student to write in the style or manner prescribed. Frequently, what might be delivered for an assignment is a simple recitation of bare-bone facts answering "who-what-when-where" ques-

tions but not including any analysis of the facts or in-depth originality, let alone the higher-order thinking that might be expected from a college-level assignment. As if adding insult to injury, students may also fail to critically distinguish or compare the validity or merit of the references examined from which these facts are gathered. In other words, all sources are perceived as equally truthful or valid, resulting in a collage of non-sequiturs rather than a narrative flow and synthesis.

In recent years, there have been attempts in business schools to address this gap by adding communications courses to degree plans, though these remedial attempts appear to be in response to the fact that students do not seem to bring these skills to the college classroom. What this paper encourages is instilling specific research capacities as well as critical reasoning and analytical skills that are manifested through writing.

While this deficit is troublesome at the undergraduate level, it is even more troubling at the graduate level where many disciplines require the demonstration of authentic research and cogent writing in significant proportion prior to graduation.

This paper will explore a process educators can use to explain and demonstrate a concept that underlies progressively deeper cognitive processing and its application to written assignments. Specifically, this paper will examine the application of *Bloom's Taxonomy of Educational Objectives* (Bloom et al., 1956), along with the revised and updated version (Anderson et al., 2001), focusing on outcomes in the cognitive domain to business school writing assignments, and describe a roadmap students can follow (and professors can teach) to transition from simplistic report writing to producing significant, insightful, and analytical written communication derived from authentic research.

III. BACKGROUND

In 1956, Benjamin Bloom, with collaborators Max Englehart, Edward Furst, Walter Hill, and David Krathwohl, published a framework for classifying educational objectives titled *Taxonomy of educational objectives: The classification of educational goals* (Bloom et al., 1956). "Bloom's Taxonomy," as it became known, categorized learning objectives into three "domains": cognitive, affective, and psychomotor. Cognitive outcomes described knowledge, comprehension, and critical thinking. Affective outcomes illustrated feelings and emotions. Psychomotor outcomes had to do with physical skills. Many educators have traditionally focused almost exclusively on cognitive outcomes. The taxonomy categorized six sequential levels of thought and analysis constituting a pyramid of increasingly critical insight (see Figure 1). The bottom three levels described lower-order thinking skills, while the upper three levels reflected greater, deeper, and more abstract cognitive functions. The lowest order was simple acquisition of "knowledge," or the ability to recall specific information. The next lowest order was "comprehension," in which a student was expected to demonstrate making use of basic information without necessarily being able to relate it to anything else. The taxonomy categorized "application" as the use of abstractions in particular concrete

Figure 1. Bloom's Taxonomy (Bloom et al., 1956)
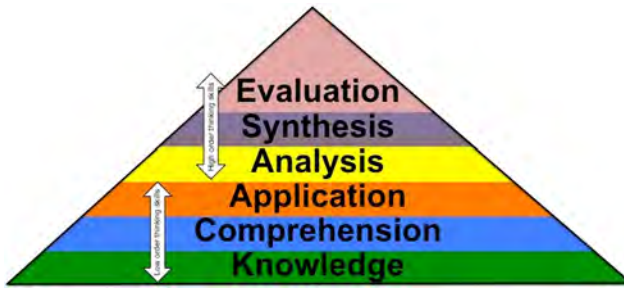
situations. Higher-order cognitive skills began with "analysis" that demonstrated the breakdown of information into constituent elements along with the ability to see the hierarchy of ideas and their relationships to each other. "Synthesis" involved the ability to aggregate the constituent parts so as to form a whole. Finally, "evaluation" gave rise to judgments about the value of the material being learned (Bloom et al., 1956).

In 2001, 45 years after the initial taxonomy was published, Anderson and Krathwohl edited a revision of the original work called *A taxonomy for learning, teaching and assessing: A revision of Bloom's taxonomy of educational objectives.* This revision updated the language of the original model and focused more on classification of learning *outcomes* rather than on the notion of "objectives." This classification also used different nomenclature labeled with "action-oriented" words rather than nouns as in the original taxonomy. These updated classification labels attempt to accurately describe the processes by which students engage their work. (See Figure 2).

For a thorough review of the changes between the original and revised taxonomies, see Krathwohl's *Theory into Practice* article (Krathwohl, 2002).

The updated taxonomy expanded the structure of the cognitive process dimension, making it more useful for an instructor to both categorize outcome expectations in assignments and assess the outcomes. Consequently, the updated taxonomy is used to describe the "road map" in this article.

IV. A PRACTICAL APPROACH

Recognizing that there may be some cause for concern that the quality of writing in written assignments at the university level is not what it should be—and without trying to point fingers or diagnose underlying causes—it is possible for university educators to pragmatically use the updated Bloom's Taxonomy to demonstrate to students how they should approach formal written assignments that require some level of research, analysis, and interpretation. Correlating the cognitive domains associated with the Taxonomy, the approach relates each cognitive level to a structural part of the classic block outline (introduction, body,

Figure 2. Updated Bloom's Taxonomy (Anderson & Krathwohl, 2000)
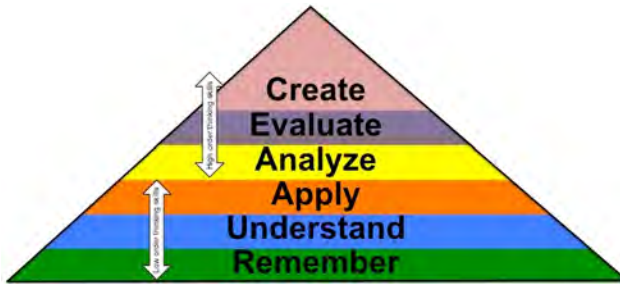
and conclusion) (Hacker & Sommers, 2011; Jones, 2015; Bryson, 2015). Figure 3 is a graphic illustration of the relationships.

Using the construct of the Taxonomy, it is possible to display how its cognitive levels can model the transition from "report writing" to "research writing" that reveals a higher level of academic, critical, and creative prowess.

Simple report writing is represented by the lower levels of the cognitive domains (remember, understand, and –sometimes– apply). If the written assignment is for a *research* paper, these lower domains fall short of the expectations of analysis and insight that come from the upper levels (analyze, evaluate, and create). The upper levels reflect the discernment that comes from subject mastery and are the goals for most written assignments that require research.

a. Analyze

In the upper levels, "analysis" is the first departure from mere reporting of facts and figures, as it requires at least minimal mastery of the component parts of the subject area or topic being researched. Comparison and contrast is one form of analysis. The construction of an annotated bibliography is another because is requires the researcher to identify and chronicle different positions or arguments that have been published about the underlying premise of the research. An annotated bibliography also forces the student to turn a more critical eye toward assumptions and inherent fallacies in logic that have been identified by others to more reasonably conclude that not all positions or arguments or data are equal, and thus to recognize that not all elements of research should be afforded equal weight.

b. Evaluate

In the middle range of the higher-order thinking skills, "evaluate" is a logical corollary of the preceding level. After dissection of an issue at the lower level, it is necessary to reassemble the component parts for purposes of ultimately judging their merit and relevance to the research being conducted. In a writing assignment,

Figure 3. Relationship of the Six Cognitive Levels of the Updated Bloom's Taxonomy to the Classic Block Outline

Cognitive levels	Block Outline
1. Remember	**I. INTRODUCTION** Identifying salient information
2. Understand	Summarizing established information and the interpretations of others
3. Apply	Transition and/or restatement or formulation of a theory and/or practical application of assembled facts
4. Analyze	**II. BODY** Dissection of the component parts, comparison and contrast, looking for relationships, assumptions, value
5. Evaluate	Assessing the component parts and preparing for reassemby at the next level
6. Create	**III. CONCLUSION** Reorganizing information in a more cogent way, demonstrating the value added by the writer

evaluation can thus be seen as the assessment of the relative merits of the individual components, leaving their reassembly into value-added creative insights at the final upper level.

c. Create

After a methodical deconstruction of the supporting pillars of an area of examination, the constituent parts are now reassembled in a more cogent manner. This penultimate higher-order thinking skill becomes simultaneously more granular while at the same time ephemeral as the written work approaches the quality that represents actually adding to a body of knowledge. Consequently, it represents the standard that a written assignment requiring research must attain. Creation is the opportunity for the student to add their own interpretation to the analysis and evaluation of collected data that are represented at the lower cognitive levels.

To a university educator, this simple overview and explanation of the Taxonomy to students concretizes the expectation that a writing assignment should deliver more than a simple summary or unsupported conclusion(s). Research does require the gathering and reporting activities represented by lower-order thinking skills in the Taxonomy, followed by some degree of dissection, scrutiny and comparison. However, the writer must now go farther. The articulation of this process suggests to students that university-level writing also requires a high degree of judgment, synthesis, and, ultimately, originality.

How then can educators help students attain such outcomes in writing assignments?

V. ROADMAP AND APPLICATION (TEACHING THE ROADMAP)

a. The Roadmap

This section will describe a simplified roadmap that can be followed to help guide the student writer in transitioning their written work toward the deeper waters of authentic research. The essence of the method is to graphically (that is to say, *visually*) correlate Bloom's Taxonomy to specific sections of the assigned document using a block outline to organize sections. Therefore, it is essential that the presentation of the method is transmitted via reasonably clear visual interactive tools, such as a whiteboard.

When the taxonomy is viewed sequentially in relationship to a written work, it may be helpful to invert the pyramid generally used to visualize the Taxonomy to better correlate with the compositional evolution of the paper. (Wineburg & Schneider, 2007, 2009). This inversion allows for an easier visual comparison of Bloom's Taxonomy to the outline of the written work.

Beginning with the most rudimentary of outlines, the correlation would look initially like what is shown in Figure 4.

Figure 4. Bloom's Taxonomy Inverted

Bloom's Taxonomy inverted	Cognitive Levels	Block Outline
		Title
		Opening, background
		and thesis
Remember	1. Remember	**I. Introduction**
		Identify salient info/thesis
Understand	2. Understand	Summarizing, interpreting
		established info.
Apply	3. Apply	Transition or
		restatement of thesis
Analyze	4. Analyze	**II. Body**
		Dissection of parts and
		organization
		Looking for relationships
Synthesize	5. Synthesize	Assessing the parts
		and concepts and
		recombining parts in
		a unique way
Create	6. Create	**III. Conclusion**
		Reorganizing info
		In a new way

In this form, the basic levels reflecting something similar to report writing appear at the top of the pyramid and tie to the paper's introduction, while the higher cognitive levels appear at the increasingly narrower bottom, correlating with the more creative analysis, insights, and conclusion of the paper. Between these two sections fall the parts generally omitted from college-level papers, which are the analysis and synthesis of information.

The graphic correlation of the cognitive steps and outline stages make the shortcomings of a typical paper abundantly, and more importantly, visually clear. This visual image of how and where a typical paper may fall short of expectations is in itself a revelation to many students. The student is better able to envision logically the incompleteness of a report (received in lieu of real research) while simultaneously visualizing a path to a more insightful level of work. Additionally, the juxtaposition of the pyramid and the outline will also establish an intuitive framework for discussing transitions between the component parts of a paper.

Finally, it is common for student works to be disproportionate, with very long introductions and or bodies, or "micro-conclusions" with little to no real creative content or insight. Therefore, it may be useful to suggest weightings to the three main sections of the document to help ensure balance and proportion. Though mechanical, at first it may be helpful to suggest an approximate percentage value to each of the three overall sections as they relate to the work as a whole. For example, one could assign a value of 20 percent to the introduction, 50 percent to the body, and 30 percent to the closing section to help the student visualize an overall shape of the document. It may also be advisable to follow the diagrams with suggestions correlating the document to specific page numbers. In other words, if the assignment requires a 20-page document exclusive of endnotes, it may be good practice to recommend to new writers a form that implies an introduction of say 20 percent (or 4 pages), followed by a body of 50 percent (or about 10 pages), leaving a conclusion of 30 percent (or approximately 6 pages). When dealing with inexperienced writers, it may be advisable to correlate the Bloom's Taxonomy (and block outline) method with the specific allotment of expected pages for the written work. This may seem self-evident or even insultingly simple; however, the document may very well represent the student's first real attempt at anything beyond mere report writing.

b. Teaching the Roadmap (one approach)

Background and Incomplete Solutions

For the authors, the motivation for finding a solution to remedy poor writing at the university level arose over many years of receiving poorly written assignments. As referenced above, this view seemed to be shared by others in academia as well as reflected in non-academic papers, notably those from the business community. Indeed, one first attempted solution was to incorporate a formal business communication course within the degree plan that would theoretically address, in part, some of the shortfalls in writing. However, the remedial nature of these courses was geared more toward correcting or neutralizing 12 years of inadequate pre-college preparation rather than offering a specific strategy toward instilling research and critical reasoning/analytical skills. Very often, the result was a hybrid speech class blended with a few lower-level composition lectures supported by written assignments designed to highlight persistent grammar, style, and possibly syntax problems. Though a step in the right direction, students were still woefully unprepared to conduct the critical analysis necessary to deliver genuine scholarly and professionally written works.

This "band-aid approach" resulted in some improvement in student writing, but rarely to the level desired, as the remedial approach tended to focus on the *mechanism* of delivering thoughts through written expression rather than assisting with the actual formulation of the thoughts or concepts. Clearly, another strategy was needed that could help students conceptualize and realize

any substantive written work from a more holistic and heuristic, process-led approach.

Though outlining may provide a good point of departure for some students, others needed a set of guidelines that would not only assist with the overall architecture of a written work but also with the development of an idea from conceptualization through realization. The idea was to provide both tools, that is, outlining and a concept-building roadmap that could assist at every stage of the outline and subsequent paper. The solution would necessarily require a unified approach welding both form and substance that was organic to a student's approach to conceptualizing an idea to be realized in writing.

This at first seemed daunting from a pedagogical viewpoint for the simple reason that teaching the tools might likely be exceedingly dry and tedious. The challenge was to create a more heuristic system that would guide the students to, in effect, discover for themselves the requisite tools, thereby instilling a sense of ownership in the process. However, the mere idea was not enough: students needed to realize that the process was self-evident, resulting from their own insights and efforts. Therefore, proper classroom exposure to the concept was critical to adoption. For that reason, realization of the process had to occur in a live classroom setting that was fully interactive.

The First Step

Once the student recognizes that a deficiency in a skill set actually exists, the stage is set to begin the ostensibly student-led process of remedy discovery. The fastest approach begins with a representation of a simple three-part block outline on the whiteboard. The instructor asks the class to identify and explain the purpose of each of the three component sections. Oddly (and perhaps frighteningly), this is often a new concept for some of the students and clearly illustrates the source of some of the deficiencies. Correlating the Bloom's cognitive domains to specific block outline parts leads to faster realization of the value of outlining as both a study and writing tool. Reverse engineering the basic parts of the block outline, if properly guided, can lead to an organic emergence of the Bloom's cognitive domains in which the students, in effect, teach themselves and each other. (The correlative side benefit of this approach is that it tends to create an atmosphere of natural peer support.)

After a brief discussion of the simple diagram of a block outline, the classroom dialog continues with an examination of what types of information would typically be found in the introduction section of the outline. This next step guides the discussion to a deeper understanding of the outline parts by introducing, in a parallel graphic representation, the lower levels of the cognitive domain. By simply questioning the students regarding the functions and purposes of each outline section, the lower levels of the Taxonomy emerge naturally. Students tend to quickly recognize the "reporting" aspects of the lower domain levels by identifying the "who, what, when, where and why" aspects, upon which so much of their prior writing had been built. That is to say, the lower three levels of the Bloom's domain

(*remembering, understanding, and applying*) are usually more self-apparent to students who quickly identify the report writing aspects that naturally correlate with these sections.

An Additional Tool

At this point, the instructor may want to begin to introduce refinements of Bloom's Taxonomy by incorporating the Anderson Taxonomy table (Anderson et al., 2001). The addition of the vertical axis refines the broader cognitive domain levels in a manner that both clarifies and simplifies the more abstract levels. For example, upon discovery of the reporting aspects of writing, students can begin to naturally develop ways to distinguish concepts, such as those appearing under the "knowledge" dimension of the table. In discussion, the class will easily differentiate between such concepts as factual knowledge (memorization) and conceptual knowledge. Further, from there it is a natural step to recognize and distinguish procedural knowledge from both memorization and conceptualization. A Socratic approach may be useful for this discussion, as it will probe the question without necessarily providing the answer. This approach is especially helpful because it seems to impart a deeper level of satisfaction and helps the class as a whole evolve as stakeholders in the process, rather than being mere passive observers. Once the foundation of the Taxonomy is established and clearly correlated to the first part of the block outline, the next step is to begin to lead the investigation to the higher and increasingly abstract levels of the cognitive domain.

The Second Step

The next step, which correlates with the second section or body of the outline, is likewise viewed by students as almost self-evident if they are first exposed to the "organic" discovery technique that establishes the foundational elements in the outline. Students now move toward deeper insights through the "analysis/synthesis" section, which consists of the dissection and recombination of the known elements found in part "I" of the outline. Once again, a Socratic guided examination of the outline and concomitant taxonomy leads to a natural understanding of the need not only for analysis, but also a method that directs the discovery.

Identifying Assumptions as a Dissection Tool of Analysis

The process leading the students to discover the higher analytical/synthesis levels is based upon a method to help identify assumptions. Identifying and investigating assumptions serves as a model and main tool for the "dissection" aspect of this step. Initially, it may seem simpler to ask the class a question, such as *"how do you define analysis?"* to begin this process. But a better approach is to instead ask *"(h)ow do you know?"* when reviewing the underlying elements or facts that

comprise the lower levels of the pyramid and introduction or thesis of the paper. Systematically reviewing and answering such questions will help lead the class to parse out facts from underlying assumptions which are later "reassembled" for review. This process should be applied to each underlying foundational element to better identify and distinguish facts from assumptions. The resulting mini-taxonomy or hierarchy of examined information should help sort and weigh the more valuable information now separated from inherent assumptions. With information logically sorted and assumptions addressed, the underlying elements are reassembled in a somewhat new way that will lead to the next step in the process. From there, the group-led analysis proceeds to the highest level of the domain, "Creating".

The Third and Final Step

Here, the students will apply the results of their analysis to an emerging and changing conceptual model. Because they have been guided step by step through the taxonomy, the transition to the more abstract concepts, such as creating, will seem more organic and again self-evident, if not inevitable. The notion of creating may seem for some a completely foreign and unknowable concept, yet that is what is required at this final level.

Part II's assessment and recombination of remaining parts and concepts will yield a significantly modified paper or thesis. The analysis and filtering of assumptions forces a concept review, on a deeper level, if for no other reason than the student must afterwards reassemble a model with different or even missing pieces. This one problem-solving challenge will require some degree of creativity and certainly forces the student writer to recognize the gaps or missing linkages resulting from the removal of assumptions and other detritus. Over time, the student writer will become more comfortable with this process and better recognize and even anticipate the emergence of solutions to questions not envisioned at the outset. Though heavy-handed, with necessity being the mother of invention, a certain degree of necessity will be a natural result of rethinking the concept processed through this method, as some reorganization will certainly be required.

The final revelation occurs when the students realize (from their own in-class investigation of the roadmap) the purpose of a writing assignment or research project; that is, to add to the body of knowledge of a given area or discipline. Anecdotally, students to date have been surprised to learn that an academic paper is intended to build upon and add to the common body of knowledge of a given discipline, and that they as students can make meaningful contributions. The realization of this stakeholder status often ignites a more proactive approach to applying the Bloom's Taxonomy-Block Outline (BT/BO) approach to writing.

An Alternative to the Pyramid

Teaching or managing the BT/BO method is greatly aided by the use of graphic representations of the outline and correlative Taxonomy. After intro-

duction of the Bloom's Taxonomy (and Anderson Taxonomy table refinements), other graphic representations of the process may be more useful in assisting the student to better visualize the path. A more linear task-oriented roadmap appears below, which highlights more of an activity flow or sequential approach to teaching the technique. This particular flow chart model readily lends itself to a project management timeline setting. As a project management tool, the chart below could easily be expanded with suggested page numbers and or correlating milestones. Or, such an approach could altogether avoid time-based milestones and simply indicate the sequential flow of project components.

The Flow Chart Model

Remember	Identifying salient information	Background, who, what, when & where

Understand	Summarizing	Interpreting established information

Apply	Transition and/or thesis statement	Or formulating a theory

Analyze & Synthesize	Dissection of the parts looking for relationships	Assessing parts & concepts & recombining in a unique way

Create	Reorganizing into a new way	Conclusion

Devoting a small amount of class time to answering the implied question of *what is required of college level writing?* may result in students newly empowered with the realization that they, too, can add meaningful insights if they follow a process that leads them through the compositional flow chart. Even better is the insight that this process can be replicated in a number of settings both within and without academia. For many students, this one realization lends credence and relevance to the process and acquisition of a knowable and marketable skill set. Perhaps surprisingly, one of the most obvious applications of the strategy occurs in the business setting.

VI. RELEVANCE TO BUSINESS STUDENTS

As mentioned above, the business community has been vocal about a pervasive dissatisfaction with the level of writing proficiency evinced by graduates, and this has already impacted many universities and business schools in particular. Therefore, the writing roadmap method may be of particular value to business students, not only due to the shared problems arising from an incomplete education, but notably in relationship to their future career paths because of the very fact that employers feel that few graduates traverse the threshold writing skill level required for professional advancement.

Arguing that they are not English majors, business students in particular may doubt the relevance of enhanced research and writing skills to their given discipline. The relevance of the method to the business student is that this one process and subsequent outcome, that is, the development of higher-level analysis and written skills, form the entire basis of management and business consulting, either manifested orally or in writing.

Managers and consultants are ultimately paid to render reasoned business decisions on increasingly abstract data. Successful business analysis and upper-level management and/or consulting skills will necessarily follow a line of inquiry and methodology that tracks the BT process discussed above. The introduction of this simple method will necessarily assist the student manager in acquiring a consistent process to navigate future business and especially management decisions, no matter how abstract. Regardless of whether the graduate is later employed by a large company or instead pursues their own career path, they will inevitably be called upon to render opinions that require the application of the very methods that transcend report writing and lead to higher-level written work product.

VII. SUMMARY AND CONCLUSION

The methods described in this article offer a point of departure for *communicating* to student writers and researchers a direct roadmap leading to enhanced writing skills. The technique is not a solution to the underlying problem but provides a

modest tool that can remedy part of the larger problem. On its face, it may appear obvious and may, to the extent it is reviewed at all, support charges of further evidence of the dumbing down of education. However, if presented as a first step to defining the contours of a more significant written work product, it will provide not only a simple process for the student to use repeatedly, but shall also force those using the method to exercise higher-level cognitive skill sets ultimately leading toward enhanced research and academic achievement. If nothing else, the process will not only provide student writers with a visual representation of the limitations of report writing when viewed from a content level, but it will also graphically and sequentially explain how to approach the higher levels of insight required at the university (and professional) level, while suggesting a plug-in format for document construction. It also provides business students with a clear example of what could later be used as a guide to drafting consulting reports, thereby bridging the academic to a real world application.

The roadmap is a living template, which is to say that adjustments are not only recommended but likely. Though drafted with an eye toward the business student, with some modification, it could have relevance to other settings and may find utility in communication classes, among others. In such communication classes, the road-map could also be applied to help organize the oral presentations of research, and this application shall be the focus of a follow-up article.

In any event, there appears to be much anecdotal evidence supporting the notion that college-bound students are lacking in certain basic skill sets, notably writing and research. Regardless of the cause, the symptoms, though a manifestation of deeper problems, can be treated. The simplicity and clarity of the method and roadmap simultaneously allow freedom in the application while providing a clear guide to a more substantive outcome. Larger and more sophisticated applications of the method are certainly possible, and it is foreseeable that the entire hierarchy could be applied to increasingly smaller sections of the document; however, the initial tool is adequate for laying the foundation of a strategy leading to better writing.

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There Is No Free Lunch: Understanding and Preventing Estate Planning Fraud

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Financial planners are expected to oversee all facets of their clients' financial affairs, including estate planning. With estate planning fraud on the rise, financial planners, as well as their clients, are exposed to potential trouble. Education of and awareness by financial planners and their clients lies at the heart of preventing this fraud from occurring in the first place. This article provides a tutorial on the basics of wills and trusts, presents red flags that financial planners can use to identify possible fraudulent situations, and offers advice on how to avoid professional liability with regard to estate planning fraud.

Keywords: Estate Planning, Fraud, Schemes, Financial Planner, Red Flags

Disciplines of Interest: Finance, Law

INTRODUCTION

Financial planners are expected to oversee all facets of a client's financial affairs and are often instrumental in guiding clients in their estate planning needs. For example, they help to shape the client's financial goals, evaluate a client's family circumstances, guide clients in gifting, and provide information on tax implications of current arrangements. Unfortunately, estate planning fraud is likely to be a concern for many financial planners and their clients in years to come. Fraudulent activities related to wills and trusts are already on the rise. The Internal Revenue Service (IRS) states that trust and estate matters are the third highest growth area among the top certified public accountant (CPA) firms [Internal Revenue Service, 2016a] and estimates that by 2015, $4.8 trillion in wealth had been transferred or inherited from one generation to the next [Internal Revenue

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Service, 2016b]. While most wealth transfers are legitimate, the government has detected an increase of abusive evasion schemes involving wills and trusts in the past few years [Internal Revenue Service, 2014]. In fact, the IRS lists "abusive tax structures" that involve abusive domestic and foreign trust arrangements and the "misuse of trusts" as two of the "dirty dozen" most common tax schemes [Internal Revenue Service, 2014]. With an unprecedented additional estimated $30 trillion in assets in North America alone transferring from Baby Boomers to their heirs in the next three to four decades [Accenture Consulting, 2016], the rise of estate planning fraud is likely to continue. These schemes can target wealthy individuals, small business owners, and professionals like doctors, CPAs, and lawyers, all of whom are likely clients of financial planners.

Financial planners have the responsibility to act in the best interest of their client and, if certified by the Certified Financial Planning (CFP) Board, have to adhere to the CFP Board's strict code of ethics (called the standard of professional conduct), which includes competence, professionalism, and diligence [CFP Board, 2015]. To follow this code of ethics, these professionals need to be aware of the inherent problems and warning signs of estate planning fraud and help their clients to avoid it. Failure to do so could potentially result in embarrassment and loss of credibility; disciplinary action by a certification board, by the U.S. Securities and Exchange Commission (SEC), and/or by any state securities regulator; the revocation of the planner's professional certification; financial losses and penalties to the client; and potentially in civil and criminal charges to both the client and the planner if they are part of the fraudulent scheme.

Estate planning fraud can be difficult to detect and prosecute. In addition, fraud schemes are likely to become more complex in the future. Once this type of fraud occurs and the client suffers a financial loss, often the only recourse available to the victim is the court system. Unfortunately, even in cases where fraudsters are caught, unless the victim is part of a class action suit, formal assistance can be hard to come by [Moody, 2008]. Understanding the basics of estate planning fraud and developing an effective approach for protecting against estate planning fraud is therefore imperative.

The purpose of this paper is multifold. It provides a tutorial on the basics of wills and trusts, along with example cases that demonstrate the diverse methods in which fraud can enter into the estate planning arena. This aims to create awareness of the specific types of estate planning fraud and how estate planning can lead to fraudulent situations. It presents practical ways to help financial planners identify a possible fraudulent situation. Lastly, it offers tools that can help prevent this type of fraud from occurring in the first place, and which protect financial planners from professional liability should they be exposed to estate planning fraud.

The rest of the paper is organized as follows. Section I discusses the basics of estate planning, in particular, of wills and trusts, which are the two main instruments used for estate or asset protection planning. In section II, a description of the different types of estate planning fraud is given, along with specific examples

that showcase these types of fraud. In section III, suggestions are given on how to detect this fraud as well as how to avoid professional liability. The paper finishes with a brief summary and conclusion section in section IV.

I. BASICS OF ESTATE PLANNING

With an unprecedented amount of wealth being transferred in the next three to four decades, estate planning will likely be an important topic of discussion for financial planners and their clients. Generally speaking, estate planning offers many benefits, such as protecting assets in the event of disability or long-term care, controlling distribution of wealth, benefiting a charitable organization, and minimizing tax liability upon death. The next paragraphs define the two main vehicles of estate protection, wills and trusts, and sets forth the general requirements for each to be valid.

Overview of Wills

Once properly executed, a will is a legally binding document in which a person declares how his or her property will be distributed upon his or her death [Hunter Dietz et al., 2015]. The person executing a will is referred to as the testator (if male) or a testatrix (if female). The testator appoints a personal representative, for example, a spouse or an adult child, to carry out the testator's directions and settle the decedent's (deceased person's) affairs.

With a will, a person can direct where and to whom their estate will go upon death. If a person dies without a will, the person has died intestate and his or her property is passed according to the state's laws of intestacy. Having a will is important, as distribution under state intestacy laws may or may not be as the deceased wished.

Common Requirements for a Valid Will

In order for a will to be valid, it must strictly comply with the formalities of the statutes of the testator's state of residence [Hunter Dietz et al., 2015]. Statute of Wills requirements vary from state to state, but most states have the same basic requirements for a will to be held valid. Statutes of Wills require that the person making the will have testamentary capacity when the will is made—that is, to be of "sound mind" and of legal age. In most states, the person making the will must be a minimum of eighteen years of age or be an emancipated minor.[1] Generally, a will must be in writing with the testator's signature at the end of the will along with the signatures of two (in some states, three) mentally competent witnesses attesting that the testator signed the document [Hunter Dietz et al., 2015]. The attestation clause is a declaration by the witnesses that the will has been executed

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[1]See, for example, Fla. Stat. §732.501.

in their presence according to the formalities required by the state law. These strict formalities are to help prevent fraud and, if not followed, the will can be declared void by a court.

Overview of Trusts

Like a will, a trust is created and governed by state statutes. The IRS defines a trust as a valid legal arrangement creating a separate legal entity, where the duties, powers, and responsibilities of the parties to this arrangement are determined by state statute and the trust agreement [Internal Revenue Service, 2016g]. To create a trust, legal title to real or personal property is transferred to a trustee (another person, bank, or other entity), who is then charged with the responsibility of using that property for the benefit of a third person or entity (the beneficiary). The property and assets held in a trust are called the trust corpus. The beneficiary has equitable title of the trust corpus with the trustee managing the trust and holding legal title to the trust corpus. The person who conveys the trust property is known as the grantor or settlor. Trusts are often required to have federal employer identification numbers (EINs) and pay taxes.

Common Requirements for a Valid Trust

To be valid, a trust must have a clear purpose and be created for a lawful purpose [Dietz et al., 2015]. To establish a trust, there must be (1) a trustee who holds the legal title to the trust corpus for the benefit of the beneficiaries, (2) beneficiaries to whom the trustee owes equitable duties to in dealing with the trust corpus, and (3) trust property that is held for the beneficiaries by the trustee [*Wisconsin Medical Society, Inc., v. Morgan*, 2010]. The trustee may possess broad powers, including the power to sell, maintain, repair, lease, invest, or mortgage trust assets, so long as such actions are consistent with the trust document and their duties to the beneficiary [Dietz et al., 2015].

II. TYPES OF FRAUD AFFECTING WILLS AND TRUSTS

This section discusses different types of fraud that affect wills and trusts, along with specific case examples.

Types of Fraud Affecting Wills and Trusts

Many different types of fraud exist that involve wills and trusts. One of the main types of estate planning fraud is caused by "undue influence." This can affect both will and trusts. Other types of fraud include tax evasion fraud (through either domestic or foreign trusts) and creditor fraud.

Undue Influence in Wills

Undue influence is a fraud committed against the testator of a will. It occurs when a person is coerced into doing something against his best judgment, and it deprives the testator of his free will, causing him to substitute the will of another for his own. In general terms, undue influence is substituting the will of the perpetrator for that of the testator. Undue influence is characterized by a type of coercion, force, or deception, such that the free agency of the testator is destroyed [Blum, 2015].

As a case in point, in *Farnsworth v. Farnsworth* [1986], a nursing home patient signed a trust which gave all her assets to individuals who were not related to her. The arrangements for the trust documents had been created and negotiated by one of the recipients in the trust. A jury found undue influence on the part of the recipients, placing special emphasis on the patient's mental impairment at the time the trust was formed, the negotiation and drafting measures taken by the recipients, and the presence of the recipients throughout the process. Because of these factors, the court allowed the family of the patient to recover the trust assets. Not all influence amounts to undue influence, however. For instance, one court has held that the influence of children over their parents is legitimate, as long as they do not extend a "positive dictation and control over the mind of the testator" [*Pyle v. Sayers,* 2001].

Undue influence will typically invalidate a will in whole or in part. The key examinations are whether the undue influence affected only limited parts of the will and whether the testator would have intended that the entire will be unsuccessful because of the invalidation of one provision [*Williams and vs. Crickman*, 1980]. For example, if an elderly person executes a will in favor of a beneficiary who misrepresents the contents of the will, or procures a will that is not consistent with the elderly person's wishes, the entire will may be invalidated.

Undue Influence in a Declaration of Trust

To invalidate a declaration of trust, the exerted influence must amount to a mental coercion that destroys the free will of the settlor of the trust [Dietz et al., 2015]. Furthermore, the coercion must have caused the settlor to go against his or her intentions and was not what the settlor would have done in his or her own judgment [Dietz et al., 2015]. To prove that a trust was the product of undue influence, a party must put forth the following evidence: (1) the target of the undue influence was susceptible to influence, (2) another person had the opportunity to exert influence, (3) improper influence was, in fact, exerted, and (4) the trust shows signs of improper influence [*Purcella v. Olive Kathryn Purcella Trust*, 2014].

In *Kelly v. McNeel*, the settlor's stepdaughter and stepdaughter's husband exercised undue influence over the settlor. After eighteen years of virtually no contact between the settlor and the stepdaughter, the stepdaughter moved into the

settlor's home when he was 78-years old and suffering from dementia. This arrangement made the settlor's own son feel uncomfortable living in the home. Previously, the settlor had doted on his son and intended for his son to inherit the settlor's ranch. The settlor's stepdaughter and her husband became more and more involved in the settlor's estate planning activities and, ultimately, the settlor amended his trust and will to disinherit his son and leave the entire estate to his two stepdaughters. Based on the evidence presented, the court invalidated the trust and the will, in which the settlor had named the stepdaughter as one of two beneficiaries in place of his son [*Kelly v. McNeel*, 2011].

Tax Evasion Fraud using Domestic and Foreign Trusts

Much of the wealth that will be transferred or inherited from one generation to the next will be transferred through the use of trusts. According to the IRS, trust return filings are the third most frequently filed tax return, following individual and corporate returns. Domestic trusts filed 3.03 million Form 1041 returns for tax year 2008 and 2.9 million Form 1041 returns for tax year 2009 [Internal Revenue Service, 2016a]. Pursuant to the Internal Revenue Code, all income received by a trust is taxable to the trust, the beneficiary, or the grantor of the trust, whether from foreign or domestic sources [Internal Revenue Service, 2016b]. To reduce taxable income, a trust is allowed to deduct distributions to beneficiaries, with a few modifications. Consequently, trusts can significantly reduce or completely eliminate income by making distributions to other trusts or to other entities as beneficiaries [Internal Revenue Service, 2016b].

While most of these wealth transfers are legitimate, the IRS has detected an increase in abusive trust tax evasion schemes in the past few years. The schemes are being promoted by a "network of promoters and subpromoters" who prepare trust documents and tax returns and allow the taxpayer to utilize foreign bank accounts and corporations. The IRS states that these promoters have charged $5,000 to $70,000 for these packages.

The following case is an example of such a promoter. In *United States v. Whistler* [2005], the court found that the defendant, an experienced certified public accountant, had prepared and filed fraudulent tax returns containing mis-representations in trusts that he established for clients. To reduce his clients' tax liabilities, the defendant backdated documents so clients could claim deductions for years prior to the establishment of the trusts, deducted expenses that never occurred, and misstated ownership of assets.

In sophisticated trust tax schemes, fraudulent expenses and nonexistent deductions are charged against trust income to reduce reportable income. The remaining income is distributed to another trust using rental agreements, fee for service agreements, purchase and sale agreements, and beneficiary distributions. This process is repeated numerous times, creating a layering effect that involves several sham trusts to move and conceal assets of the taxpayer. These abusive trust arrangements attempt to hide the true ownership of assets and income and

disguise the true nature of transactions pertaining to the trust [Internal Revenue Service, 2016b].

Generally, there are two types of schemes, abusive "domestic" schemes and abusive "foreign" schemes.

Abusive domestic schemes include:

- *Equipment or service trusts*, which are used to rent or lease equipment to a business trust at inflated rates, allowing the business trust to decrease its income by claiming deductions for the payments;
- *Business trusts*, which give the appearance that the taxpayer has relinquished ownership and thus control of the income stream;
- *Family residence trusts*, which are used to deduct depreciation and maintenance and operation expenses of the family's residence;
- *Asset protection trusts*, which are used to avoid liabilities for judgments against a taxpayer; and
- *Charitable trusts*, which are used to transfer assets or income to a trust claiming to have a charitable purpose, which then pays for personal, educational, or recreational expenses on behalf of the taxpayer. This reduces the income of the trust.

A domestic scheme that resulted in fraud is illustrated by a case that involved a financial advisor. In 2014, the advisor was sentenced to 24 months in prison in California and ordered to pay $627,000 in restitution to the IRS. Besides touting a variety of tax avoidance schemes to his clients and failing to properly report his income on his tax returns, he claimed an improper charitable deduction to an entity that was one of his own corporations sole (a corporate form that enables religious leaders to hold property and conduct business for the religious entity) [Internal Revenue Service, 2015].

In foreign schemes, trusts are often formed in foreign countries that are known to be tax havens, such as the Bahamas, Belize, Bermuda, the Cook Islands, Panama, and the Cayman Islands. These countries typically impose little or no tax on trusts and provide financial secrecy [Internal Revenue Service, 2016b]. Offshore bank accounts are employed in conjunction with offshore trusts in order to access funds concealed in these entities. The use of debit or credit cards issued from the foreign accounts then enable the taxpayer in the U.S. to withdraw cash and to pay for everyday expenses.

In abusive foreign trust schemes, an asset management company (AMC) is set up in conjunction with a business trust, and these are used together to give the appearance that the taxpayer is not managing his or her business. A series of foreign trusts are then set up to transfer income from the domestic business trusts. This starts a "layering" process. Often, the AMC is the trustee of the first foreign trust created. The second foreign trust receives all the income from the first foreign trust. The trustee of the second foreign trust is either the first foreign trust or a foreign employee of the promoter. An asset protection trust may also be set

up in order to transfer all of the taxpayer's assets, such as the taxpayer's personal residence, to the trust. Although there are several foreign and third-party trustees involved, the taxpayer essentially remains in control of all assets. The promoter "sells" these trusts to the taxpayer by claiming that the taxpayer will be judgment-proof once the taxpayers' assets are transferred to the trust. In reality, however, if the taxpayer resides in the residence and controls the assets, the courts may still seize the assets and require them to be sold to satisfy liabilities and liens [Internal Revenue Service, 2016b]. Another abusive scheme involving foreign trusts in which income is concealed occurs when funds are transferred from foreign trusts to an international business corporation (IBC) via foreign bank accounts. Fraudulent loans are then made from the IBC to the U.S. taxpayer. These funds are not taxed, as loans are generally not taxable [Internal Revenue Service, 2016b].

A case involving offshore trusts, which was prosecuted by the Department of Justice's Tax Division, involved an attorney and a CPA who were indicted for conspiracy to defraud the IRS in Arizona. The attorney assisted clients in setting up three offshore trusts to conceal ownership of businesses, assets, and income by titling their assets in the name of the foreign trusts. By opening domestic bank accounts in the names of the trusts and using employer identification numbers (EINs) received from the IRS for the trusts, the clients' money could not be connected to their names and Social Security numbers. The CPA then allegedly prepared false trust tax returns that fraudulently omitted the clients' income by shifting it to the clients' false foreign tax returns. In order to appear legitimate, the false tax returns were mailed to the IRS from outside the United States. The attorney charged the clients between $10,000 and $30,000 to set up the trust packages, as well as annual maintenance fees. The attorney and the CPA were sentenced to 46 and 18 months in prison, respectively [United States Department of Justice, 2010].

The IRS takes abusive tax trust arrangements very seriously, with violations resulting in civil penalties and/or criminal prosecution. Civil sanctions can include the taxes owed, in addition to a fraud penalty up to 75 percent of the underpayment of tax attributable to the fraud. Criminal convictions may result in fines up to $250,000 and/or up to five years in prison for each offense [Internal Revenue Service, 2016a].

Creditor Fraud

In general, when third parties are creditors of the estate, wills are not an ideal vehicle for fraudsters to commit fraud against third parties. With the use of a will, the decedent's property is distributed upon death through probate proceedings, which are designed in part to alert creditors and allow for collection by the creditors. Trusts are the more common vehicle for committing fraud against creditors in an estate planning context. Trusts may allow for assets of a decedent to pass to heirs outside of probate and therefore to escape the creditor security mechanisms present in probate.

A typical sign of a trust intending to defraud creditors occurs when the trust is created shortly in advance of either a judgment or a collection event. However, these trusts are sometimes not executed with the formalities necessary to create a trust and, as a result, fail for a variety of reasons. Many of these transfers into a trust are void for simply failing from a technical standpoint to create a valid trust [Bogert and Bogert, 1973]. For others, however, a detailed analysis beyond the four corners of the trust instrument is required before a determination can be made whether they are void. For someone unaware of a settlor's creditors, creditor fraud may be difficult to detect. The purpose of the trust document may not be so obviously fraudulent as to arouse suspicion and the document itself would be upheld if not for the intent to defraud creditors. In the investigation of these types of trusts, the focus is whether the nature of the transaction demonstrated "intent to delay or defraud creditors." If that is the case, the trust is deemed void.

Various states have enacted statutes to resolve such questions, and these statutes are typically a version of either the *Uniform Fraudulent Conveyance Act* (1918), or the more recent *Uniform Fraudulent Transfer Act* [1984].[2] The *Uniform Fraudulent Transfer Act*, considers transfers in trust from an insolvent debtor to an antecedent "insider" creditor to be fraudulent against other creditors. As an example, if an ex-spouse, who is in arrears for court-ordered child support, transfers the marital home to his new wife, there is a strong suggestion that the transfer was a fraudulent conveyance [*Rich vs. Rich*, 1991]. The court found that the following factors suggest that it was a "conveyance effectuated with intent to defraud" his creditor, the ex-wife: the transfer to a relative (the new spouse) was to an "insider," the ex-husband remained in possession of the property by continuing to live in the house, the child support action was filed by his ex-wife prior to the transfer, the transfer was of substantially all his assets, he became insolvent shortly after the transfer by being laid off, and the transfer occurred after a substantial debt was incurred through the child-support order [*Rich vs. Rich*, 1991].

III. DETECTING AND PREVENTING FRAUD IN WILLS AND TRUSTS

This section lists red flags that may help the financial planner detect and prevent estate planning fraud. It also presents suggested steps financial planners can take to avoid professional liability.

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[2]The Uniform Fraudulent Conveyance Act ("UFCA") is a model Act adopted in 1918 to codify and bring uniformity to the common law regarding fraudulent conveyances. In 1984, the UFCA was revised and renamed the Uniform Fraudulent Transfer Act (UFTA). In 2014, the name of the UFTA was changed as a result of a series of amendments. The act is now known as the Uniform Voidable Transactions Act (UVTA) (http://www.uniformlaws.org/ActSummary.aspx?title=Fraudulent%20Transfer%20Act%20(1984)). In many states, the UFCA has been replaced with the UFTA (http://www.uniformlaws.org/shared/docs/fraudulent%20transfer/UFTA_Final_1984.pdf). For example, Florida's fraudulent transfer statute may be cited as the "Uniform Fraudulent Transfer Act." (http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0700-0799/0726/Sections/0726.101.html). The UFCA is still in effect in New York and Maryland.

Potential Red Flags Signaling Estate Planning Fraud

Although it is hoped that the financial planner will never encounter fraud in wills and trusts, potential situations or red flags exist that could lead to fraud. While an individual red flag does not necessarily signal trouble, the occurrence of multiple red flags may indicate fraud, and calls for further investigation by the financial planner.

1. Client Is Elderly and/or Has Mental Capacity Issues

The elderly and mentally ill are common targets of estate theft under "undue influence". The financial planner should be suspicious with respect to the possible interference of family members or other beneficiaries, if it is known that a client has been diagnosed with a debilitating mental or memory problem (such as Alzheimer's or dementia) and wishes to have a will or trust written or changed. For example, a financial planner may receive a phone call from a client's child requesting a recommendation for an attorney and stating that the father does not have a will or wants to change his will. This harmless start to a conversation should cause the financial planner to ask questions. Why did the client not call himself? Had this client previously indicated a desire to change his will in any recent direct conversations or communications? This situation may be an indication that the beneficiary is attempting to change the existing will to fraudulently benefit from such a change, thereby circumventing the true wishes of the testator.

2. Death Is Imminent and a Will Is Rewritten

The terminally ill are also typical targets for undue influence, especially as the payoff to the beneficiary is not far off. Whenever there is an attempt to change a client's will or trust when death is imminent, suspicions of fraudulent intent should be raised.

3. A Will Excludes People Who Should Be the Beneficiaries and/or Benefits People or Organizations That Are Not Typically Beneficiaries

Another situation that requires further consideration of possible fraud occurs when the financial planner finds out that relatives, such as spouses or children of their clients, are excluded from a will or trust, or when people or an organization that are not typical beneficiaries are receiving assets through a trust. This is particularly suspicious if the beneficiary is a lawyer, health care worker, real estate agent, neighbor, or anyone the decedent depended on for food, clothing, social interactions, or shelter. The professionals involved should be satisfied that the testator was of sound mind, and that the device(s) incorporates the true wishes of the testator and not those of any possible beneficiaries.

4. Decedent's Estate Does Not Match What Is Written in The Will or Trust

A red flag occurs when the estate that is referenced in a will or trust does not match the actual estate the client owns. For example, a will may transfer assets that the decedent never owned, or large parts of the estate or personal property that are supposed to be transferred are missing. This may indicate that the client does not have testamentary capacity, that the client is under undue influence, or that parts of the estate have been stolen.

5. Clients Are Trying To Evade Taxes

Should a wealthy client express a desire to create a trust to evade taxes, the financial planner should counsel the client on the basics of trust law and suggest that the client seek immediate legal advice. The planner should caution the client that seminars given by professionals that are promoted with slogans such as "Never pay taxes again," "So new your CPA does not even know about it," "Deduct the cost of your personal residence or the cost of your child's education," and "I don't pay any taxes, why should you?" could set the client up for trouble with the tax authorities [Internal Revenue Service, 2016e]. The financial planner should be particularly wary if a client has become involved with complicated multilayered trusts that purport to allow the deduction of expenses which are not legally deductible in order to evade taxes, such as deductions for personal expenses paid by the trust and depreciation deductions for a personal residence and furniture. A red flag is raised when one trust distributes funds to another trust (in particular to a foreign trust), the trustee of which is an AMC, or if a loan is made from a foreign bank account. The financial planner may need to investigate further the legality of such a scheme before making any further recommendations or to refer the client to an attorney specializing in such types of agreement.

6. Heirs Are Trying To Evade Taxes

Should a wealthy client express a desire to significantly change a will or create a trust to evade taxes, it is the duty of the financial planner to alert the client's lawyer and/or CPA to consider the possibility that this desire is being fueled not by the client but by others who are attempting to increase their inheritance. In this situation, it is also important for the client's CPAs to strictly follow all tax and other applicable laws and regulations to avoid future problems for the client or the professionals.

7. Client Asks the Financial Planner for Bogus Actions

The financial planner should avoid performing any bogus actions, such as backdating documents, opening foreign bank accounts on the client's behalf, or forming bogus business entities as a vehicle for committing fraud against third

parties. A client that asks for such actions should be counseled as to the consequences of the actions. If a client continues to ask for such actions, the financial planner should sever professional ties to that person.

8. Questionable Postnuptial Agreements

Should a circumstance arise where a husband or wife seeks the assistance of a financial planner to "convince" their spouse to enter into a postnuptial agreement favoring the party desiring the agreement, the financial planner should be wary of fraudulent intent, advise the parties of the suspicion, and keep a record of this communication.

9. Financially Stressed Client Is a Debtor

If the client is a debtor who is financially distressed and asks the financial planner to help move assets into a trust, the financial planners should recognize this action as a red flag. The financial planner has the duty to advise the clients that this action is considered fraud if the intent of the client is to avoid paying the creditor.

10. Phony "Titles"

While certified financial planners can take continuing education classes focused on handling the affairs of elderly clients, there is no such accredited certification as a "senior needs planner" or a similar title. Financial planners should make their clients aware of this bogus certification, which is often used as a marketing tool to attract the elderly with the end goal of selling unnecessary annuity or insurance products.

11. Bogus Seminars, Often Offering a "Free Lunch"

If a client plans to attend an estate planning seminar, the financial planner may want to warn the client to carefully consider the credentials of the seminar presenter(s). Is the seminar being conducted by an attorney, paralegal, insurance agent, or some other type of salesperson? If the speaker is an insurance agent or salesperson, the client should be careful not to purchase unsuitable annuities or unnecessary insurance policies. If the speaker is an attorney, the client should check the attorney's status with the appropriate state bar association. Some states allow attorneys to become certified in elder law if they are a member in good standing and meet certain requirements. For example, in Florida, an attorney can become a certified elder law attorney after practicing law for a minimum of five years with 40 percent or more of that time devoted to elder law, meeting continuing legal education requirements, and passing an examination.

12. Preprinted Documents and "Trust Mills"

A red flag may occur when the client is asked to sign preprinted documents. The financial planner should advise clients to be extremely cautious when asked to sign documents (e.g. annuities, illegal trust agreements, living trust kits, etc.) or forms that are preprinted with the client's name and other personal information. These documents may not be valid and may lead to identity fraud, especially if clients are asked to provide their Social Security number.

Also, if the financial planner realizes that the client has used or has expressed an interest in using a "trust mill," this may also indicate potential trouble for the client. Trust mills are companies that produce wills, trusts, and other legal documents through the mail, online, or through seminars. The financial planner should advise clients to avoid such trust mills, as in many instances these legal documents are not being prepared by attorneys or tax accountants and may not be prepared in accordance with the laws that exist in the client's state. A client should always be alerted when a legal document is provided by an entity without the client ever seeing an attorney. Having no concern for the client's overall estate plan, these companies will attempt to sell a will or a trust in a one-size-fits-all package. This could have a detrimental effect on a client's estate plan and result in the transfer of property to the wrong heirs, while costing the client a great deal of money. Also, the goal of some of these trust mills is to steal identities or to gather credit information to be used for other fraudulent purposes. Identity theft is a serious threat that affected 7 percent of all U.S. residents over the age of 16 in 2014, 86 percent of whom experienced misuse of their credit card or bank account [Bureau of Justice Statistics, 2015]. This threat should not to be taken lightly and can often be prevented by prudent behavior.

How to Protect Against Professional Liability

All financial planners have the responsibility to act in the best interests of their client and follow the principle of "suitability" when recommending investment products. If certified by the Certified Financial Planning (CFP) Board, financial planners have to adhere to a strict code of ethics (called the standards of professional conduct), which includes competence, professionalism, and diligence [CFP Board, 2015]. If financial planners fail to help their clients avoid estate planning fraud, the consequences could be grave. They range from embarrassment and loss of credibility, to disciplinary action by a certification board and/or by any state or federal securities regulator, and even to potential civil and criminal charges. The following is a list of actions that financial planners can take to protect themselves from liability for possible professional negligence or wrong-doing with regard to estate planning fraud. Since each situation will be unique, the financial planner's decision as to how to proceed will vary depending on the circumstances.

- *Engagement letter:* The financial planner should include a specific statement in the engagement letter that the financial planning services will or will not include estate planning assistance, and, if so, to what extent.
- *Defective referrals*: The financial planner should avoid any defective referrals, which are referrals to other professionals (such as lawyers, insurance agents, and CPAs) without the formal scrutiny of competency. Before referring any professional, the financial planner should conduct a background check and a search for any disciplinary actions by regulating authorities. For example, in the state of Florida, disciplinary actions for CPAs, attorneys, and insurance agents can be found at www.AICPA.org, www.flabar.org, and www.myfloridacfo.com, respectively. A financial planner should only endorse estate planning seminars given by an attorney who is reputable in the community and has the required expertise and competency.
- *Questionable qualifications of professionals:* To make sure that the client receives the best possible representation, the financial planner should also warn the client not to choose professionals that handle their estate planning needs, such as accountants and lawyers, based on looks, their golf game, or affiliation in the same clubs or religious organizations. Unfortunately, this behavior is very prevalent [Moody, 2008].
- *Financial planner as the "quarterback":* Ideally, the financial planner should be considered the "quarterback" of the professional financial team and oversee any major activities and changes. In this role, the financial planner has close contact with the professional team and has access to the team members' contact information, and can therefore react quickly if any suspicious activity is observed. This quick action in any suspicious situation may prevent the financial planner from being charged with negligence and can possibly prevent any further fraudulent activity from proceeding.
- *Collect initial information:* If a client questionnaire is used by a financial planner, the financial planner should specifically inquire if the client has made or intends to make any estate planning changes, so that the financial planner can better serve the needs of the client. This questionnaire should also include questions regarding the debts (how much and when they are due) and any possible creditors of the client (who are they and what their relation to the client is).
- *Consultation with the client and collection of information:* Generally, if fraud in an estate planning situation is suspected, the financial planner may need to obtain more evidence and discuss the matter with the client before deciding how to proceed. If there is any suspicion of undue influence by others regarding estate plans, the financial planner should consult with his/her clients privately to find out additional information. If the financial planner suspects any sort of fraud, it is important that any necessary additional information is collected and carefully documented. The details of any meetings with clients and any advice given for future

reference should be put in writing, signed by the client, and kept for future reference.

- *Consultation with other parties*: If the financial planner suspects that the client is being unduly influenced or coerced, or is the victim of fraud, the financial planner should consult with family members and/or law enforcement authorities.
- *Reporting of fraudulent activity*: Any estate planning scheme promoters and any schemes that involve tax evasion that are identified by a financial planner should immediately be reported to the IRS's Abusive Schemes Lead Development Center[3] [Internal Revenue Service 4 and 7, 2015] or to an IRS representative via the IRS hotline.[4] Another place to report fraud in this area is to file a complaint through a state's attorney general's office website.
- *Continuing education of the financial planner:* In order to recognize estate planning fraud, it is imperative for the financial planner to not only understand the basics of this type of fraud but to also keep up with recent changes in estate planning legislation and to learn about any new types of schemes that are being investigated. For example, in 2016 the Treasury Department and the IRS proposed major changes to Section 2704 of the Internal Revenue Code (IRC) relating to the handling of valuation discounts.[5] These changes, if they had been adopted, would have had major implications for the estate planning needs of clients. New fraud schemes with regards to abusive tax schemes are exposed on the IRS.gov (www.IRS.gov) website, while recent estate theft schemes can be found on the U.S. Justice Department's website (www.justice.gov).

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[3]If tax evasion is suspected, the IRS requires a *Referral Form 3949-A* to be filled out and mailed to: Internal Revenue Service Lead Development Center, Stop MS5040, 24000 Avila Road, Laguna Niguel, CA 92677-3405 [Internal Revenue Service, 2016f]. The form to report abusive tax promoters is Form 14242 [https://www.irs.gov/pub/irs-df/f14242.pdf].

[4]The IRS hotline for reporting tax schemes is 1-800-829-0433.

[5]In 2016, the Treasury Department and the IRS were proposing changes to Section 2704 of the IRC relating to valuation discounts to make the avoidance of taxes in a transfer of assets more difficult. Public hearings on this subject started in December 2016. After the 2016 presidential elections and consequent changes in the White House, the new Treasury Department authorities announced on October 4th, 2017 that they would NOT change section 2704 of the IRC [Schreiber, 2017]. While no changes were made relating to valuation discounts at that time, financial planners should still be aware that this possible change may occur in the future. This development sheds light on how closely tied in the law is with politics and how quickly changes can happen. Valuation discounts are frequently used to avoid taxes in transfers of assets. In a transfer of assets, transfer taxes (gift or estate taxes) have to be paid at a current estate tax rate of 40% (after an initial exemption). The owner of the assets (for example, a closely held family business or even marketable securities) can avoid some of these taxes by transferring the assets into an entity that is not publicly traded, such as a family limited liability company (FLLC) or family limited partnership (FLP). The owner then gives ownership shares of that entity to family members or a charity. The fair market value (FMV) of the assets drops and can be valued at a discount because control of the entity is dispersed and assets would be harder to sell (i.e. they are less liquid and less marketable). The combined discounts in this sort of transaction generally range from 30% to 50% of the value of the assets.

- *Education of the public:* Last but not least, educating the public about estate planning fraud is another important tool for the detection and prevention of estate planning fraud. As the burden of educating the client should not solely lie with the financial planner alone, the creation of an educational estate planning fraud booklet by either a certification body (like the CFP board) or a regulatory entity (like the Treasury Department) is suggested. This booklet would resemble the settlement cost booklet that was created by the Consumer Finance Protection Bureau (CFPB), which has to be given by a lending organization to a borrower during the mortgage application process. This estate planning fraud informational booklet would be given to a client by any professional dealing with the client's finances and/or estate, and could include such information as the basics of wills and trust, the differences between the types of activities involving trusts that lawfully avoid taxes and those that illegally evade taxes, the red flags that may signal estate planning fraud, the responsibilities of the different professional financial team members (attorneys, CPAs, financial advisors, insurance agents, and financial planners), and where the client can report suspected fraudulent activity.

IV. SUMMARY AND CONCLUSION

Many types of fraudulent activities associated with estate planning and wealth preservation exist. These activities are often difficult to detect and are expected to be on the rise for years to come. The financial planner can be instrumental in assisting clients to avoid estate planning fraud and similar scams. This analysis highlighted the different types of estate planning fraud to help financial planners identify when a client might be in a troublesome situation. It also presented corresponding red flags, along with recommended actions for financial planners on how to avoid professional liability. Educating financial planners about estate planning fraud is essential in the fight against this type of fraud. Collecting, keeping, and communicating information appropriately are also key to detecting and preventing this type of fraud. In addition, as financial planners have the responsibility to act in the best interest of their clients and essentially take on the role of the "quarterback" with regards to their client's financial affairs, planners need to not only be aware of the different types of estate planning fraud schemes but also to have a feedback loop with the other professionals on the client's financial team in order to be able to react swiftly to any suspicious activity and protect their clients from this type of fraud. A recommendation is made to improve the awareness of estate planning fraud among the members of the public. This entails the creation of an estate planning fraud informational booklet by a regulating body, similar to the mortgage settlement cost booklet created by the CFPB. In conclusion, education and prevention lie at the heart of the fight against

these types of frauds: stay informed, know the warning signs, and act swiftly should any suspicion occur.

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Using Trading Platforms for Simulated Trading in the Financial Derivatives Course

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The use of computer simulation in business education has become so widespread that it now considered a standard educational tool. There are now many different business management simulations available, which target different aspects of business management at various levels of student preparation and background. Despite this, not all areas of instruction have available focused specialty simulations which provided real-world level of detail and complexity. Financial derivatives trading has until recently been one of these areas lacking simulations. However, the recent trend of financial services firms offering up their trading platforms in simulation format has significantly changed the situation. This paper discusses this development and the use of one such trading-platform-based simulation in a senior-level undergraduate financial derivatives course.

Keywords: Simulations, Options, Futures
Disciplines of Interest: Financial Derivatives, Investments

INTRODUCTION

Using computer-based simulations in the classroom has become common as the level of computer technology has advanced and the number of simulation software packages has increased. In teaching investment management, the use of computer-based simulated trading has become the norm, at least in capstone-level courses.

Recently, many brokerage firms have begun to make access to their actual trading platforms available to prospective clients. As a recruitment tool, the individual is given access to the full capabilities of the firm's trading platform and is allowed to trade "paper money." While most such offers are available to individuals, a limited number of firms have recognized the potential benefits of offering group simulated trading opportunities to those in academic settings.

The key additional required attribute is the ability to create and manage groups of simulated traders for specific periods, with specific constraints as to types of securities traded, types of trades allowed, notional investment balances, and so forth. With the addition of these group creation and management features, a financial firm's

trial run trading program becomes a very realistic basis for formatted simulated trading exercises in an organized course setting.

However, not all financial firms understand the potential benefits of having their platforms used by prospective future professional clients while these prospects are still engaged in preparatory coursework. The author's experience includes interactions with representatives of firms that jealously guarded access to their platform and with those who didn't understand the need for an educator to be able to coordinate and assess student trading.

Fortunately, a subset of these firms sees value in having a connection to education. These firms have been willing to add features which allow the effective use of their trading platforms for simulated trading within the setting of a formal college course.

This paper presents the difficulties encountered by the author in attempting to identify an appropriate trading platform to use for simulated trading in a financial derivatives course. The advantages and disadvantage of certain platforms are discussed. Examples of the design and management of multiple course-module-specific simulated trading drills is then presented. Suggestions are then made concerning how others might incorporate the technology into their own courses.

INSTRUCTIONAL OBJECTIVE AND SEARCH FOR TRADING PLATFORM

The author's interest in derivatives trading simulation arose upon being reassigned to teach the senior-level introductory financial derivatives course after a long absence. A simulation was sought that would allow students to engage in simulated trading in futures, options, and futures options on a wide variety of underlying assets. While some of the older stock market trading simulations offered futures or options trading, the range of underlying assets was quite limited. Thus, the simulations widely used in simulated stock trading would not allow for the simulated trading of the wide range of derivatives and underlying asset combinations discussed in the course.

While searching for trading simulations, the author became aware of the CME Group's Trading Challenge, which pits teams from schools around the world against each other in simulated futures contract trading. CME's technology partner for these simulated trading contests is CQG, a provider of financial market trading technology to institutional and higher-level individual traders. The CQG platform is an extremely complex and well-developed trading platform.

Unfortunately, CQG up until the time of this writing has jealously guarded access to this trading platform software. In recent CME Trading Challenge simulated trading contests, CQG has essentially made the platform available to educators and student participants only around the time of the Challenge activities itself, with only a short period of learning and practice time prior to the Challenge. In

addition, CQG removes access to the trading platform shortly after the Challenge stages are completed.

CQG's platform is certainly quite advanced, and one assumes that the firm has business condition analysis and revenue maximization clearly in mind in the maintenance of this policy. However, this policy makes CQG's platform a very poor choice for the academic, since ongoing use of the platform is not possible. In order to maintain a sharp and ready familiarity with the platform, the academic would need to use the platform herself or himself (at full cost) throughout the year in order to be prepared to help students quickly ramp up for the annual CME Challenge program.

Then, too, since the CQG platform is not available to students throughout the semester during which the CME Challenge is held, even students who participated in the CME Challenge would be forced to change trading platforms for the remainder of the course if simulated trading were used for the standard full-length semester course.

The author's failure to convince the CQG group of the need for extended access led to the search for an alternative real-world quality trading platform for use in the course. Typical online searches proved to be of little use at first, since available information tended to be focused on attracting new trading customers— not on attracting academics to use the trading platforms for classroom purposes.

When contacted by phone, multiple providers affirmed that students could certainly open practice trading accounts. However, none of those initially contacted had any provisions for group formation, coordination, and management.

Then, as chance would have it, the author encountered a fellow finance faculty member who recommended TD Ameritrade, as this firm had an interest in coordinating with academic programs.

TD Ameritrade's academic outreach programs arose out of an employee's disappointing classroom experience with a traditional trading simulation. The employee, Mary Ryan, was completing a finance degree and found herself using her company's Think or Swim trading platform to overcome the disadvantage arising from the time delay in the quotes of the unnamed simulation.

Thereafter, TD Ameritrade began to develop an academic outreach program built upon free academic access to the company's Think or Swim trading platform, which includes access to real-time quotes on a wide variety of securities, including futures, options, and futures options. From promotional materials and public presentations, it seems clear that the company has adopted a model whereby its desire to train the next generation of investors while engendering product loyalty justifies granting free academic access and bearing the cost of supporting the related academic customer service. This stands in stark contrast to the example of the CQG group discussed earlier.

Before moving on to the implementation of a course model incorporating the Think or Swim platform, it is appropriate to note that at least one other provider,

Trade Station, has begun to offer a similar program. However, the author does not have direct experience using that product in the classroom.

USING TRADING-PLATFORM-BASED SIMULATED TRADING IN THE FINANCIAL DERIVATIVES COURSE

A quick review of the available textbooks for the undergraduate financial derivatives course will demonstrate two distinct approaches to introducing the various types of derivatives to the students. One approach begins with futures contracts and then progresses to options, while the other begins with options and then presents futures contracts.

The author prefers the approach which approaches options contracts as economically equivalent to futures contracts with the added feature of a "right to walk away." Therefore, the author has chosen to use a textbook which presents futures contracts before options contracts. This basic course design then determines the way in which the simulated trading exercises are used in the course. At present, the author is using the *Fundamentals* version of the widely used text by John Hull.

With the academic-use coordinating account, the professor can establish any number of trading drills that focus on different derivative types or different trading approaches. Students can also be organized into trading groups or trade as individuals.

The author chose a mixture of group and individual trading exercises for the course. In the recent course offering, four separate trading session variations were used.

Because the trades and results for each trader were available to all, it was possible to discuss the various strategies and activity levels evidenced by different members of the class. This enabled multiple discussions about the wide variation in outcomes that can result from both hyperactive and less active trading.

Trading Drill One

The first trading drill was an individual trading exercise intended to familiarize the students with both the trading platform and with basic technical analysis techniques. This first session lasted one week, with students divided into teams. During this trading exercise, students were limited to trading only futures contracts.

As part of the course lectures ongoing during this period, basic presentation of candlestick chart patterns and rudimentary strategies were made. Students were encouraged to attempt to trade using strategies implied by the traditional interpretation of candlestick charts. During this period, the students were quizzed on the basics of this charting approach.

Students were required to make a minimum number of trades. Although some students made only the minimum number of trades, others became enthusiastic traders and engaged in a large number of trades. Because the trade history recorded the time of trades, it was clear that some students had become deeply involved in the

experience, with trades occurring very late at night and in the wee morning hours for those contracts that have near continuous trading.

Student outcomes from the first drill were quite widely distributed, ranging from a gain of 14.5 percent to a loss of 16.46 percent on a notional starting account balance of $100,000. Because the trading activities of the other groups were accessible, students were able to assess the relative success of active and inactive traders.

Trading Drill Two

The second trading drill of the semester was a group exercise emphasizing longer term position trading. In this simulated trading exercise, students were formed into groups of three and asked to implement a trading strategy driven by the economic and political conditions in the market for a given commodity. Trading was again limited to futures contracts.

While the first trading drill allowed very short-term trading, the second trading drill required each student group to disclose their trading hypothesis in advance and then hold a position for a minimum of four days. This trading drill lasted for approximately two weeks.

After the drill had ended, each group made a presentation to the class explaining their analysis, trades, and results. Many of the groups waited until nearly the last hour to attain the minimum holding period, so the objective of having a longer-term trading window was somewhat muted. It would likely improve the benefit of this particular type of drill if the minimum holding period was increased. The performance on this trading drill ranged from a gain of 3.71 percent to a loss of 61.59 percent on a notional beginning account balance of $100,000.

Trading Drill Three

The third trading drill was an individual student exercise in which only individual options could be traded. This simulated trading exercise lasted one week. Because the students had only been exposed to the basic option payoffs at this point, most student trades were based entirely on straightforward directional expectations.

The outcomes in this case ranged from a gain of 3.08 percent to a loss of 3.44 percent on a notional starting balance of $500,000. Some students failed to participate at all in this trading drill, which may have been due in part to the timing of the exercise.

Trading Drill Four

The fourth trading drill was limited to trades involving combinations and spreads. These are option trading strategies whose payoffs depend on the interaction of multiple short and long positions in related options contracts. This trading drill proved to be a bit intimidating to some students. Performance on this drill ranged from a gain of 9.26 percent to a loss of 88.3 percent on the starting notional balance of $1,000,000.

SUMMARY AND RECOMMENDATIONS

It should be noted that the simulation constraints are limited by the regulatory requirements associated with the real-world trading conducted by the firm's real-world trading clients. This proved a complication when it became apparent that a particular trading drill designed to facilitate option trading strategies would need to be modified because options and futures options have a different regulatory structure. Real-world clients would not necessarily be qualified to trade both, so the TD Ameritrade support staff had to retroactively modify each student trader's account to mimic the addition of real-world trading authority for futures options. The instructor is urged to consider the practical regulatory-based definitions instead of the theoretical ones.

In the semester reported upon in this paper, the use of the Think or Swim trading platform was delayed for several weeks into the semester. The tradeoff is between having a longer portion of the semester available for individual trading exercises and having the students wait until they have a more complete foundation in the valuation of the derivatives securities before trade begins. There is a distinct risk that beginning trading simulations before an adequate foundation is given may foster a "casino" perspective towards trading in some of the students.

Were the simulation exercises to have been started earlier in the semester, it would have been possible to add a fifth trading drill which went beyond expectations basis for options trades. This fifth trading drill would be conducted late in the semester, after the students had been more fully exposed to option-pricing models. Thus, they could have explored more arcane trading strategies that depend upon the "Greeks" option, which describes option pricing dynamics.

Finally, this paper reports on an approach which utilizes multiple distinct trading exercises designed to focus individually on a particular type of trading and type of security, as that topic is covered in the course. An alternative would be to run a single semester-long simulation with different emphases at different points during the semester. The individual instructor should consider the merits of these two distinct approaches relative to his or her individual teaching style.

People, Profit, and Promotion: When Health Care is Business

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This case describes an ethical dilemma involving the marketing director, Jenny Kingsley, of an assisted living community located in Reno, Nevada. The ethical decisions faced by the marketing director involve the turnover or move-out policies promoted by Sunset Point assisted living community. The case reviews the many health conditions which state's often permit or trigger mandatory move-outs of residences. The case takes the reader through the use and often abuse of these move-out policies (and their associated compensation systems) and the decisions directors of these facilities must frequently navigate. The case provides detailed background information on the assisted living industry, current practices, laws and ethical frameworks. At the end of the narrative, the reader is asked to formulate ethically and legally sound recommendations. The suggested audiences for this case study are upper level undergraduate students and graduate students.

Keywords: Assisted Living, Ethics, Law, Management, HR, Regulation

Disciplines of Interest: Ethics, Strategy, Marketing Management, Case Study

INTRODUCTION

Jenny Kingsley plopped into her chair after giving her fourth informational tour of the day. For a Tuesday, the day had been extraordinarily busy, with families walking in, gathering information, and wanting to view Sunset Point, the assisted living community for which Jenny served as marketing director. Like most

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months, Sunset Point's occupancy was full at 100 percent. Therefore, it was critical that Jenny kept meticulous records about the families interested in the community who potentially wanted to reserve a spot on the waitlist. She had begun to enter the notes she had taken on the structured intake forms provided by the corporate office into the customer relationship management (CRM) system when her boss, Brynn Fuhrman, the executive director, burst into her office. She handed Jenny three folders.

"You've been busy today. This is great," Brynn said, beaming. Jenny forced a smile, but always struggled to balance a totally full building with the more hard-sales tactics prescribed by the corporate office. Most people who had really liked the building for themselves or a family member were not content to remain on a long waitlist without seeking another option. Many would be forced into one of these other options well before Jenny had an opening by a health event that mandated that they could no longer live independently.

"I want you to take a look at these," Brynn continued, referring to the three folders. Jenny's stomach turned. Whenever the building was at 100 percent occupancy, she knew these folders would be those of current residents that Brynn considered to be candidates for move-out. Although Jenny's primary role was technically marketing, she also knew the state admissions requirements well from leading and overseeing the move-in process. There were many health conditions for which the state required Sunset Point to facilitate a move-out. However, the state also gave an assisted living community executive director the discretion to dismiss a resident for any reason.

Jenny greatly disliked the move-out process, as it was often upsetting and unsettling for both the resident and her/his family. Brynn failed to understand Jenny's trepidation, since she only received bonuses for new move-ins. In fact, Enviva, the corporate office, structured their compensation system for both the executive directors and marketing directors of a community so that bonuses were only paid for new move-ins. This incentive structure was designed to encourage managers at low-occupancy buildings to work hard to fill apartments. Enviva was based in Costa Mesa, California, and many of the California properties were in highly saturated markets with extremely low occupancies. Of course, this incentive structure did not translate as well to places like Sunset Point that were almost always full. Although sometimes a resident truly needed greater care than Sunset Point could provide, Jenny thought that Brynn occasionally created turnover in response to Enviva's bonus system.

As Brynn hurried out to take a phone call, Jenny put the folders aside and went back to her notes. She thought about how different the marketing for an assisted living community was than what she had envisioned for herself as an undergraduate marketing major. Her curriculum had been heavily based in business ethics, with relevant content provided in nearly every course she took. Yet she still felt unprepared to manage the current situation she found herself in.

Company Profile and Background

Enviva Assisted Living is a publicly-traded company that owns 22 assisted living communities across California, including three in Nevada (two in Las Vegas and one in Reno). The company was founded in 1996 by John C. Escherle in Costa Mesa, located in Orange County, California. When Escherle's mother, Betty, became unable to live independently after a serious fall, he began looking for housing and care options for her. Assisted living was just beginning to gain the traction it now enjoys, and at that time, Escherle found no options for her that he thought were suitable. With a background in hospital management, he started his own assisted living community, called The Grove at Orange Oaks. Over the years, he acquired properties he believed to be "worthy of his mother" across California and, eventually, the corporate entity Enviva was born to manage the various properties. Enviva eventually went public and quickly grew to a multimillion dollar company. In spite of the rapid growth, the company consistently embodied Escherle's original founding premise of proving housing and care that was "worthy of Mom." In fact, this became a mantra for important corporate decisions, and a large portrait of Betty Escherle still hangs in the Costa Mesa headquarters.

In 2003, following Escherle's retirement, Toni McManus became CEO. McManus also deeply embodied the founder's philosophy of making communities worthy of one's mother, but she also sought a more aggressive growth strategy. It was under her leadership that the company acquired seven new northern California properties, one in Sacramento, and all three of the Nevada properties. McManus was a very hands-on CEO, regularly visiting her communities and engaging executive directors and marketing directors in frequent trainings and sharing of best practices.

Assisted Living

Assisted living is part of the broader category of retirement community living. Although the exact services offered vary from state to state in accordance with regulations, assisted living typically bridges independent living in one's own home and skilled nursing care. The ability to prolong one's independence and make a more gradual transition to levels of greater assistance is much of the appeal of this industry to seniors and their families. Indeed, the assisted living industry is healthy and growing, largely due to its philosophy of respect for the autonomy, choice, and competence of the individual through the aging process. Fig. 1 provides an example of how seniors might progress through these various care options as they age.

The assisted living industry provides seniors with apartment-style residences and also offers a limited portfolio of personal care services for elderly persons who are mostly able to care for themselves. As people age and require some capacity of extra assistance, known in the industry as activities of daily living (ADL), they may begin receiving various forms of extra help as needed. Assisted living communities were designed with the theme of "aging in place," allowing people to grow old more

Figure 1. Senior Living Options and Sample Progression/Transitions
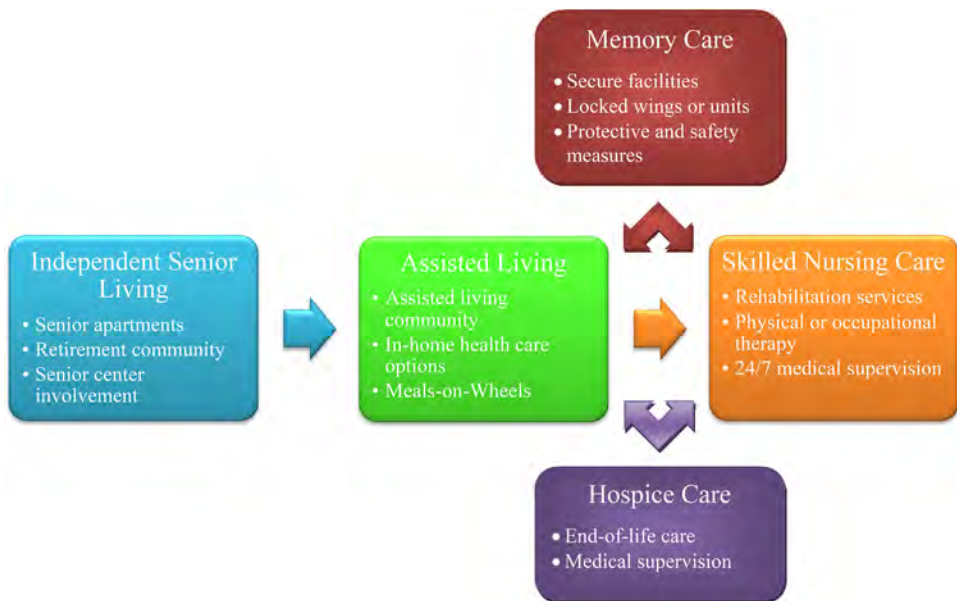
comfortably and make the transition to greater levels of care more gradually and on their own terms. Extra assistance with ADL may include medication management, assistance with bathing, dressing and grooming, travel to and from medical appointments, housekeeping services, and others. Assisted living facilities have full-time nursing staff and supervision, but differ in many ways from skilled nursing facilities in the nature and scope of care provided.

Importantly, through their licensure terms, most states limit the forms of care that may be provided by an assisted living facility. Should a person require care beyond that which is offered by assisted living, he or she would require a move to a more skilled nursing or memory care facility. For example, many states necessitate that a person be able to transfer from bed to wheelchair with limited assistance as a minimum requirement for assisted living. If this cannot be done, he or she would be eligible for a skilled nursing facility. Likewise, given the independent nature of assisted living communities, many do not have secure entry/exit measures in place like those found in specialized memory care facilities. This trend, according to the Alzheimer's Association, is changing, however, as an "estimated 42 percent of assisted living residents have some form of dementia." Nonetheless, in many states when a person's dementia progresses to a point that it poses a safety risk, he or she also may be found inappropriate for assisted living and advised to move to a dedicated memory care facility. Whether a person requires care beyond the scope of the assisted living facility is typically determined by the

Table 1. Common Activities of Daily Living (ADL) and Usage[a]

Activities of Daily Living	Residents Needing Help (%)
Medication management	81
Bathing	72
Dressing	52
Toileting	36
Transferring	25
Eating	22

[a]Source: National Center for Assisted Living (www.ahcancal.org).

executive director in conjunction with a registered nurse, any other medical caregivers, and the family.

One exception to these requirements for advanced stage care involves hospice care. Again, state regulations vary, but typically when hospice has been prescribed by a medical team it has been determined that a person's condition is chronic and in the end stages (i.e. a life expectation of six months or less). A hospice team would work in conjunction with assisted living staff to allow the resident to "die in place" and to be as comfortable as possible in his or her remaining days. Thus, he or she may stay in the assisted living facility, but is considered to be under the care of the hospice team for regulatory purposes. For this reason, hospice must be prescribed by a qualified medical professional.

Typical Resident Profile

Approximately 750,000 people nationwide call an assisted living community home. According to a study by the American Association of Homes and Services for the Aging, the typical assisted living resident is about "87 years old and relies on two or three of the ADL" as noted in Table 1. Most residents are mobile, and statistically speaking, most are female (74 percent). The typical resident also suffers from two or three of the chronic medical conditions listed in Table 2.

According to the National Center for Assisted Living (NCAL), most people moved into assisted living from their own home or apartment (70 percent). The remaining 30 percent of the population is comprised of people who came from a nursing or rehabilitation facility (9 percent), a retirement community (9 percent), a family residence, such as living with an adult child (7 percent), or another assisted living community or group home (5 percent). The median length of stay in assisted living is close to two years. Most residents eventually move on to more skilled care (59 percent), or pass away within the community (33 percent). The remaining percentage will return home or move to another similar location.

The NCAL also notes that residents place high priority on their rights of 1) privacy, 2) freedom of religion, 3) to be treated with respect and dignity, 4) to control their personal finances, possessions, and their health care plan, and finally

Table 2. Top 10 Chronic Conditions Experience by Assisted Living Residents[a]

Health Condition	Residents Suffering from Condition (%)
High blood pressure	57
Alzheimer's/other dementias	42
Heart Disease	34
Depression	28
Arthritis	27
Osteoporosis	21
Diabetes	17
COPD and related conditions	15%
Cancer	11%
Stroke	11%

[a]Source: National Center for Assisted Living (www.ahcancal.org).

5) to interact freely with others outside and within the community, including 6) the ability to organize resident groups and councils.

Industry Outlook

An aging population that makes up an increasingly greater percentage of the United States demographic implies heightened demand for assisted living and other long-term care options for the elderly. Indeed, according to the National Council on Aging, "the population aged 65 and older has increased at an annual rate of 2.5 percent to 44 million Americans, and the population aged 85 and older is expected to grow at about three times the national population growth rate, due to medical advancements in prolonging life" (NCOA, 2014). Growth in the population of adults aged 65 and older will strengthen industry demand. Moreover, an improving housing market (approximately 80 percent of the elderly must first sell a house to finance a move to assisted living) will release pent-up industry demand. This, coupled with other economic improvements, the growing aging population, and increased supplements from healthcare reform, led industry analysts to predict an industry growth rate above 3 percent per year to total $53.9 billion in revenues. Longer term (5+ year projections), analysts forecast revenue of $69.8 billion, representing a growth rate of 5.3 percent.

Competition in the assisted living industry is considered high. The "industry is characterized as having low entry barriers and low degrees of technological change," Diment (2014b). Furthermore, the industry has experienced a number of mergers and acquisitions, as in this mature phase of the life cycle, industry players compete fiercely for market share. The regulatory environment also plays a focal role in this industry. Strict regulations affect how Medicare and Medicaid can reimburse assisted living providers. Indeed, these government programs tend to

reimburse at a much lower rate for assisted living services than for skilled nursing facility services. Therefore, much of the population in assisted living communities possesses greater-average-private wealth, and finances their residency with the sale of a home, retirement funds, or other family private wealth.

Independent Senior Living

Senior living options have become more varied and accessible in response to the demands of an aging population. In 'the initial stages of aging, many people find senior apartment living to be a suitable option. These apartments often have minimum age requirements and boast more shared and communal space than traditional apartments', (ALFA, 2014). This type of living arrangement offers no medical or ADL care, and residents provide their own food and housekeeping. Alternatively, some independent living communities extend meal, transportation, and activity services to residents, but, like senior apartments, do not provide any ADL or medical services. Independent living options such as these do not represent a strong competitive threat to assisted living, as they are often lifestyle moves rather than medically necessitated moves. Moves to independent living situations are even more contingent upon a strong housing market and the ability for one to sell his/her current home.

In-Home Health Care

For many seniors, the desire to stay in their home can outweigh other considerations. Likewise, the inability to sell a home in order to finance assisted living or independent senior living can constrain people's options. In-home health care or home nursing options can become viable ways for seniors to receive a range of medical care, assistance with ADL, and even meals and transportation. The previously stagnant housing market saw increased use of in-home health care options with proportional declines in new assisted living admissions. Even with the return to a strong housing market, in-home health options that truly allow one to "age in place" are strong and enduring competitive threats to assisted living.

Memory Care

Much of the growth in the assisted living category has been focused in the area of dementia care or, more specifically, Alzheimer's disease care. Known more generally as "memory care" (Feldman, 2012), many assisted living facilities and skilled nursing facilities have scrambled to increase residential space for those needing memory care assistance. State and federal regulations imply separate certification and licensing for memory care, often requiring enhanced security and protective measures for these residents, who can be prone to wandering outside community boundaries and who sometimes pose security threats to themselves and others. Assisted living facilities that do not have dedicated memory care

wings or divisions are required by state and federal law to transfer patients with dementia whose care exceeds the boundaries of their services provided. Many assisted living communities added these new memory care-certified facilities because of industry demand, and also to lessen the need to transfer residents who want to age in place in a single facility. Not surprisingly, such transfers can be traumatic to aging residents and often represent a hardship for both the elderly resident and their families.

Skilled Nursing

Aside from memory care, when an assisted living resident requires greater medical care than what the community can provide through their ADL menu, he or she typically is advised to seek full-time skilled nursing care. An example of this progression might be when a person can no longer get out of bed with some assistance. Other reasons for the progression might include an injury that requires rehabilitation or an advanced health condition that requires constant medical supervision. Skilled nursing facilities provide living quarters, as well as full-time nursing, medical supervision, rehabilitation, and other therapeutic services. The skilled nursing home population is typically comprised of residents who do not need full-time hospitalization, but need greater levels of care than what assisted living or more independent senior living options provide. Likewise, "skilled nursing facilities are heavily regulated and have traditionally had more formalized reimbursement agreements with Medicare and Medicaid," (Diment, 2014). It follows that reductions in these programs pose a significant threat to this industry. In addition, the growth of in-home nursing and assisted living options have cut into the profits of skilled nursing by providing seniors with a greater range of options. In response, many skilled nursing businesses have broadened their portfolio of services. Many have begun to cater to a more independent population. Some have even created hybrid forms of senior living within the scope of a single campus. For example, these hybrid communities may have independent senior apartments, assisted living, and skilled nursing all on one site that allows a person to age in place even as they require increasingly sophisticated medical care programs.

Community Profile: Sunset Point

Sunset Point is located in Reno, Nevada, situated in the northwest part of the state near Lake Tahoe. The city of Reno has a population of 225,221, but the combined population of the Reno-Sparks-Truckee Valley approaches 500,000. Its mild climate and reasonable cost of living, combined with its close proximity to more populous areas of California (e.g. Sacramento and the San Francisco Bay Area), make it a popular retirement destination.

Sunset Point has 74 units, comprised of 40 studio apartments and 34 one-bedroom apartments. The one-bedroom units can accommodate a double occupancy to allow married couples the ability to stay together in their own apartment.

Table 3. Sunset Point Rate Sheet for 2014

Option or Service	Rate
Accommodation Options	
Studio Apartment	$3,300/month
One-bedroom apartment	$3,750/month
One-bedroom apartment with two occupants	$4,000/month
Levels of Care Provisions	
Level 1 (includes dispensing and storage of medications)	$500/month
Level 2 (includes meds and assistance with dressing and grooming)	$750/month
Level 3 (includes meds an all hygiene-related care)	$1,000/month
Level 4 (includes all of the above, meal delivery, and assistance)	$1,250/month
Other	
One-time administration fee for paperwork, processing, and admitting medical examination	$1,500

The basic rates for the rooms are featured in Table 3, as are the fees for the levels of care available. Sunset Point is one of four assisted living communities in the city. Reno has an expanding aging population and because of the limited number of assisted living options, Sunset Point is almost always near capacity, with a healthy waiting list of prospective residents.

As with all assisted living facilities, the care provided at Sunset Point is regulated by the State of Nevada. Residents who can no longer transfer from bed to wheelchair with limited help from nursing staff are considered to be beyond assisted living care, and by law must go to a skilled nursing facility. Residents with dementia who require care in a supervised and locked facility also require a different level of care. Sunset Point is not a secure facility, which would put severe dementia patients at risk. The full list of move-in/move-out requirements as mandated by the state [National Center for Assisted Living] is as follows:

"A resident must be at least 18 years of age. Facilities may not admit or retain persons who:

1) Are bedfast;
2) Require chemical or physical restraints;
3) Require confinement in locked quarters;
4) Require skilled nursing or other medical supervision on a 24-hour basis;
5) Require gastronomy care;
6) Suffer from a staphylococcus infection or other serious infection; or
7) Suffer from any other serious medical condition."

In addition, "there are other medical conditions that are specified in the regulations that, unless a resident is able to self-manage the condition, require the

resident move out of the facility. A resident may be discharged without his/her approval if:

1) He/she fail to pay his bill within five days after it is due;
2) He/she fails to comply with the rules or policies of the facility; or
3) The administrator of the facility or the Bureau determines that the facility is unable to provide the necessary care for the resident" [National Center for Assisted Living, 2018].

Costs to operate Sunset Point are significant. In addition to a large staff of caregivers, including two rotating certified nurse assistants (CNAs), there is a large kitchen staff, a custodial and housekeeping staff, and many volunteers who run activities or assist in various capacities on a weekly basis. The management team is led by an executive director and a marketing/admissions director. They are supported by an administrative assistant, an activities director, and a medical director who also is a registered nurse. The management team is paid on salary, with the executive director and marketing director earning additional bonuses based on new move-ins.

Competition

The Crescendo

The Crescendo is located less than two blocks from Sunset Point and also boasts the beautiful views of the Sierra Nevada Mountains and the valleys to the west of Reno. Owned by the Caremark Group, which has assisted living and memory care facilities in 35 states, the Crescendo has 77 units. The building is comprised equally of studio apartments, one-bedroom apartments, and two-bedroom apartments. In addition to having two-bedroom units, which Sunset Point does not have, the square footage of the Crescendo's apartments exceeds those at Sunset Point. Because of the larger accommodation capacity, the overall occupancy in the building can nearly double that of Sunset Point. As such, it has a much bigger and less intimate feel than Sunset Point. Many residents who choose Sunset Point over the Crescendo comment on the Crescendo's less personal and inviting feel. Their ADL menu, activities, amenities, and other offerings closely mirror Sunset Point's. One differentiating aspect of the Crescendo is its 15-unit memory care facility, which is considered to be state of the art in the northern Nevada region. Residents suffering from dementia in the Crescendo's Assisted Living community can transition to their memory care unit and remain there, if space is available, regardless of the severity of their memory care needs. Rates for the Crescendo community begin at $3,095 for the assisted living community and $3,550 for the memory care unit.

La Playa Ridge

La Playa Ridge is a small assisted living community that is part of the larger South Meadows Medical Center. It is located on the hospital campus, giving residents easy access to medical appointments and a range of health services beyond what the assisted living community offers. La Playa Ridge has 40 studio-style apartments and provides meals, transportation, ADLs and all other typical assisted living amenities. La Playa Ridge was built in 2005, making it the newest assisted living facility in the area. Its Spanish architecture and modern decor make its apartments visually appealing and comfortable. Because of its proximity to the Medical Center, many residents arrive after an accident or health emergency, spend some time at the Center's rehabilitation facility, and simply transfer to assisted living for a longer-term stay. La Playa Ridge's rates begin at $3,400.

The Prestige

The Prestige communities typically offer independent senior living apartments adjacent to their assisted living communities. Owned by the Prestige Living Company, with senior and assisted living in 27 states, Reno's The Prestige community is no different. In addition, however, Reno's The Prestige also offers a memory care community and skilled nursing facility nearby, making any needed life transitions possible. In spite of its name, The Prestige is typically considered to be on the lower end of quality. Their buildings are often older and their staff is paid on the low end compared to competing communities. While base rates are a bit lower, extra charges often apply to a number of amenities and basic activities that are offered for free at other communities. Reno's The Prestige offers studio apartments, three different layout options for the one-bedroom apartments, and a one-and-a-half-bedroom option that includes a small den. Base prices at The Prestige's assisted living community begin at $2,700. More than two-thirds of the residents at The Prestige at least partially finance their rent through Medicaid.

Marketing

Products and Positioning

Because Sunset Point focuses solely on assisted living, unlike many of its competitors that have multiple lifestyle communities and health care options, it strives to be the best in that area. Its services, pricing, building, and grounds position it as a high-quality assisted living community with an intimate, homey feel. The look and feel of the rooms and common areas provide a luxurious appearance, but the warm, friendly nature of the staff make it cozy and inviting. Many families who have toured the community grounds echo these themes and observations when providing feedback. All marketing materials, typically infor-

mational packets and brochures, are heavily visual and contain messaging that "welcomes people home."

Outreach and Referrals

The management team at Sunset Point places great value on outreach to various organizations in the Reno community. Nearly 80 percent of all inquiries are generated via referral or word of mouth. Accordingly, the marketing director attends all senior informational events and trade fairs with a Sunset Point booth and talks with seniors and the other vendors to make both personal and community connections. Jenny is also responsible for outreach by regularly visiting various health care providers in the community and providing information packets and other marketing materials. An example of this type of outreach might be for Jenny to visit rehabilitation centers that often treat elderly patients who, for injury or other health reasons, will not be able to go back to living independently and will most likely require a move to assisted living. The outreach visit can keep Sunset Point at the top of mind for the referring party at the rehabilitation center and lead to new move-ins.

Advertising

Because Sunset Point is consistently at capacity and has a long wait list, and because the outreach/referral network has been so fruitful, the marketing manager does little to no advertising. Exceptions to this include local senior magazines and resource guides that are published on a biannual basis. Just as with in-house marketing materials, all themes center on the high-quality amenities and the warm, welcoming feel.

Customer Profiles

The three folders that Brynn passed on to Jenny contained the profiles of the following residents. A brief synopsis of each follows.

Ruby Green

Ruby Green is 86, and has been at Sunset Point for two years. She rents a studio apartment and requires help with medication management (Level 1). She has frequent complaints to the administration about the food, the caregiving staff, and what she perceives as a lack of activities that she enjoys. She is in good health, but some caregivers say that she has been getting to be more forgetful. Ruby takes a prescription blood thinner and thus uses the bus service frequently to have her blood checked by her doctor. Ruby grew up in Reno. She has a large family and network of friends still living in the area. Her friends come to visit her often, usually staying for dinner, as Sunset Point provides complementary guest meals.

Lately, Ruby's complaints have become more frequent and often are highly critical of individual staff members. In a recent note in her file, Shirley, the medical director, mentions her serious concern that Ruby is having a negative effect on caregiver morale.

The Blackwells

Howard (91) and Mildred Blackwell (87) rent a one-bedroom apartment. Mildred requires no assistance with ADLs, but Howard recently had a stroke and requires the maximum level of care (Level 4). The staff spend a great deal of time with the Blackwells, particularly because Howard's condition is so bad, but also because Mildred loves to talk. Howard and Mildred each page the staff frequently, requesting their help throughout the day. This is usually for minor issues, but sometimes they call for critical help that Howard needs. Originally from San Diego, the Blackwells have no family or friends in the area. They frequently tell the administration how happy they are at Sunset Point. Mildred often volunteers to show visitors and new residents around, and praises the community. However, the significant staff time they require is raising costs and is annoying the other residents, who sometimes must wait longer for services.

Jeanette Albright

Jeanette Albright (90) has been at Sunset Point for three years and has gradually progressed through the levels of care to a Level 3. She requires help with most ADLs, but can still feed herself and enjoys mealtime and the social outlet it provides. She participates in most of the activities Sunset Point provides, and especially loves those involving music or flower arrangement. Jeanette is originally from Shreveport, Louisiana, but moved to Reno to live with her son and his family after her husband passed. Jeanette's family is still highly involved in her care and day-to-day activities, in spite of her son's increasingly busy schedule (he is COO of one of Reno's biggest employers, a gaming technology company). Jeanette has a sweet disposition, is typically quite positive, and is well-liked by all the staff. Lately she has been having small episodes called mini-strokes, that can very temporarily somewhat mimic a traditional stroke. Her primary care physician has reported that they are not of immediate concern, but she can increasingly be found sitting in the lobby with a blank look on her face. Her caregivers that these blank looks are increasing occurrences of the mini-strokes.

Decisions to Make . . .

As Jenny finished entering the final information from her morning tours into the CRM system, she sat back and looked again at the three folders. She knew that she would soon need to provide feedback on the three cases to Brynn. As she closed the CRM software screen, she glanced at her calendar, only to be reminded

that Enviva's CEO, Toni McManus, would be visiting next week. Toni always set aside an hour with Jenny to talk frankly about the marketing for Sunset Point—just the two of them. Jenny knew she would need to respond to Brynn, but that she also would potentially need to defend her suggestions when she met with Toni. Jenny took a deep breath and opened the first file.

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APPENDIX

Teaching Notes

Synopsis

This case is set in a fictional assisted living community called Sunset Point, which is structured very similarly to any assisted living community in the United

States. The parent company, Enviva, owns 22 assisted living community properties in California and Nevada. Jenny Kingsley, the marketing director for the Reno, Nevada facility is facing tough choices, some of which are imposed by Enviva's bonus structure that rewards a building's executive director and marketing director with bonuses solely for new move-ins. We learn that Reno has a shortage of supply for assisted living and as a result, Sunset Point is almost always at 100 percent occupancy. Therefore, new move-ins require move-outs that are largely at the discretion of the executive director.

Executive director Brynn Fuhrman must follow State of Nevada regulations to prescribe move-outs for current residents. These regulations are provided in the case, and we learn that although there are many health conditions outlined, the executive director retains the power to dismiss someone for any reason. It is not surprising that Jenny is uneasy with this practice, given the arbitrary nature of some of these decisions. Brynn frequently calls on Jenny to evaluate case files for potential move-out. At the time of the case, Jenny has been given three such folders, and we meet those residents later in the case. Jenny will need to report back to Brynn with her recommendations on the three resident cases. We also learn that Enviva's CEO, Toni McManus will be visiting the Sunset Point community next week, leaving the door open for Jenny to perhaps voice some of her concerns during her regularly scheduled private meeting with Toni.

There are several issues worthy of discussion in the case, with most grounded in business ethics concerns. Given the highly customer-oriented nature of assisted living, there are also a number of marketing themes intertwined with the ethical issues in the case. Below are a few questions to provide to students in advance to shape class discussion. The teaching note material that follows is organized around these five themes.

Suggested Discussion Questions

1. If you were Jenny, how would you evaluate the residents featured in the three folders? What criteria would you use for evaluating each? How should she respond to Brynn?
2. What issues would you recommend that Jenny discuss with Toni McManus during her visit?
3. How would you suggest that assisted living communities such as Sunset Point make ethical decision-making more central to their operations, as well as customer recruitment and retention?
4. Evaluate Sunset Point's competitive position. Is it sustainable, given current industry trends?
5. How do you view the long-term industry outlook for assisted living? How do you view the long-term industry outlook for the other senior housing/care options?

Teaching Notes

1. If you were Jenny, how would you evaluate the residents featured in the three folders? What criteria would you use for evaluating each? How should she respond to Brynn?

The case focuses on the central question of whether any of the three resident cases should be considered candidates for move-out. In reality, we would have extensive information on each case, as well as our own personal knowledge through interactions with each resident. The brief summaries of each give us a flavor for their backgrounds and what might be driving Brynn's motivation toward move-out recommendations.

The second part of this question asks the student to advance some criteria for evaluating the three cases. If the case is used in an advanced marketing class, students could calculate customer lifetime value (CLV) by using the fee schedule in the case and taking the average data provided in the resident profile section. A second criterion could be each resident's actual medical state, or whether they approach greater levels of care than the community can legally provide. A third criterion might be the potential for negative word-of-mouth generated by a move-out. We know that referrals and recommendations are the driving marketing forces for new clients. Negative stories of forced move-outs will no doubt travel in a small city such as this.

Ruby Green

We learn that Ruby seems increasingly dissatisfied with the services provided at Sunset Point and complains frequently to staff and caregivers. Her negative behavior has escalated to the point that the community medical director has made a note in Ruby's file that she is having a negative effect on caregiver morale. Caregivers in assisted living do not necessarily need to be highly trained, aside from CNAs and more specialized staff. Therefore, they are not paid highly and these positions typically experience great turnover. Any additional threat to morale is of great concern to a place like Sunset Point, which competes with the other communities in town in filling these positions.

Another concern is Ruby's extensive local network of family and friends. A forced and unexpected move-out would not likely sit well with her or with her large network. Many of these people will also likely be candidates for assisted living themselves in the near future, so a forced move-out could jeopardize potential new client relationships. Given the small population of the city, negative word of mouth spread by Ruby's people could have far-reaching effects. However, we do learn that Ruby is increasingly forgetful. As with any other resident, if her dementia were to progress to a point where she required full-time secure care,

Brynn would have to help her find a memory care facility. A frank conversation with Ruby and her family about this situation may help ease any transition that may be needed later.

The Blackwells

The Blackwells have no family in the area, according to the case. Although Howard is advancing in his need for care, Mildred is in good health and could potentially stay in the community for some time. If Howard does need more skilled nursing, however, the question would be whether Mildred would want to leave with him or stay at Sunset Point. If Howard is worsening quickly, he may transition to hospice care and stay in the community. At the time of the case, with Howard's need for Level 4 care and the double occupancy of their apartment, they are quite profitable for the community.

Jeanette Albright

Jeanette appears to be the ideal resident, with her sweet personality and enjoyment of the community. She has family locally, and we learn that her son has an influential position at a large local company. The possibility that Jeanette is having mini-strokes more frequently is worrisome, and should be evaluated by the community medical director. Greater communication between the community medical staff, her primary physician, and her family should be structured so that everyone is aware of new developments in Jeanette's condition and can respond more quickly with appropriate interventions.

Ideally, at this point in the case, questions about ethics have already surfaced. This is a perfect segue to incorporate the professor's desired ethical framework. One suggested framework includes the Daniels Fund Ethics Initiative Principles of Integrity, Trust, Accountability, Transparency, Fairness, Respect, Rule of Law, and Viability. Ultimately, many students will draw from these to say that no residents should move out. Others may weigh the Daniels Principles against some other evaluative criteria. These differing methods of evaluation might present discussion opportunities to divide the class, and perhaps have students each defend their ideas about what Jenny should say to Brynn.

2. What issues would you recommend that Jenny discuss with Toni McManus during her visit?

The previous discussion focused on the Daniels Principles and ethical decision-making also transition nicely into the question of what Jenny will discuss with Toni during her upcoming visit. We know that Toni likes to be very hands-on with her leadership staff at her various communities. Perhaps this is a great opportunity to outline some of the problems and ethical contradictions imposed by

the current compensation system. Perhaps Jenny could present alternative compensation structures that might better incentivize fully occupied buildings. Such plans might reward stability and retention, rather than making move-outs the only way to managerial bonuses. One could argue that rewards based on retention are more ethical, and force the staff to strive to keep residents happy and satisfied with their care. These measures would likely have positive ripple effects, including positive word of mouth.

Of course, Jenny reports to Brynn, so she many worry that her discussion with Toni will create tension between her and Brynn. Given Brynn's predisposition to dismiss residents at will, Jenny will no doubt have the same concerns about her own employment in talking too deeply with Toni about these issues.

3. How would you suggest that assisted living communities such as Sunset Point make ethical decision making more central to their operations, as well as customer recruitment and retention?

Once again, this question is a great way to integrate the Daniels Principles to describe measures that would make ethical decision making more focal to the daily operations of a community like Sunset Point. Students are likely to have a range of ideas about this, and many will draw from their past work experience to do so. Challenge them to attach one or two of the principles to their idea to get them thinking about the ethical concept underpinning their more practical and applied ideas about ethics. This is also a good place to talk about ethical outcomes. What is the end goal for greater ethical decision-making in an assisted living community? What do students hope to achieve with such suggestions? What other industries or business models might benefit from the ethical programs suggested?

4. Evaluate Sunset Point's competitive position. Is it sustainable given current industry trends?

If themes of Sunset Point's competitive position have not already emerged, this is an appropriate time to discuss how they fit relative to the other assisted living options in the city. We learn that Sunset Point is the only community in town that just offers assisted living. All others have additional offerings such as memory care units, skilled nursing, independent senior housing, or rehabilitation facilities on site. Enviva has pursued a focused differentiation strategy that emphasizes assisted living as their specialization. This can be a clear strength if done well; however, the frequent need to move residents out to advanced care facilities threatens to erode that strength. If seniors do not view assisted living at Sunset Point as a true "age in place" community, their enrollments will suffer.

5. How do you view the long-term industry outlook for assisted living? How do you view the long-term industry outlook for the other senior housing/care options?

Assisted living is in a strong, sustainable position, given that it has traditionally held a private-pay model with little reliance on Medicare or Medicaid. As these programs continually experience cuts, assisted living faces less threat to profitability than skilled nursing facilities that are highly dependent on this form of financing. One more indirect effect, though, is that to spread their risk, more and more skilled nursing facilities are adding the more profitable assisted living services and even communities to their portfolios. Thus, the already saturated markets in some areas may become even more so.

In any case, the demographics of the United States suggest an expanding aging population who will require a wide variety of care options. Companies that are known for their care, respect, sensitivity, and of course their ethical values will be well-poised to succeed in this marketplace. With the continual expansion of new offerings, those who are not known to be ethical will find it increasingly difficult to compete.

Sales Role Play . . . Take Two . . . Action! Using Video Capture Technology to Improve Student Performance

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As role plays become increasingly popular in the sales curriculum, the challenge for instructors is how to motivate students to watch—and, ultimately, learn from—them. This paper examines how both students and faculty can benefit from video capture technology. We find that students perform better in their second role play when they watch their first one via video link. Further, the longer students watch, the more they improve. For faculty, it provides a systematic way to monitor individual progress and tailor student feedback. This innovation has implications for student incentive structures, role-play assessments, and classroom technology adoption.

Keywords: Video Capture Technology, Sales Role Play, Experiential Learning

Disciplines of Interest: Professional Selling, Sales Strategy, Marketing

INTRODUCTION

Experiential learning has gone from a new fad to a staple of the marketing classroom [Forman, 2012]. Its positive impact on student success is well documented across a wide variety of coursework, particularly in equipping students with capabilities they can leverage in the real world [Remidez and Fodness, 2015]. As sales centers become more prominent [Agnihotri, et al., in print], sales instructors turn to the mock sales call as a powerful source of experiential learning. Mock sales calls have been an important part of developing salespeople for decades [Tanner and Chonko, 1991; Jones and Javie, 1996; Moncrief, 1991]. These mock sales calls, often termed Role Plays, have also become a focal point in sales education [Widmier, Loe, and Selden, 2008; Sojka and Fish, 2008] as active learning strategies have been deemed more important than passive [Inks and Avila, 2008]. The role-play assignment is based on the constructivist model of learning, which requires two aspects: 1) students actively participate in the learning process, thus "experiencing" the subject matter at a practical level, and 2) real-life facts and situations are built into the task, procedure, and outcomes to create an applicable learning experience [Leidner and Jarvenpaa, 1995].

Role-play assignments are increasingly used in undergraduate courses not just to assess student achievement [Newberry and Collins, 2012; Sojka and Fish, 2008], but to track improvement throughout the semester [Inks and Avila, 2008]. Indeed, the expectation and goal of many introductory sales courses are to see marked improvement as students learn and develop the skills needed to function in a sales role. Improvement requires a feedback mechanism. Although some research shows that immediate person-to-person feedback after the first assignment leads to greater improvement [Inks, Schetzsle, and Avila, 2011], other instructional methods use technology because it enables learners to control the pace [Leidner and Jarvenpaa, 1995]. We subscribe to the logic, specifically, that providing students with a video of their assignment fosters long-term improvement. However, the basic problem that this research tackles is that sales professors do not understand the tangible value of recording the role plays. Moreover, even if they do use technology, feedback is still critical to improvement [Carroll, 2006]. Thus, our goal is to help faculty incorporate video technology in the feedback mechanism to enhance the student experience.

To address this problem, we investigated a new sales innovation, interactive video recording technology (i.e., Panopto Video Capture), and its impact on student improvement between role-play assignments. Specifically, we first determined if this novel technology tool is more useful than digital video discs (DVDs), and then we reveal whether a relationship exists between how long students spend watching their first role play and how well they do in the second. To our knowledge, this is the first study to monitor the student viewing time and its effects on performance. Our aim is to answer these two questions:

1. How can sales faculty effectively implement technology during mock sales calls?
2. How can faculty motivate students to get involved in this active learning process?

THEORETICAL FOUNDATION

Panopto Video Platform for Businesses and Universities Panopto Video Platform (www.panopto.com) is an award-winning video platform developed at Carnegie Mellon University. Although it can be used for any type of presentation recording and management, it is particularly applicable to higher education. Faculty can record their lectures and allow students to stream them from any device. For the purposes of this study, it could be used to record student activities like role-play assignments. Panopto includes two features, one geared to monitoring student activity and the other to providing feedback. The first feature simply keeps track of how many minutes a student spends watching their video, which was used in this study. The second feature is a "time stamp" tool, which allows faculty to insert comments at specific points during the video and deliver contextually relevant feedback. Importantly, this product feature was not used in this study.

We build our case for the value of Panopto video capture first using the Technology Acceptance Model (TAM) and then with Task-Technology-Fit theory (TTF). Adoption of technology is crucial to diffusion of innovation [Norton and Bass, 1987] and TAM [Davis, 1989; Davis, Bagozzi, and Warshaw, 1989] has been used to predict a wide range of adoptive behaviors. In particular, TAM gained wide support in the sales discipline for its predictability of how, when, and why salespeople adopt information technology [Schillewaert, Ahearne, Frambach, and Moenaert, 2005]. In short, if a new technology is perceived to be both easy to use and useful, salespeople are likely to adopt and implement that technology [Robinson, Marshall, and Stamps, 2005]. Technology has been shown to increase performance outcomes among salespeople [Rapp et al., 2008; Agnhihotri et al., 2008], and this finding has started to translate to the classroom as well [Leidner and Jarvenpaa, 1995]. However, if one of those criteria (ease of use or usefulness) is not met, individuals are less likely to build the technology into their work behaviors. Active learning has been shown to increase multiple student performance outcomes [see Grandzol and Wynn, 2011], and this technology may enhance those outcomes associated with role-play assignments.

HYPOTHESIS DEVELOPMENT

We utilize TFF theory to build our case that adoption of this technology corresponds to enhanced performance outcomes. Using this theoretical viewpoint, in order to see a positive association between technology and performance, "the technology *must be utilized,* and the technology *must be a good fit with the tasks it supports*" [Goodhue and Thompson, 1995, p. 213, emphasis in original]. Sales force automation is one example of a technology tool that streamlines salesperson activities by providing a quick and reliable flow of information [Rapp, Agnihotri, and Forbes, 2008]. Firms invest in this technology with the expectation that both salespeople and managers will be able to automate routine manual processes and reduce cumbersome tasks, and therefore enhance efficiency [Erffmeyer and Johnson, 2001] and productivity [Pullig, Maxham and Hair, 2002].

Introductory sales courses are designed to operate like a sales organization. The instructor is the sales manager; the students are salespeople; the class is the sales team; and the college is the organization. Therefore, the tenets of TFF and TAM should apply, as the students who adopt the technology should experience a positive impact on their performance. Specifically, we predict that students who are sent a link to their video should improve more than those who were given a DVD because Panopto more fully meets the criteria for technology adoption. Both a DVD and video link contain the same content, namely, footage of the student's assignment. Therefore, both are equally as useful. However, given the ubiquity of tablets and phones without a DVD port, it is simply more convenient to click a link than to watch a DVD. Panopto use also aligns with the task and the nature of millennial students, who will find it more efficient. Thus, the Panopto option also

fulfills the ease-of-use criterion. We suggest that this ease of use will alter student behavior toward a higher frequency of viewing. Consequently, we predict the emergence of a positive technology–performance chain effect. Ease of use will lead to actual use and translate to better scores on the subsequent assignment. Formally stated,

> *H1: Students who have access to a video link via Panopto will show greater improvement between role plays than will students who have their video on a DVD.*

Next, we dig deeper into the Panopto technology itself by examining just those students who were given the video link. The goal here is to determine if there is a relationship between how long individuals watch their first role play and their performance on the subsequent play. Again, we use the logic that it is the actual use—not mere adoption—of technology that affects the performance. Sales technology literature supports this argument. For instance, Ahearne, Jelinek, and Rapp [2005] advance that the success of technology relies "not simply in whether salespeople adopt technology, but whether adoption (i.e., use) improves performance" [p. 380].

We argue that the level of technology utilization, defined here as the amount of time spent watching the first role-play video, will increase performance in the next role play. Students who watch more of their first assignment should witness not only more of what they did well, but also what they did poorly. Most improvement stems from uncovering—and correcting—mistakes. Consequently, those students who spend more time with those mistakes should learn more from them and be better able to turn those weaknesses into strengths in the next assignment.

To factor in students who performed relatively well on the first role-play assignment, we also predict a relationship between time spent watching the video and the second role-play score itself. Some students may have had relatively less room for improvement given their first role-play score, and our argument is that the more students watch their first role play, the better their second role play will be regardless of the first. Finally, we expect a relationship between time spent viewing the video and the overall semester grade. Given the weight of these assignments (43 percent of semester grade), the two are naturally correlated. However, we take this relationship a step further, suggesting that students motivated to perform on one aspect of the course will be equally motivated in other areas (i.e., exams and in-class activities). Therefore, we propose the following hypothesis and a full model of our proposed relationships in Figure 1.

> *H2: There will be a positive relationship between time spent watching the video and (a) improvement between role plays, (b) Role Play 2 score, and (c) overall semester grade.*

Figure 1. Research Model and Hypotheses

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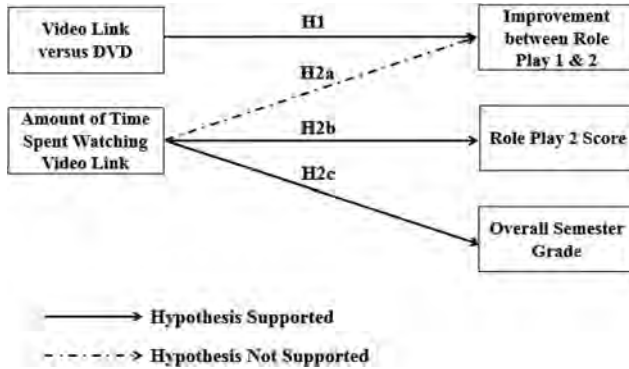
METHOD AND RESULTS

The Role-Play Assignment

The role-play scenario was a two-part assignment spanning the entire semester. Students were given a handout detailing their company as well as the company and buyer to whom they would be selling. The instructor dedicated roughly 50 percent of class time to the assignment via practice, preparation, content, development, and debrief. In this role play, students acted as B2B sales representatives for a real-world natural soft-drink company selling to a large grocery retailer, a scenario that should be widely generalizable. Typical of many role plays [Inks et al., 2011], the first assignment was a 10-minute information-gathering session. The main goal of this "needs discovery" meeting was to uncover the buyer's situation and secure another meeting where the solution could be presented. The second role play was that solutions meeting, a 15-minute sales call when students presented a value proposition based on the discovered needs, then negotiated terms, signed a contract, and closed the sale. Even though the meetings had different goals, we expect improvement in Role Play 2 because 1) students have the experience from the first assignment, and 2) many of the skills required to do well overlap with the first role play and should carry over to the next. For instance, professional entrance and exit, rapport building, communication skills, creativity, and active listening skills are evaluated in both assignments.

Sample and Data Collection

Data was collected over the course of four academic semesters (two years) by the principal investigator. Everything about the course content, including the role-play assignments, was the same for all four semesters. It is important to note

Table 1. Group Comparison of DVD versus Video Link

Video Access	Mean RP1	Mean RP2	STD Dev	Improvement
DVD	76.65%	80.80%	0.09	4.15%
Panopto link	77.75%	83.15%	0.07	5.41%

$N = 133$ for both samples; difference is significant at $p < .0001$.

that there was no significant difference between any of the four semesters in role-play scores, exam scores, or overall grades. Thus, these metrics were not inflated due to extraneous factors. Content analysis also demonstrates no significant differences across the teaching style or written feedback, thus making the video-delivery option the only difference across samples. Further, all role-play assessments were made and submitted prior to the knowledge of this paper submission. The study was conducted post hoc by a third-party with no knowledge of the goal of the study or any affiliation with the university. These steps were taken to minimize any potential biases.

The total sample consisted of 266 undergraduate students. The sample group was evenly split across gender with 129 female (48.5 percent) and 137 male (51.5 percent) students. Most of the students were juniors (147 students or 55 percent) and seniors (96 students or 36 percent) with 22 sophomores (9 percent) and 1 first-year student. Of the total sample, 133 students were given their role-play video on a DVD, and 133 students were sent emails with an embedded link to their video on Panopto. Hypothesis one utilizes the entire sample, whereas the subsequent hypotheses use only the 133 students who were sent links.

Analysis and Results

The first goal was to determine whether students performed better when their video was provided via embedded link versus a DVD. (We should note that DVDs are becoming less common; however, this investigation serves as a tangible means of comparing ease of technology with its impact on performance). To test this, the average score from Role Play 1 was tallied for the two semesters without Panopto and then compared with the two semesters with Panopto. We then conducted an unpaired *t*-test to determine whether the difference was significant. As predicted, students who received their video via link improved significantly more between role plays than did those given a DVD ($t = 123.18$, $df = 264$, *p*-value < 0.0001). Table 1 shows the results for this analysis.

Next, we wanted to take a closer look at the 133 students who utilized the Panopto technology and determine whether the amount of time spent viewing their first role play had a significant effect on their role play two performance. To do this, we conducted Ordinary Least Squares regression in SPSS 21, placing the Change in Score between Role Play 1 and Role Play 2 as our dependent variable.

Table 2. Stepwise Regression Results on Performance Indicators

Role Play 2 Score						
	Step 1			**Step 2**		
Variable	**B**	**β**	**t**	**B**	**β**	**t**
Intercept	84.203***	–	23.752	80.94***	–	22.66
Gender	0.47	0.039	0.444	−0.14	−0.01	−0.13
Class Rank	−0.5	0.04	−0.57	−0.29	−0.03	−0.33
Time Viewed	–	–	–	0.19**	0.28**	3.21

** $p < .01$, *** $p < .001$.

Overall Semester Score						
	Step 1			**Step 2**		
Variable	**B**	**β**	**t**	**B**	**β**	**t**
Intercept	124.64***	–	9.75	122.63***	–	9.86
Gender	−0.63	−0.02	−0.32	−1.71	−0.04	−0.88
Class Rank	−0.5	0.02	−0.3	−0.21	−0.01	−0.13
Exam Score	1.4***	0.83***	17.05	1.38***	0.81***	17.1
Time Viewed	–	–	–	0.33**	0.14**	2.94

** $p < .01$, *** $p < .001$.

Then, we added two covariates (Gender and Class Rank) before adding our independent variable, Time Viewed. H2a was not supported as there was an insignificant relationship between Time Viewed and Change in Score (B = 0.048, p-value = 0.47).

To test H2b, we utilized the same regression procedure, replacing Change in Performance with Role Play 2 Score as the dependent variable. This hypothesis was supported (B = 0.19, p-value = 0.002) and can be seen in Table 2. Before repeating the steps to test H2c, we added Total Exam Score of the course as a covariate to control for the fact that some students may have performed extremely well on exams and not role plays, which would inflate their Overall Semester Score. Interestingly, there was no relationship between Time Viewed and Total Exam Score. Rerunning the regression with the third covariate, we find support for H2c (B = 0.16, p-value = 0.004) as Time Viewed was positively related to Overall Semester Score.

DISCUSSION

Implications for Educators

Professional development has become paramount in business curricula as firms now expect business-ready students [Hawes and Foley, 2006]. This profes-

sional requirement translates to experiential learning activities built into the core curriculum to enhance student skills and capabilities [Foreman, 2012; Remidez and Fodness, 2015]. This new norm of the business education model is particularly relevant in sales. One of the best ways to offer real-world experience that aids in the development of a professional student is the role play [Newberry and Collins, 2012]. This manuscript examined an interactive technology platform (i.e., Panopto video capture) as an innovative tool in sales education and an effective technological option to optimize these important assignments.

We set out to answer two broad research questions: 1) how can sales faculty effectively implement technology during mock sales calls? and 2) how can they motivate students to get involved in the active learning process? In answering these questions, we offer two key implications for sales educators. We answer the first question with hypothesis 1. In line with TAM, our data suggest that emailing students a link to the video of their first role play produces better results on the second role play than handing them a DVD in person produces. Although both sets of students improved in our sample, the difference in improvement was significantly higher for those students who were sent the video link. Engaging students in the learning process is a challenge across the college curriculum, and thus, the implication of this finding should not be limited to sales faculty. In fact, the Panopto video capture platform was initially developed as a computer science project, so its use could be widespread.

Secondly, we attempt to answer the motivation question by suggesting faculty make the use of this technology a priority. Using TFF logic, we wanted to reveal whether students who spent more time watching their video would perform better on three metrics. Although we found no significant effect on the change in role-play scores, the amount of time spent watching the video did have a positive impact on both Role Play 2 performance and overall semester performance. Importantly, we controlled for how well students performed on exams, which is the other major component of semester grades. In fact, although there was, logically, a correlation between exam scores, role-play scores, and overall semester scores, we found no correlation between how long students viewed their performance and how well they did on exams. This finding underscores the difference between the two assignments both in preparation, delivery, and learning outcomes. Further, for those students who underperform on exams, it should provide additional incentive. Specifically, faculty can inform students that watching their first role-play video will most likely not affect their exam scores. However, watching it may help on the other major semester criteria—Role Play 2—and even the overall semester grade. Given the direct link between this technology utilization and classroom success, faculty should motivate students to engage in this active learning process.

Challenges and Opportunities

Although our study highlights the positive applications of this innovative tool for sales faculty, the challenges associated with it cannot be ignored. To begin, the

acquisition and implementation of this technology requires significant financial investment. Although cost may not be a problem for sales programs supported by corporate partners, it could represent a barrier for sales faculty who lack that funding. Further, it demands time to learn proper implementation, another critical faculty resource. Therefore, human capital may be a secondary obstacle. However, given the changing scope of classroom technology, we acknowledge that DVDs are becoming less common. Although this circumstance is a limitation of our study, it provides a useful point of comparison and may still have value for those programs without the financial support.

Further limitations stem from the newness of the technology to both instructor and student. For example, in the first sample, we do not know how many students watched their DVD or for how long. We were limited to only the change in role-play performance. Additionally, although we were able to track how long students watched their video links in the subsample, we could not control for other extraneous variables (e.g., attentiveness, watching environment, device type, etc.). Thus, the "time viewed" variable may be quite varied across individuals. These aspects represent challenges but also opportunities as sales faculty continue to improve how they assess these crucial assignments. Furthermore, this technology could easily be adapted and implemented across marketing curricula to enhance presentation skills.

CONCLUSION

As hiring firms expect more "business-ready" job candidates, universities strive to graduate students who can "hit the ground running" for these firms. The first step is adopting a curriculum focused on active learning, a proven strategy for success both in the classroom and the boardroom. Scholars and professionals alike acknowledge the role play as the premier active learning tool in sales education. The next step is to implement technology that fully optimizes the value of these active-learning techniques. Our study examines one such tool, Panopto, and its ability to enhance student success. Although both useful and easy to use—for students and faculty—it also provides tangible motivation to students who want to improve their performance and become those "business-ready" job candidates.

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Accounting for Faculty Sufficiency and Qualification Indicators for AACSB International's Accounting and/or Business Accreditation

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This paper demonstrates how to comply with AACSB's 2013 Faculty Sufficiency and Deployment and Faculty Qualifications and Engagement/ Professional Interactions standards for accounting and/or business accreditation, which require the academic units to develop and implement policies and procedures for classifying faculty members as participating or supporting, depending on time devoted toward the unit's mission, and as Scholarly Academic, Practicing Academic, Scholarly Practitioner, Instructional Practitioner, and Other categories. An emphasis is placed on how to determine whether adjunct members are participating or supporting. A weighted per-credit basis method, developed by the authors, is presented as one approach to account for this requirement.

Keywords: AACSB, Participating Faculty, Supporting Faculty,
Qualified Faculty and Accreditatiaon
Disciplines of Interest: Accounting and Other Business Disciplines

INTRODUCTION

AACSB International's (AACSB) Accounting Standard A4 (related to Business Standard 5) *Accounting Faculty Sufficiency and Deployment* and Accounting Standard A9 (related to Business Standard 15) *Accounting Faculty Qualifications and Engagement/Professional Interactions* requires an academic unit to maintain and

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utilize a faculty that is appropriate to achieve quality outcomes from its various degree programs and to attain other elements of its mission. One of the goals of AACSB's revised standards is to "attempt to reflect the competitive. . .and economic realities of the nature of university-level management education across the globe" [Miles, Franklin, Grimmer, & Heriot, 2013, p. 3]. As colleges and universities dramatically increase the number of courses being taught by adjunct faculty to cut costs and remain competitive [Kelly, 2013; Shinn, 2016; Sonner, 2000], AACSB [2013a, 2013b], has implemented standards to require units to be more accountable for how they deploy both full-time and part-time (i.e., adjunct) faculty.

As a result, students will be provided the opportunity to be educated by faculty that have the appropriate qualifications [AACSB, 2013a, 2013b]. AACSB [2013a; 2013b] requires academic units to employ participating faculty and qualified faculty in a certain percentage of its teaching positions. To demonstrate that a unit adheres to these standards, a unit must determine the criteria for classifying a faculty member (1) as participating or supporting (i.e., sufficiency group) and (2) into the appropriate faculty qualification group (i.e., Scholarly Academic [SA], Practicing Academic [PA], Scholarly Practitioner [SP], and Instructional Practitioner [IP]) [AACSB Accounting, 2013a, p. 37; AACSB Business, 2013b, p. 44]. Once the criteria are developed, the unit must classify the faculty into the appropriate sufficiency and qualification categories. Because the accounting and business standards relating to these areas are essentially the same, this paper focuses on how to compute the *Faculty Sufficiency and Deployment* and *Faculty Qualifications and Engagement/Professional Interactions* standards for accounting accreditation. This paper provides examples to illustrate how to apply these standards. As part of these examples, the paper demonstrates an approach, developed by the authors, for how to determine the percentage of time participating and supporting faculty devote toward an academic unit's mission by using a weighted per-credit basis method.

PARTICIPATING AND SUPPORTING (STANDARD A4)

According to Standard A4 [AACSB, 2013a], participating and supporting faculty members are defined as follows:

A *participating faculty member* actively and deeply engages in the activities of the school in matters beyond direct teaching responsibilities. Such matters might include policy decisions, educational directions, advising, research, and service commitments. The faculty member may participate in the governance of the academic unit and or business school, and be eligible to serve as a member on appropriate committees responsible for academic policymaking and/or other decisions. The individual may participate in a variety of non-class activities such as directing an extracurricular activity, providing academic and career advising, and

representing the school on institutional committees. Normally, the academic unit considers participating faculty members to be long-term members of the faculty regardless of whether their appointments are of a full-time or part-time nature, whether their position with the academic unit is considered the faculty member's principal employment, and whether or not the unit has tenure policies. The individual may be eligible for, and participate in, faculty development activities and take non-teaching assignments, such as advising, as appropriate to the faculty role that the unit has defined taking into consideration the depth and breadth of the non-teaching assignment.

A *supporting faculty member* does not, as a rule, participate in the intellectual or operational life of the unit beyond the direct performance of teaching responsibilities. Usually, a supporting faculty member does not have deliberative or involvement rights on faculty issues, membership on faculty committees, or responsibilities beyond direct teaching functions (e.g., classroom and office hours). Normally, a supporting faculty member's appointment is on an ad hoc basis - for one term or one academic year without the expectation of continuation — and is exclusively for teaching responsibilities (pp. 22–23).

Note that a faculty member who is not participating is supporting. The academic unit must adopt criteria to identify each faculty member as participating or supporting. For example, a faculty member of the College of Business Administration (CBA) at Winthrop University will be classified as participating during the academic year if a minimum of three of the following criteria is met during the year:

- Serves on a department, college or university committee
- Advises students
- Advises a business student organization or engages in chapter activities
- Regularly attends and participates in department meetings
- Regularly attends and participates in the CBA's faculty assemblies
- Participates in the CBA's assessment system
- Attends professional development activities sponsored by the CBA or Winthrop University
- Has scholarly activity [Winthrop University, 2014, p. 13, available at http://www.winthrop.edu/uploadedFiles/cba/facultymanual/PostJune, 2014Edition-PandTguidelines.pdf].

The criteria selected to classify faculty as participating or supporting must be consistent with the academic unit's mission.

FACULTY SUFFICIENCY QUALIFICATIONS GUIDELINES

AACSB [2013a, p. 38] Standard A4 states the following academic unit guidelines for faculty qualifications, referred to as *faculty sufficiency indicators*, for participating and supporting:

- Overall guideline: P/(P + S) ≥ **75 percent**
- By discipline, location, or program guideline: P/(P + S) ≥ **60 percent**

*P: Participating; S: Supporting

FACULTY QUALIFICATION GROUPS (STANDARD A9)

According to Standard A9 [AACSB, 2013a], the definitions of faculty qualification groups are stated as follows:

Scholarly Academics (SA) sustain currency and relevance through scholarship and related activities. Normally, SA status is granted to newly hired faculty members who earned their research doctorates within the last five years prior to the review dates.

Practice Academics (PA) sustain currency and relevance through professional engagement, interaction, and relevant activities. Normally, PA status applies to faculty members who augment their initial preparation as academic scholars with development and engagement activities that involve substantive linkages to practice, consulting, other forms of professional engagement, etc., based on the faculty members' earlier work as an SA faculty member.

Scholarly Practitioners (SP) sustain currency and relevance through continued professional experience, engagement, or interaction and scholarship related to their professional backgrounds and experience. Normally, SP status applies to practitioner faculty members who augment their experience with development and engagement activities involving substantive scholarly activities in their fields of teaching.

Instructional Practitioners (IP) sustain currency and relevance through continued professional experience and engagement related to their professional backgrounds and experience. Normally, IP status is granted to newly hired faculty members who join the faculty with significant professional experience [p. 33].

Other (O) should be used for those individuals holding a faculty title but whose qualifications do not meet the criteria the unit has established for SA, PA, SP, or IP status [p. 39].

The academic unit must adopt criteria to determine which group (i.e., faculty qualification or status) is appropriate for each faculty member and the criteria that are necessary to sustain the status. It is important to note that the academic unit is expected to work with the above definitions and develop criteria that are consistent with the academic unit's mission. AACSB Standard A9 [2013a] provides detailed information and examples regarding the basis for developing appropriate criteria. Other examples can also be found on the websites of various colleges. For example, the University of Wisconsin College of Business [2014] has prepared (Table 1) *Initial Academic Preparation and Professional Experience* criteria as part of its *Scholarship & Practitioner Productivity Guidelines & Faculty Qualifications* (only part of the document is presented).

FACULTY QUALIFICATIONS GUIDELINES

AACSB Standard A9 [2013a, p. 38] states the following academic unit guidelines for faculty qualifications (i.e., *faculty qualification indicators*):

SA guideline: $(SA)/(SA + PA + SP + IP + O) \geq 40\%$

SA + PA + SP guideline: $(SA + PA + SP)/(SA + PA + SP + IP + O) \geq 60\%$

SA + PA + SP + IP guideline: $(SA + PA + SP + IP)/(SA + PA + SP + IP + O) \geq 90\%$

IMPLEMENTATION OF POLICIES AND PROCEDURES

The academic accounting unit must develop and implement policies and procedures that are consistent with its mission to determine which faculty members are considered participating faculty and which are considered supporting faculty members as well as how to classify faculty members into SA, PA, SP, IP, and O categories. The academic unit should also determine requirements that are expected of full-time faculty regarding teaching, research, and service. The unit should determine how much of a faculty member's time should be devoted to each category, e.g., 40 percent teaching, 40 percent research, and 20 percent service or some other combination that is appropriate to support the academic unit's mission. For example, the faculty of the College of Business at The University of Central Arkansas (UCA) agreed to the following emphasis:

. . . teaching (55–75 percent); intellectual contributions (20–35 percent); and service (5–25 percent). As an institution with an emphasis on undergraduate education, the college emphasizes scholarship and instructional development. Given this emphasis, each faculty member therefore must apportion their effort distribution for the three areas such that the total equals 100 percent, adhering to the percentages above (teaching 55–75

Table 1. University of Wisconsin College of Business Scholarship & Practitioner Productivity Guidelines & Faculty Qualifications Initial Academic Preparation and Professional Experience

1. ACADEMICS
a. Normally, a doctoral degree emphasizing advanced foundational discipline-based research is the required initial academic preparation for SA and PA status.
b. Exceptions.
i. J.D. for teaching business law and legal environment
ii. Graduate degree in taxation to teach taxation
iii. Classification as Academically Qualified under previous standards
c. A doctoral degree that is not related to the field of teaching or a non-research oriented doctoral degree, will typically require a higher level of research engagement activities to support currency and relevance in the fields of teaching.
d. Newly Hired Faculty.
i. New tenure-track faculty with new terminal degrees have five years of SA status.
ii. New tenure-track faculty with terminal degrees that are three or more years old have three years of SA status.
2. PRACTITIONERS
a. Normally, IP and SP faculty members are required to have a master's degree in disciplines related to their fields of teaching and, at the time of hire, have professional experience in business or other types of organizations that is current, substantial, and related to their area of teaching.
b. Exceptions.
i. Individuals without a master's degree may be granted SP or IP status based on extensive professional experience in their discipline. For example, status as a partner in an accounting firm.
ii. Individuals with a research-oriented master's degree emphasizing discipline-based research, ABD, or substantial doctoral coursework that establishes currency in the teaching field may need less professional experience to obtain SP or IP status. For example, a master's degree with a master's thesis.
iii. Professional experience in higher education that establishes currency in the teaching field may need less professional (business) experience to obtain SP or IP status.
iv. Classification as Professionally Qualified (PQ) under previous AACSB accreditation standards or hired before the PQ standards were established may obtain SP or IP status (University of Wisconsin College of Business, 2014, p. 3, https://www.uwlax.edu/uploadedFiles/Academics/Colleges_Schools/College_of_Business_Administration/CBA%20Scholarly%20Productivity%20051415%20Approved.pdf).

percent, etc.) [UCA, 2014, p. 8, http://uca.edu/business/files/2014/08/Faculty DevelopmentPlan_07-25-14.pdf].

A full-time faculty member's time devoted to the unit's mission is normally considered to be 100 percent or 1.00. The question arises as to the percentage assigned to part-time (adjunct) faculty members. The accounting academic unit must determine, in addition to their part-time teaching responsibilities, which other functions the part-time faculty members are performing to support the academic unit's mission. Examples of these functions were provided earlier, when discussing how AACSB defines participating. For example, such activities could include those that involve ". . . policy decisions, educational directions, advising, research, and service commitments" [AACSB, 2013a, p. 22].

One approach to computing faculty sufficiency indicators that we suggest is to assign a weight, on a per-credit basis, to participating and supporting part-time faculty. A higher weight should be assigned to participating than to supporting part-time faculty because the former devote more time to achieving the academic unit's mission. For example, assume that an academic unit with an annual full-time teaching load of 24 credit hours expects that the proportion of a full-time faculty member's time devoted to the academic unit's mission is expected to be 60 percent teaching, 10 percent research, and 30 percent service. A participating faculty member should receive 0.038 (rounded) per credit hour for each credit taught, whereas a supporting faculty member should receive 0.25 (rounded) per credit hour for each credit hour taught computed as follows:

Participating = $1.00/24 \times 90\%* = .038$
*90% = 60% teaching + 30% service
Supporting = $1.00/24 \times 60\%** = .025$
**60% = 60% teaching

As previously noted, qualifying participating activities as defined by AACSB could also include research activities. For example, the College of Business Administration at California State University (Long Beach) (CSU) lists seven activities that qualify faculty as participating, including advising students, serving on academic committees, being involved in governance activities, serving as a faculty advisor to a student club, participating in assessment activities, being a course coordinator for a core course, and being involved in "other significant intellectual or operational activities" [California State University, 2016, http://web.csulb.edu/colleges/cba/aacsb/participating-standard/].

In addition, at the Lucas College and Graduate School of Business at San Jose State University, non-tenure track faculty are classified as participating if they are engaged in at least two of eight different types of activities, including an activity that contributes to the scholarship component of its mission. Examples of other activities that can count toward being classified as participating include regularly attending department, school, or university meetings; being involved with curric-

ulum or assessment activities; and serving on committees or as a faculty advisor to a student organization [San Jose State University, 2016, http://www.sjsu.edu/cobaccreditation/policies/facultysufficiency/].

EXAMPLE OF COMPUTING COMPLIANCE RATIOS FOR ACCOUNTING AACSB ACCREDITATION FOR FACULTY SUFFICIENCY AND QUALIFICATIONS (RE: STANDARDS A4 AND A9)

The AACSB's [2013a] compliance ratios should be computed for the normal academic year. Assume the following factors for this example:

- The accounting unit has only one location and program (an undergraduate degree program in accounting). If other locations and programs exist, then the same analysis would be required for each location and program.
- The annual faculty teaching load for full-time faculty is 18 credits.
- The proportion of a full-time faculty member's time devoted to the academic unit's mission is expected to be 50 percent teaching, 30 percent research, and 20 percent service.
- All part-time faculty members have the opportunity to engage in activities of the school in matters beyond direct teaching responsibilities. The extent and type of these nonteaching activities will determine whether they are participating or supporting faculty.
- Participating faculty members are deemed to provide 70 percent support to the teaching and service goals of the academic unit's mission (50 percent teaching plus 20 percent service), whereas supporting faculty members are deemed by the school to provide only 50 percent support to the academic unit's mission (i.e., to the teaching component of the mission). Note that these percentages are based on a unit's mission and are given only as hypothetical amounts for this analysis. Therefore, for *each* credit taught by a part-time faculty member, the academic unit has decided that: A *participating faculty member* should be assigned a weight of 0.04 rounded (1.00/18 credits × 70 percent), and a *supporting faculty member* should be assigned a weight of 0.03 rounded (1.00/18 credits × 50 percent). The rationale behind this analysis is that a participating faculty member helps the accounting unit achieve other components of its mission beyond teaching responsibilities and should therefore be assigned a heavier weight than a supporting faculty member is assigned.
- Full-time faculty/administrator percentage of time devoted to the mission is 100 percent (1.00). A numeral one (1.00) in the table indicates that the individual is employed full-time. Reasons for less than 1.00 (i.e., less than 100 percent) might include part-time employment (i.e., appointment as an adjunct), shared appointment with another academic unit, or other assignments that make the individual partially unavailable to the accounting unit.

Table 2. Faculty Sufficiency

Name	Participating	Supporting	Total
Full-Time:			
A	1.00		1.00
B	1.00		1.00
C	1.00		1.00
D	1.00		1.00
Part-Time:			
F	.48		.48
G		.12	.12
Total	4.48	.12	4.60

Note: Faculty member E is a full-time administrator and in accordance with AACSB (2013a) is therefore not listed in the faculty sufficiency section.

- Faculty members A through D are full-time accounting faculty; faculty member E is a full-time administrator and is not engaged in teaching (note: according to AACSB [2013a], faculty members who do not teach are not included in the faculty sufficiency section but are included in the qualifications section of the table); faculty members A through C are classified as SA, faculty member D is classified as PA, and faculty member E is classified as SP.
- Faculty member F is a part-time faculty member who teaches 12 credits per academic year and is classified as IP and a *participating faculty member* and is therefore listed in the table as 0.48 (0.04 × 12 credits) for the academic year.
- Faculty member G is a part-time faculty member who teaches 4 credits during the academic year, is classified as O, is a *supporting faculty member* and is therefore listed in the table as 0.12 (0.03 × 4 credits) for the semester.

The information presented in Table 2 is based on the preceding assumptions.

ANALYSIS OF ABOVE FACULTY SUFFICIENCY

Following is an analysis of the results provided in Table 2, which demonstrates that the accounting unit satisfied the guidelines for faculty sufficiency standards:

- Overall faculty sufficiency: 4.48/4.60 = 97.4 percent
  Conclusion: *satisfied standard (75 percent guideline)*
- By discipline, location, or program: 4.48/4.60 = 97.4 percent
  Conclusion: *satisfied standard (60 percent guideline)*

Table 3 documents the percentage of time devoted to mission for each faculty qualification group.

Table 3. Faculty Qualifications

	Percent of Time Devoted to Mission					
	For Each Faculty Qualification Group					
Name	SA	PA	SP	IP	O	Total
Full-Time:						
A	1.00					1.00
B	1.00					1.00
C	1.00					1.00
D		1.00				1.00
E			1.00			1.00
Part-Time:						
F				.48		.48
G					.12	.12
Total	3.00	1.00	1.00	.48	.12	5.60

ANALYSIS OF ABOVE FACULTY QUALIFICATIONS

An analysis of Table 3 reveals that the accounting unit satisfied the guidelines for time devoted to the mission for each faculty qualification group:

- SA: (3.00)/(5.60) = 53.6
  Conclusion: *satisfied standard (40 percent guideline)*
- SA + PA + SP: (3.00 + 1.00 + 1.00)/(5.60) = 89.3 percent
  Conclusion: *satisfied standard (60 percent guideline)*
- SA + PA + SP + IP: (3.00 + 1.00 + 1.00 + 0.48)/(5.60) = 97.9 percent
  Conclusion: *satisfied standard (75 percent guideline)*

OVERALL ANALYSIS FOR THE ACCOUNTING UNIT

The accounting unit satisfied AACSB's [2013a] sufficiency and qualifications guidelines. Specifically, it met the 75 percent overall faculty sufficiency guidelines and the 60 percent sufficiency guideline by discipline, location or program. The unit also met the 40 percent SA guideline, 60 percent SA + PA + SP guideline, and the 90 percent SA + PA + SP + IP guideline.

ALTERNATIVE SCENARIOS:

According to AACSB standards,

the percentage of time devoted to mission reflects each faculty member's contributions to the unit's overall mission during the period of evaluation. Reasons for less than 100 percent might include part-time employment, shared appointment with another academic unit, or other assignments that

make the faculty member partially unavailable to the unit. A full-time faculty member's percent of time devoted to mission is 100 percent [AACSB, 2013a, p. 39].

Assume instead for the previous example that faculty member A is SA for teaching both accounting and legal studies in business courses and that this individual taught 50 percent of their annual teaching load in accounting and 50 percent in legal studies in business courses. In the *faculty sufficiency section* and the *faculty qualification section*, faculty member A would be listed as 0.5 (instead of 1) in the accounting report and 0.5 (instead of 1) in the business report.

The above logic also holds true when a faculty member teaches in different programs. For instance, in the above example, it was assumed that the school had only an undergraduate program. Assume instead that the school had both an undergraduate and a graduate accounting program and that faculty member B taught all accounting courses, of which 75 percent were in the undergraduate program and 25 percent were in the graduate program. In the *faculty sufficiency section* and the *faculty qualification section*, faculty member B would be listed as 0.75 (instead of 1) in the report for the undergraduate accounting program and 0.25 (instead of 1) for the report for the graduate accounting program.

CONCLUSION

This paper focuses on how to apply the *Faculty Sufficiency and Deployment* and *Faculty Qualifications and Engagement/Professional Interactions* standards for accounting accreditation. As part of this application, the paper also presents one approach, developed by the authors, for how to account for part-time faculty to comply with AACSB Standards A4 and A9 [2013a]. The approach uses a weighted per-credit basis method to determine the percentage of time participating and supporting faculty devote toward an academic unit's mission. The approach presented could also be used for AACSB business accreditation.

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The Effect of Active Learning Activities on Knowledge Acquisition and Knowledge Application

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This study examines the effect of active learning activities on knowledge acquisition *and* knowledge application *by comparing three different teaching methods: traditional lecture, in-class competition, and tri-fold competition. We found that student performance on* knowledge acquisition *was better in the traditional lecture in comparison with in-class competition and tri-fold competition. On the other hand, in comparison with traditional lecture, student performance on knowledge application was better for the tri-fold board competition, but not for the in-class competition. From a practice standpoint, these results suggest that combining traditional lecture and active learning methods might be an optimal choice.*

Keywords: Active Learning, Knowledge Acquisition, Knowledge Application, Passive Learning
Disciplines of Interest: Accounting

INTRODUCTION

Studies on the effect of employing active versus passive learning activities on learning outcomes have mixed findings. Some studies [e.g., Chu and Libby, 2010; Hermanson, 1994] have found that active learning is positively associated with student performance. However, other studies [e.g., Grauer et al. 2008] have failed to find a relationship between active learning and student performance.

By studying learning outcomes of students in Hong Kong, Hwang et al. [2005, 2008] found that an active learning environment is more effective than a passive learning environment. Furthermore, Hwang measured the learning outcomes at multiple levels of learning by specifically measuring knowledge acquisition at the application and analysis level. The current study provides a similar

analysis by measuring learning outcomes at multiple levels of learning, including knowledge acquisition and knowledge application.

In comparison with Hwang et al. [2005, 2008], our study has two incremental contributions. First, we investigate whether active learning activities have an equal impact on **U.S. students'** understanding at the different levels of learning. A passive learning environment in the United States might include an element of discussion, with some exchange between the professor and individual students. This environment compares with a passive learning environment in Hong Kong where students are much more apt to sit quietly, listening to the lecture and expecting to absorb the information presented in the lecture. Students in Hong Kong have consistently experienced a traditional passive learning environment throughout their academic years, whereas most students in the United States have had more experience with active learning environments [Johnson et al. 1998] than their Hong Kong counterparts. In this study, we find that students who participated in our study reported a positive opinion of the active learning activities. Second, to our knowledge, our study is the first paper to analyze the tradeoff between knowledge acquisition and knowledge application for active learning.

A short description of the concept of learning levels is warranted. For example, one level of understanding occurs when students memorize and recall the definition of terms. This level of understanding demonstrates the *knowledge* level of Bloom's taxonomy [Bloom, 1956; Anderson and Krathwohl, 2001] and represents the easiest or lowest level of understanding. This concept will hereafter be referred to as *knowledge acquisition*. Another level of understanding is based on the student's ability to demonstrate the application of a concept. The *application* level of Bloom's taxonomy requires the student to apply definitional knowledge while critically evaluating a situational case; therefore, the application level of learning represents a higher level of understanding. This concept will hereafter be referred to as the *knowledge application*.

In this study, we compare students' ability to recall facts (*knowledge acquisition*) with their ability to apply concepts (*knowledge application*) across three different teaching methods: traditional lecture (passive learning environment), in-class competition, and tri-fold competition (active learning environment).

We found that students generally have a more positive opinion of active learning teaching and learning methods. We also found that traditional lecture was more effective than active learning methodologies for students to *acquire knowledge*. However, when measuring student outcomes in the area of *knowledge application*, we found that one of the two active learning methodologies employed, tri-fold competition, produced favorable results over traditional lecture. This finding suggests that some combination of traditional lecture and active learning may produce the best student outcomes.

The remainder of this paper is organized as follows: The next section outlines relevant literature associated with theory and presents hypotheses. Subsequent

sections present the methodology employed to investigate relationships and empirical results. The final section presents discussion and conclusions.

THEORY AND HYPOTHESES

The topic of the approaches that students take to learning has been debated and investigated since at least the 1970s [e.g., Marton and Säljö, 1976; Entwistle, 1987]. These investigations have resulted in an agreement that students can approach learning in at least two ways, which have been titled a surface (reproducing) approach and a deep (constructive) approach [van Rossum and Schenk, 1984]. Ramsden [2003] and Biggs [2003] presented characteristics of surface and deep learning approaches. Students who engaged in the surface approach were found to emphasize recall, or the application of, trivial knowledge. On the other hand, the deep approach is characterized by students' use of judgment, such as choosing how to complete activities. Class activities that encourage a deep approach to student learning can also incorporate a collaborative learning environment in which students work together to complete an activity. Collaborative learning has been found to result in improved student attitudes about the course [Johnson et al. 1998]. As a result, students are expected to have a more favorable opinion about the course in which the instructor employs methods that involve the class in an active, collaborative, environment than environments when the instructor employs methods to address topics in a more traditional, surface approach. These expectations lead to the first proposed hypothesis as follows:

> *H1:* Students who participate in collaborative learning activities have a more positive opinion of the teaching method when compared to a traditional lecture course.

Researchers have also found that collaborative learning results in improved academic performance [Mahmood, 2014; Jameson, 2010; Johnson et al. 1998; Springer et al. 1999]. As students work together to complete assigned tasks, they generally need to discuss the concepts and will likely have differing views of the concepts. As they work together to come to a common understanding, their familiarity with the subject matter is improved and they perform better on assessment tasks. The finding that cooperative learning results in a greater level of performance has not been universal. In fact, some studies have found that collaborative (active) learning results in increased performance in some areas and decreased performance in other areas. In particular, Vernon and Blake [1993] observed that problem-based learning decreased performance on standardized exams but increased clinical performance. Standardized exams are generally based on recalling facts and can be accomplished by employing a surface learning approach, whereas clinical performance requires integration of numerous facts and requires the employment of a deep learning approach. Clinical performance is similar to account-

ing students being asked to interpret a theory based on the circumstances provided, whereas standardized exams are based more on the understanding of terminology and relationships. As a result, the following hypotheses are proposed:

H2a: As the level of student engagement and active participation increases, student learning, as measured by the student's ability to identify basic facts (*knowledge acquisition*), decreases.

H2b: As the level of student engagement and active participation increases, student learning, as measured by the student's ability to apply concepts (*knowledge application*), increases.

METHOD

Participants

This study involved 178 students from 6 sections of Principles of Financial Accounting classes at a private university.[1] Most of the participants were first-year students. Table 1 presents student demographics. Female students account for 50.6 percent, 18 percent of students are accounting majors, and around 60 percent of students have internal control-related working experience. In addition, 61.8 percent of students have a GPA greater than 3.0. Approximately half of participants participated in an in-class competition, and around 33 percent of participants participated in a tri-fold competition, and the rest of participants attended the traditional lecture class.

Instruments

A preinstruction perception–assessment survey and a postinstruction perception–assessment survey are the main instruments used in this study. The preinstruction perception–assessment survey was administered prior to content delivery on the topical area (PRE-survey). Likewise, the postinstruction perception–assessment survey was delivered after content delivery on the topical area (POST-survey). The surveys contained questions pertaining to demographics, student perceptions, knowledge *acquisition,* and *knowledge application*.

(1) Measurement of student perception

Student perception questions were used to measure preferences to active learning relative to traditional lectures. Only students in the active learning sections received these questions. Two sample questions are:

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[1]An approval has been granted by the institutional review board (IRB) of the institution where the experiment took place.

Table 1. Demographic Data of Participants

Variable	N	Mean	Std. Dev.
Female	178	0.506	0.501
Acct	178	0.180	0.385
Experience	178	0.601	0.491
HighGPA	178	0.618	0.487
In-class	178	0.506	0.501
Tri-fold	178	0.326	0.470

Variable definitions:
Female is an indicator variable that is equal to one for a female student, and zero for a male student.
Acct is an indicator variable that is equal to one if a participant is accounting major, and zero otherwise.
Experience is an indicator variable that is equal to one if a participant has internal control related working experience, and zero otherwise.
HighGPA is an indicator variable that is equal to one if a participant has a GPA greater than 3.0, and zero otherwise.
In-class is an indicator variable that is equal to one if the teaching method is in-class competition, and zero otherwise.
Tri-fold is an indicator variable that is equal to one if the teaching method is tri-fold competition, and zero otherwise.

> *I would rather have the tri-fold board/in-class competition than a traditional lecture.*

> *I learn more about internal control by participating in the tri-fold board/in-class competition than I would have in an in-class lecture environment.*

Respondents used the 7-point Likert scale anchored from strongly disagree (-3) to strongly agree (3).

(2) Measurement of *knowledge acquisition*

One of the two types of assessment questions relates to *knowledge acquisition*, the lowest level of understanding in that students memorize and recall the definition of terms. A sample question follows.

A good system of internal control:
  A. Urges adherence to prescribed managerial policies
  B. Ensures profitable operation

C. Eliminates the need for an audit

D. Requires the use of non-computerized systems

E. Is not necessary if the company uses a computerized system

(3) Measurement of *knowledge application*

The other type of assessment question relates *to knowledge application*, a higher level of understanding in that students must recall the definitional aspect of the topical area and then apply it to a situational case, critically think about the situation, and evaluate accordingly. A sample question follows:

When two clerks share the same cash register, which internal control principle is violated?

A. Establish responsibilities

B. Maintain adequate records

C. Insure assets

D. Bond key employees

E. This does not violate any internal control principles

To control students' ex ante knowledge about internal control, we used two different sets of assessment questions in PRE-survey and POST-survey.[2]

Procedure

Students were asked to participate in a study that involved understanding the effectiveness of different teaching methods; however, they were not told that the study would focus on the content area of internal control. In conjunction with this, the timing of the PRE-survey was controlled to be administered at the beginning of the semester and well before the actual topical content delivery. Consequently, students would not be able to anticipate that the study involved the topical area of internal control. This controlled timing alleviates any concern that students would be able to prepare ahead of time to control their performance on the PRE and POST-surveys.

Approximately 4 weeks after administering the PRE-survey, content on the topic was delivered to each section using one of three methods of delivery: the first was a passive lecture-style delivery (**lecture**); the second method required individual-student advance-preparation and a subsequent team-based in-class competition (**in-class competition**); and the third method required individual-student advance-preparation followed by a subsequent team-based tri-fold board presentation and competition (**tri-fold competition**). The detailed explanation of

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[2]To encourage students to answer the assessment questions seriously, we gave students performance-based bonus points.

the above three teaching methods are as follows: 1. **Lecture:** This is a traditional classroom setting. Students passively listen to a lecture on the topic. Although they offer some examples of good and bad internal controls based on their personal job experience, there is no active collaboration with other students in the class. 2. **In-class competition:** It is a guided classroom competition. Students are placed in teams to discuss examples of good and bad internal controls observed at their workplaces. Each team makes several short presentations about examples discussed in that group. The presentations are evaluated by the instructor in a team-based competitive format. 3. **Tri-fold competition:** It is an unguided competition. Students read the chapter and work in teams to find examples of good and bad internal controls observed at their workplaces. They prepare tri-fold boards and present in a common gathering place where students typically congregate between classes. Group members must present the boards and explain the control measures demonstrated to all who stop to view the display. The boards are evaluated by the instructors in the accounting and other departments, as well as by the deans.

Subsequent to delivery of the topic content using these varied methods, students were asked to complete the POST-survey. Again, the timing of administration of the POST-survey was controlled to be administered during the class after content delivery. This timing was intended to equalize the amount of time that passed after content delivery among the sections and to minimize the amount of discussion that students between sections might have. All participant responses were pooled and analyzed so that participants were not identifiable by name or ID. On both the PRE-survey and POST-survey, students were asked to indicate the last four digits of their cell phone number. This information was used to trace pre-teaching survey responses to post-teaching survey responses for each student.

RESULTS

Descriptive Data

Table 2 presents descriptive statistics for students' performance PRE-survey versus POST-survey. As shown in Table 2 Panel A, the average POST-survey score is 2.657 out of 5, and the average PRE-survey score is 2 out of 5. For students' performance in *knowledge acquisition*, the average score is 1.652 out of 3, decreased from 1.685 out of 3 in PRE-survey. However, as for the performance in *knowledge application*, the average POST-survey score is 1.006 out of 2, increased from 0.315 out 2 in PRE-survey. Overall, the results in Table 2 Panel A suggest that students' performance improved in POST-survey as opposed to PRE-survey. However, the improvements appear to come from *knowledge application* rather than *knowledge acquisition*.

Table 2 Panel B presents the change in students' performance by different teaching methods. It seems that tri-fold competition is the most effective method in improving students' performance in *knowledge application*, whereas lecture is the most effective method in improving students' performance in *knowledge acquisition*.

Table 2. Descriptive Statistics of Students' Performance PRE-Survey vs. POST-Survey

Panel A: Full Sample

Variable	N	Mean	Median	Std Dev
Post-score	178	2.657	3.000	1.189
Post-score acquisition	178	1.652	2.000	0.916
Post-score application	178	1.006	1.000	0.701
Pre-score	178	2.000	2.000	1.105
Pre-score acquisition	178	1.685	2.000	0.903
Pre-score application	178	0.315	0.000	0.544

Panel B: Change of Students' Performance PRE-Survey vs. POST-Survey by Full Sample and Subsamples

	Mean			
	Full Sample	Lecture	In-class	Tri-fold
Post-score–Pre-score	0.657	0.900	0.700	0.466
Post-score acquisition–Pre-score acquisition	−0.033	0.367	0.000	−0.293
Post-score application–Pre-score application	0.691	0.533	0.700	0.759
N	178	30	90	58

Variable definitions:
Post-score/post-score acquisition/post-score application are raw scores students earned for all five assessment questions/three *knowledge acquisition* assessment questions/two *knowledge application* assessment questions, respectively, in POST-survey.
Pre-score/pre-score acquisition/pre-score application are raw scores students earned for all 5 assessment questions/three *knowledge acquisition* assessment questions/ two *knowledge application* assessment questions respectively in PRE-survey.

Results of Testing Hypotheses

Students' Preferences Over Three Different Teaching Methods: H1

Hypothesis 1 predicts that students who participate in collaborative learning activities have a more positive opinion of the teaching method in comparison with a traditional lecture course. To test H1, we used two-tailed *t*-tests to compare the average of perception score with zero. The perception score is based on students' response to the question: "I would rather have the tri-fold board/in-class competition than a traditional lecture", with -3 = strongly disagree, 0 = indifferent, and 3 = strongly agree (The chart in Table 3 illustrates the conversion of 7-point Likert scale in the survey to the perception score). As shown in Table 3, the average perception scores are 1.565, 1.811, and 1.175 for in-class/tri-fold com-

Table 3. Test of H1

Method	N	Mean of Perception	T-test of Mean $= 0$	p-value
In-class/Tri-fold	148	1.565	10.95	<0.001
In-class	90	1.811	10.560	<0.001
Tri-fold	58	1.175	4.840	<0.001

Perception is the measurement of perception based on student's answer to the question: "I would rather have the tri-fold board/in-class competition than a traditional lecture" and the following chart.

Choice	Perception Score
A. Strongly disagree	-3
B. Moderately disagree	-2
C. Slightly disagree	-1
D. Not sure	0
E. Slightly agree	1
F. Moderately agree	2
G. Strongly agree	3

bined group, in-class group, and tri-fold group, respectively. Furthermore, all these average perception scores are significantly different from zero (p-values <0.001), which indicates that students who participated in the collaborative learning like these active learning activities more than traditional lecture. In addition, although not tested, it appears that students may prefer the in-class competition (1.811) relatively more than the tri-fold competition (1.175).

The Association Between Three Teaching Methods and Students' Learning in Knowledge Acquisition/Knowledge Application: H2

Hypothesis 2 predicts that student learning, as measured by the student's ability to identify basic facts/apply concepts, decreases/increases as the level of student engagement and active participation increases. To test H2, we ran the following multivariate regressions:

$$\text{Post-score-acquisition} = \beta_0 + \beta_1\text{In-class} + \beta_2\text{PTri-fold} + \beta_3\text{Pre-Score}$$
$$+ \beta_4\text{Female} + \beta_5\text{Acct} + \beta_6\text{Experience} + \beta_7\text{HighGPA} + \varepsilon \dots \text{(Model 1)}$$

$$\text{Post-score-application} = \beta_0 + \beta_1\text{In-class} + \beta_2\text{PTri-fold} + \beta_3\text{Pre-Score}$$
$$+ \beta_4\text{Female} + \beta_5\text{Acct} + \beta_6\text{Experience} + \beta_7\text{HighGPA} + \varepsilon \dots \text{(Model 2)}$$

Model 1 and Model 2 were used to test H2a and H2b, respectively. The only difference between these two models is the dependent variable.

Post-score-acquisition/post-score-application are raw scores students earned for three *knowledge acquisition* assessment questions/two *knowledge application* assessment questions respectively in POST-survey. Our test variables are *In-class* and *Tri-fold.*

In-class is an indicator variable that is equal to 1 if the teaching method is in-class competition, and zero otherwise. *Tri-fold* is an indicator variable that is equal to 1 if the teaching method is tri-fold competition, and zero otherwise. Therefore, by running these two models, we were comparing two collaborative teaching methods (*in class competition* and *tri-fold competition*) with the base group (*lecture*). Based on H2a, we expect $\beta_1 < 0$ and $\beta_2 < 0$ in Model 1; whereas based on H2b, we expect $\beta_1 > 0$ and $\beta_2 > 0$ in Model 2.

In addition, we controlled the variation in students' prior knowledge (*Pre-Score*), students' demographics (*Female, Acct, Experience, and HighGPA*), and the instructor fixed effect.

The first column in Table 4 presents multiple regression results for Model 1, which was used to test H2a. Both *In-class* and *Tri-fold* are significantly (*p*-value <0.05) and negatively associated with *Post-score-acquisition*, which supports H2a. With regard to control variables, *Pre-Score* is significantly and positively associated with *Post-Score,* as we expected.

The second column in Table 4 presents multiple regression results for Model 2, which was used to test H2b. Although *In-class* is not significantly associated with *Post-score-application, Tri-fold* is significantly (*p*-value <0.05) and positively associated with *Post-score-application*, which supports H2b. With regard to control variables, *Pre-Score* and *HighGPA* are significantly and positively associated with *Post-Score,* which are consistent with our prediction.

Overall, the results in Table 4 suggest that traditional lecture trumps active learning methods when it comes to knowledge acquisition (learning the basic facts), but active learning methods prevail in knowledge application (applying the concepts).

DISCUSSION AND CONCLUSION

The current study was undertaken with the belief that U.S. college students would prefer to actively collaborate about a topic rather than passively listen to a lecture, and that this preference would lead to positive perceptions and performance. One topic area in Introduction to Financial Accounting (internal controls) was chosen for the study because we believe that many students have been exposed to internal controls at various part-time jobs. We also believed that they would react well to learning the reasons behind some of the rules they had seen at work.

To operationalize the study, two different active learning environments (in-class competition and tri-fold competition) were created to investigate these beliefs. Students who were in the active learning sections (treatment groups) were

Table 4. Test of H2

Dependent Variable: Post-Score

Variables	Pred. Signs	Test of H2a Knowledge Acquisition Assessment Questions		Test of H2b Knowledge Application Assessment Questions	
		Estimate	*p*-value	**Estimate**	*p*-value
Intercept		1.792	<.0001***	0.686	0.000***
In-class	−/+	−0.516	0.010**	0.163	0.143
Tri-fold	−/+	−0.449	0.041**	0.278	0.048**
Pre-score	+	0.153	0.063*	0.172	0.041**
Female	?	0.010	0.941	−0.034	0.376
Acct	+	0.135	0.469	0.052	0.361
Experience	+	−0.184	0.186	−0.012	0.456
HighGPA	+	0.072	0.624	0.247	0.012**
Instructor fixed effect		Controlled		Controlled	
N		178		178	
Adjusted R-Sq		0.078		0.072	

Post-score is raw scores students earned for three *knowledge acquisition* assessment questions (H2a)/two *knowledge application* assessment questions (H2b), respectively in POST-survey.

In-class is an indicator variable that is equal to one if the teaching method is in-class competition, and zero otherwise.

Tri-fold is an indicator variable that is equal to one if the teaching method is tri-fold competition, and zero otherwise.

Pre-score is raw scores students earned for three *knowledge acquisition* assessment questions (H2a)/two *knowledge application* assessment questions (H2b), respectively, in PRE-survey.

Female is an indicator variable that is equal to one for a female student, and zero for a male student.

Acct is an indicator variable that is equal to one if a participant is accounting major, and zero otherwise.

Experience is an indicator variable that is equal to one if a participant has internal control related working experience, and zero otherwise.

HighGPA is an indicator variable that is equal to one if a participant has a GPA greater than 3.0, and zero otherwise.

(*), (**), (***) indicates significance at the 0.10, 0.05, and 0.01 levels, respectively.

asked to provide an opinion about whether they preferred the active learning approach in comparison with traditional lecture they have encountered in other courses. Students in the traditional lecture sections (control groups) were not

asked these questions. As indicated in Table 3, both the in-class competition and the tri-fold competition were observed to be preferred to traditional lecture. However, the in-class group had a stronger preference than the tri-fold group. One possibility for this observed difference is the manner in which the competitions were organized. The in-class group competed in front of their peers in class, whereas the tri-fold group was required to display their materials in a public forum. In addition, the tri-fold group was evaluated by a variety of College of Business faculty, including multiple deans. It is possible that the public nature of this competition could have been stressful for the students, resulting in a decrease in the desirability of this approach. However, it should not be overlooked that this group significantly preferred the tri-fold competition over the traditional lecture.

Regarding student performance on assessment tasks, we found that their ability to recall basic facts (knowledge acquisition) to be better in the traditional lecture. This observation may be the result of instructors guiding the discussion in the areas where students will be evaluated. As a result, students are consciously, or subconsciously, directed to study the correct items. The in-class competition and tri-fold competition were substantially less directed. Students were told to read the material and be prepared to discuss internal control concepts with their group. As a result, their focus on factual material was less directed, and that circumstance could have resulted in the lower performance illustrated in the H2a column of Table 4. On the other hand, student performance on the knowledge application portion of the assessment was better for the tri-fold competition but not for the in-class competition. This observation could be a function of how seriously students took the competitions. The in-class competition was conducted completely in front of their class peer group, and students may have viewed this as just another class. However, the tri-fold competition was a public event and students may have felt pressure to be better prepared so as to not be embarrassed if they were unable to answer questions. As a result, students in the tri-fold competition may have prepared more thoroughly to understand the internal control concepts.

As with all studies, this study should be interpreted considering its limitations. One limitation is that the study was conducted at one small private four-year university. As a result, it is not possible to generalize the findings to two-year colleges, public universities, or to large universities. Another limitation is that a small number of questions were used to measure the study variables. A greater number of questions would reduce possible noise in the measures. However, the small number of questions makes finding significance more difficult, so the findings seem to be the result of real differences in the groups. A third limitation is that the data were gathered across multiple semesters due to course schedule constraints. At this university, there are more prospective accounting majors in the spring semester of the course than in the fall semester. It is unlikely that significant changes occurred in the student population from one semester to the next, but it is possible.

The findings of this study have implications for practice. This study found that there is a tradeoff between knowledge acquisition and knowledge application for active learning, which indicates that there is no panacea to address all the challenges facing today's students in the learning process. From a practice standpoint, our findings in this study suggest that combining traditional lecture and active learning methods might be an optimal choice. Focusing on one or the other may help develop knowledge acquisition or knowledge application, but both are important.

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Use of Pinterest to Promote Teacher-Student Relationships in a Higher Education Computer Information Systems Course

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The teacher-student relationship (TSR) is important in educational environments, as enhancing TSR can increase levels of student engagement and success. This research describes a process to enhance TSR through implementing a structured teacher-student sharing interaction. The objective was to enhance the students' sense of instructor care and interest, leading to positive TSR. The interaction was facilitated using Pinterest, a web-based social media platform. Data were collected in two stages with results indicating that TSR was enhanced through the exercise. The results have implications for instructors because using Pinterest is a relatively simple way to connect with students to enhance TSR.

Keywords: Social Media, Pinterest, Teacher-student Relationship, TSR, Higher Education, Engagement

Disciplines of Interest: Business, Education, Liberal Studies, Communications, Social Sciences

INTRODUCTION

Teacher-student relationships (TSR), the academic relationships between students and teachers, have been identified as important in educational environments [Hagenauer et al., 2014] and been researched rather extensively at the primary and secondary school levels [Komarraju, Musulkin, and Bhattacharya, 2010; Penrose, 2009; Roorda et al., 2011; Spilt, Koomen, and Thijs, 2011; Webb, 2014; Wilcox, Winn, and Fyvie-Gauld, 2005]. There is, however, limited work that has been conducted on the topic in higher education. Hagenauer et al. [2014] note that extending the study of TSR to the university context is important for three reasons: (1) universities are exhibiting higher dropout rates that may be improved through enhanced TSR; (2) the quality of interpersonal relationships applies to members of the university community as well as to those of primary and secondary institutions; and (3) TSR may have a positive effect on teaching

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excellence as part of the broader study of the scholarship of teaching and learning (SoTL). Accordingly, efforts in the study of TSR at the university level may contribute to our understanding of the importance of this factor on both student engagement and success [Hagenauer et al., 2014].

Moreover, research has shown that although positive TSR can be regarded as a precondition of successful learning for all students, it seems to be of particular relevance for at-risk students in terms of retention and drop-out decisions [Hagenauer et al., 2014; National Conference of State Legislatures]. Accordingly, improving TSR may be very important in addressing several issues in higher education [Komarraju, Musulkin, and Bhattacharya, 2010; Palmer, O'Cane, and Owens, 2009].

This paper describes a process to enhance TSR at the university level by implementing a structured, out-of-class teacher-student sharing interaction. The objective of the sharing interaction was to enhance the students' sense of instructor care and interest in students, thus leading to positive TSR. The interaction was facilitated using Pinterest. Pinterest is a web-based social media platform that allows users to collect and post images extracted from the Internet to a virtual "board" for later viewing. The virtual posting board allows users to arrange and order the images according to preference and category. The interaction required students to create a Pinterest account and post images related to their personal interests and background to their Pinterest board. Students then met outside class with the instructor and shared their postings. Data were collected in two stages with results indicating that TSR was enhanced through the exercise. The results have implications for instructors because using Pinterest is a relatively simple but powerful way to connect with students, and therefore enhance TSR.

BACKGROUND AND RESEARCH QUESTIONS

TSR is defined as the academic relationship between a student and teacher, which describes the bond built between students and teachers, forming the basis for secure, affective, and positively experienced relationships [Hagenauer et al., 2014]. Prior research into TSR has focused on instructor and student perceptions of the relationship with respect to both in-class interactions [Roorda et al., 2011; Spilt et al., 2011; Suldo et al., 2014] and out-of-class interactions [Clark et al., 2002; Denzine and Pulos, 2000; Dobransky and Frymier, 2002]. A positive quality of interaction is one factor that may lead to improved TSR through the affective dimension. Hagenauer et al., 2014 notes that of the many aspects of TSR, "care for students" is regarded as an important factor that the instructor can exhibit to improve TSR [Grasha, 2002; see also Owens and Ennis, 2005].

The current study builds on this prior research by examining university students' perceptions of the effect of an out-of-class structured interaction with the instructor on TSR. The structured interaction was designed to allow students to share their interests and background with the instructor. The objective was to create a positive quality of interaction that allowed the instructor to demonstrate care for students. This demon-

stration in turn should result in positive TSR [Komarraju, Musulkin, and Bhattacharya, 2010]. The interaction was student-driven in that each student prepared in advance a set of items defining their interests and background. A sharing interaction with each student then occurred during a one-on-one visit with the instructor outside class time. The instructor therefore engaged each student in a close-proximity discussion of the student's interests and background.

The structured interaction was facilitated by the popular social media platform, Pinterest. The Pinterest site started in 2010 and, as of 2016, had a user base internationally of over 100 million individuals covering more than 30 languages [Fast Company, 2016]. Pinterest is a free, visual-based social network that allows registered users to find and share images, articles, and other digital content through the use of "boards." A board is like a digital folder, containing content that can be organized based on topics or themes of the user's choice. Once established, the user can "pin" or "save" appropriate content that they self-curate onto their boards. The boards then may be shared with other Pinterest users or kept private.

Social media platforms (e.g., Facebook, LinkedIn, Pinterest, and Twitter) may provide a viable means for efficiently organizing a structured interaction between student and teacher that can be used to create and develop relationships along the affective dimension of TSR. These social media platforms are readily available to all via the Internet and are popular with university students. As these sites have matured, newer platforms such as Instagram and Pinterest have emerged that primarily employ images to share life interactions and elements and keep users informed about one another's activities and interests [Cheng, 2014; Gilbert, 2013; Pierce et al., 2013]. Pinterest is the fifth most popular social network as of December 2016 behind Facebook, YouTube, Twitter, and LinkedIn [The eBusiness Guide, 2016] and allows users to collect and post images extracted from the Internet for later viewing.

The structured interaction developed for this study required students to create a Pinterest account and post images related to their personal interests and background to a Pinterest board. Students then met with the instructor outside class and shared their postings. The objective of the exercise was to examine the following hypothesis related to TSR: a structured positive quality student-teacher interaction will enhance the students' sense of instructor care and interest in the student, which in turn will result in positive TSR.

METHODOLOGY

Overview

Data was collected in two stages to examine the research question. The first stage involved having all students in an introductory computer information systems course prepare a Pinterest board and engage in the structured interaction as described above. All students then completed a survey questionnaire which queried their perceptions of the interaction to capture a measure of TSR.

The second stage occurred in the following term when students in an introductory computer information systems course were randomly assigned to one of two groups: Group one completed the structured interaction and group two did not. Measures of TSR from both groups were then analyzed and compared. Taken together, the data from both stages lends support to the research question that a student-driven, structured out-of-class interaction will lead to positive TSR.

First Stage Methodology – Survey

Participants

Participants were drawn from three sections of an introduction to computer information systems course at a large four-year public university in the Southwest. A total 206 students participated in the study. Forty-five percent of the participants were freshmen and 55 percent were female. All students completed the structured interaction task in the first two weeks of the semester which involved generating a Pinterest board displaying images and websites of their interests and backgrounds. All students then visited individually with the instructor out of class to discuss the contents of their Pinterest board. The interaction was facilitated by a set of pre-established questions so that all interfaces were similar in form.

Task

Each participant created a Pinterest account and a board titled "About Me" that included 10 to 12 images and websites of the student's interests and background. As noted above, Pinterest allows users to find and pin images, photos, articles, recipes, and other digital content to boards. After completion of the "About Me" boards, students met with the instructor one-on-one outside class to share the contents of the board. The sharing interaction involved the student and instructor discussing the items that the student pinned to their Pinterest board. Predefined questions were prepared by the researchers and used by the instructor to query each student during the one-on-one session (see Appendix A). This process maintained consistency in the interactions across students. The questions were designed to elicit information from each participant directly related to the content on their Pinterest board. The one-on-one sessions with each participant lasted approximately 10 minutes. No additional relationship-building activities were used during the first weeks of class. Figure 1 displays the breakdown of the topical content that students included on their Pinterest boards.

First Stage Data and Analysis – Survey

A survey questionnaire was administered at the end of the first two weeks of class to all students. The questions solicited the participant's general perceptions of the task and usefulness of the interaction. Figure 2 displays the percentage

Figure 1. Distribution of Topical Items Included by Students – Stage One

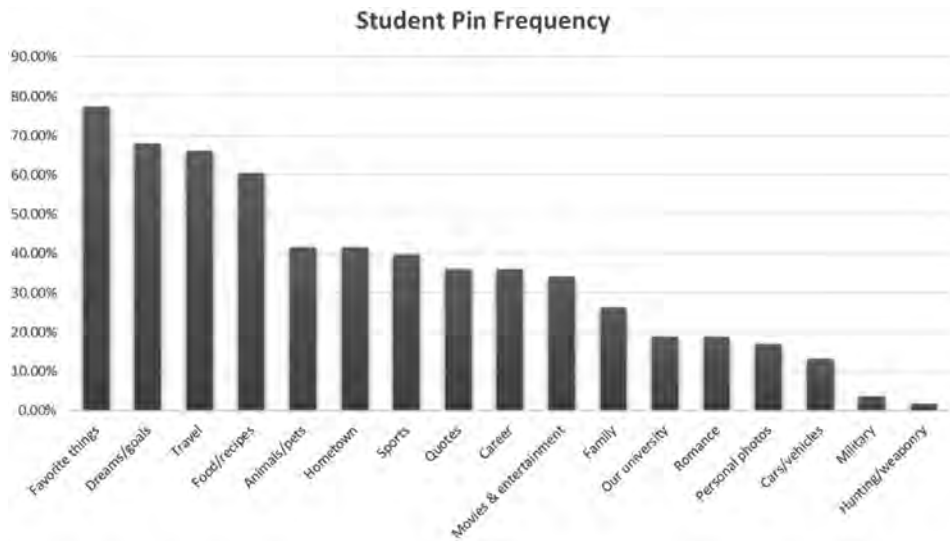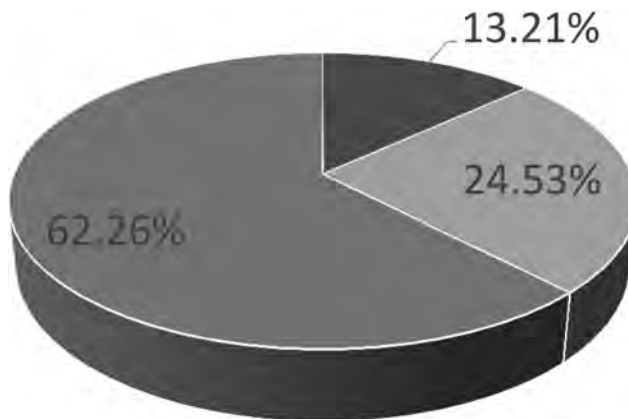**Student Pin Frequency**

Figure 2. Distribution of Participant Responses – Stage One

OK – I just did it for the points: 13.21 percent
Good – I liked learning about Pinterest: 24.53 percent
Excellent – I appreciate going beyond basic questions: 62.26 percent

responses to the questions regarding the participant's general perceptions of the task. A subsequent question also was posed and asked, "Would you recommend this assignment to other faculty who want to get to know their students?" Eighty-three percent of the participants answered "Yes" to this question.

The results from the first stage of the investigation provided general support of the research question that the structured student-driven out-of-class interaction will lead to positive TSR. To gain more insight, a second-stage process was carried out during a subsequent class term with a new set of participants. The objective of the second stage was to determine more directly if the structured interaction resulted in positive TSR.

Second-Stage Methodology – Controlled Data Collection

Participants

Participants were drawn from three sections of an Introduction to Computer Information Systems course at a large four-year public university in the Southwest. A total of 185 students participated in the study; 92 percent of the participants were first-semester first-year students, and 54 percent were female. Students from each section were assigned to one of two groups: a group that completed the structured interaction using Pinterest in the first two weeks of the semester, and a group that did not complete the structured interaction using Pinterest. During the two-week period, 71 students completed a Pinterest board and the structured interaction, and 114 students did not.

Task

As described above, the task required each participant to complete a Pinterest board titled "About Me" and share the contents of the board outside of class with the instructor. The predefined questions shown in Appendix A were again used to ensure consistency in the interactions with students. As noted above in describing the process for the first stage, the one-on-one sessions with each participant lasted approximately 10 minutes, and no additional relationship-building activities were conducted during the first weeks of class. The topical content that students included on their Pinterest boards was similar to that of Stage One as shown in Figure 1.

Data Collection Instrument

At the end of the first two weeks of classes, a survey was administered to both the participants who completed the structured interaction using Pinterest and to those who did not, to determine whether the students who completed the structured interaction with Pinterest perceived it to improve TSR. Instruments and scales to assess the quality of TSR in schools have been developed by several researchers [Hagenauer and Volet, 2014]. One well-recognized instrument used to assess TSR is the Teacher-Student-Relationship Scale [Pianta, 2001]. Pianta's scale was developed for students age 3–12, so some dimensions were not applicable to higher education environments. Pianta's survey was therefore modified for use in this setting based on the suggestions of Hagenauer and Volet

Table 1. Summary Statistics–Mean Values of Participant Responses to TSR Survey Questions

TSR Survey Question	Structured Interaction Group	Non-Structured Interaction Group	*P*-Value Student's *t*-test
My instructor views me as an important part of the class.	4.15	3.82	.0029
I admire my instructor.	4.32	4.13	.0392
My instructor connects emotionally with me.	3.73	3.37	.0023
I enjoy having this instructor for my class.	4.63	4.39	.0052
I am happy with my relationship with my instructor.	4.30	3.90	.0003

[2014] and Ang [2005]. The modified survey instrument is better able to capture the TSR dimensions most appropriate to higher education settings and is presented in Appendix B. All participants from both groups answered the questions on a five-item Likert-type scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Neither Agree/Disagree; 4 = Agree; 5 = Strongly Agree.

Second-Stage Data and Analysis – Controlled Data Collection

Table 1 presents data by participant group. An initial analysis indicated no differences across gender or across participants from the three sections of the course in which the task was completed. Therefore, all data were combined into the two groups shown in Table 1: Structured Interaction Group and Non-Structured Interaction Group. The data displayed in the table reveals a difference in the mean values between groups for each of the five TSR dimensions elicited in the survey instrument.

A two-sample Student's *t*-test was carried out to analyze the data. The results shown in Table 1 indicate statistically significant differences in the mean values across all five of the TSR elicitation questions administered in the survey. These results considered along with those of the first-stage data collection provide support for the research question that a student-driven structured out-of-class interaction will lead to positive TSR.

SUMMARY AND CONCLUSIONS

This paper describes a process to enhance TSR at the university level by implementing a structured out-of-class teacher-student interaction. The interaction was facilitated using the social media platform, Pinterest. The objective was to enhance the student's sense of instructor care and interest in the student, thus

leading to enhanced TSR. A two-stage process of data collection revealed that the interaction led to enhanced TSR, both through survey data and through a controlled data collection exercise.

An important contribution of this manuscript is how Pinterest, a social media platform, was used as the mechanism for facilitating the structured interaction. Social media platforms are popular among university students, who find them relevant in establishing and maintaining social interactions. The ubiquitous availability of these platforms through all manner of network connections, including laptops and mobile devices, relieves the instructor of the burden of developing the mechanism for the interaction. This convenience saves the instructor time, energy, and effort in creating a software platform, application, or process to structure and standardize the interaction. In addition, Pinterest has the feature of self-curation of image content in a convenient and easy-to-use interface. With much of the population visually-oriented [Bradford, 2004; Felder, 1988], Pinterest offers the ease of curating images for sharing and later consideration.

Results should provide guidance to faculty interested in using social media as a means to build relationships with students and enhancing TSR. Future research could examine other social media platforms as mechanisms for structuring student interactions to enhance TSR. For example, LinkedIn and Facebook offer users the ability to post and curate content on their respective timelines, which followers may then view. Such posted content could be examined in a fashion similar to the way Pinterest is utilized in this study.

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APPENDIX

Appendix A: Questions about Pinterest Board Shared One-on-One with Each Student

1. Have you used Pinterest before?
2. Walk me through your pins–why did you pin what you did?
3. What do you think about Pinterest?
4. Will you use Pinterest in the future?
5. Do you think this assignment has been useful? Why or why not?
6. What other comments do you have about Pinterest and this assignment?

Appendix B: Teacher-Student-Relationship (TSR) Scale Questions Adapted from Pianta [2001]

1. My instructor views me as an important part of the class.
2. I admire my instructor.
3. My instructor connects emotionally with me.
4. I enjoy having this instructor for my class.
5. I am happy with my relationship with my instructor.

Maximizing the Educational Investment with a Required Personal and Professional Development Program for Business Majors

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University of Portland

Higher-education institutions have been asked to go beyond the classroom and provide a better return on investment for students. With no line item in the budget, the Pamplin School of Business of the University of Portland linked both formation of the person and professional development by creating a mechanism of a credit-based program designed to marry theoretical, self-assessment, and experiential learning. Students engage in a series of holistic processes and professional development coursework challenging them to find and fulfill their potential while effectively exploring the core question of the university, "Who am I?" Between 2012 and 2016, 93 percent of business students acquired a vocational career position within six months of graduation, maximizing their education investment.

This article is dedicated to the student workers who were instrumental in assisting in the development and implementation of the program. This program could not have been developed without them. These workers include Dani Remy Baker, Jasmine Dudley, Larissa Woods, Brooke Murphy, Cole Preece, and Amanda Stowe. The graphics in the paper are by Cole Preece.

Keywords: Experiential Learning, Employment Outcomes, Pedagogy, College Students, Financial Wellness, Teaching, Professional Development

Disciplines of Interest: Business, Education, Undergraduate Education, Innovation, Entrepreneurship

INTRODUCTION

Higher education costs have soared 1,120% since 1978, four times faster than the increase in the consumer price index. Rising tuition and the trillion-dollar debt that students have accumulated have led to the government recognizing that the current educational system is in need of reform.[1] (Jamrisko et al., 2012) Univer-

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[1]Jamrisko, Michelle et al. (2012) Bloomberg News Article.

Figure 1. Mantra of the P4

sity stakeholders across the country, in general, are demanding more of a return on investment with collegiate programs, particularly in the areas of postgraduate employment, where an assurance of paying back student debt can be obtained. In 2007, the school understood society's concern and decided to do something constructive, creative, and innovative to address this challenge. Initially, with no line item in the budget and with help from staff, faculty, and student workers, the school developed a program whose aims were two-fold. The disruptive, innovative program emphasizes personal and professional formation of the whole person by marrying theoretical, self-assessment, and experiential learning within the curriculum. By combining the different types of learning, this program prepares graduates in a comprehensive manner. This *mechanism* of a credit-based requirement with fees attached to the classes (see Appendix I) are the *keys* in the program, which enriches the undergraduate collegiate experience and maximizes the value of higher education by ensuring that students are intentional in discerning a path for their lives and finding a right-fit vocation beyond a job or career. The mantra of the program is "a job pays the bills, a career is about self, and a vocation is about self in the context of community" (see Figure 1). The cocurricular program creates a systemized and strategic environment that assists students in their transformational growth through reflection and discernment of educational experiences outside the classroom. Each year, students are required to

Figure 2. Curriculum

REFLECT with your HEART

LEARN with your HEAD

DO with your HANDS

SELF-ASSESSMENT · THEORETICAL · EXPERIENTIAL

IDEA

Integrated into each curriculum is a core philosophy:

By learning about yourself and the world with your head, hands, and heart, you will discover your **vocation**, and be prepared to enter the world as an ethical and creative business leader.

COURSES

Yearly updates
Personal Development Plan (PDP), LinkedIn® Profile, E-Portfolio, Resume & Cover Letter

BUS 100

Introduction to Leadership Skills

-StrengthsQuest®
-Activities Fair
-Ropes Course
-Informational Interview
-Networking
-Site Visit/Job Shadow
-Resume Building
-Develop E-Portfolio for personal & professional assessment

BUS 202

Professional Development

-Site Visit/Job Shadow
-Group Mock Interview
-Habit Awareness Seminar
-Cover Letter
-O*Net Assessment
-360 Communication Style
-Draft of Personal Brand
-Dress for Success
-Service Day: Leading Self
-Public Safety Driving Seminar

BUS 302

Professional Development Internship

-Actions to Habits Seminar
-Etiquette Dinner
-Evaluating a Vocation Offer
-LinkedIn® Profile
-Videos for E-Portfolio
-Brand Video
-Employer Profile
-Individual Mock Interview
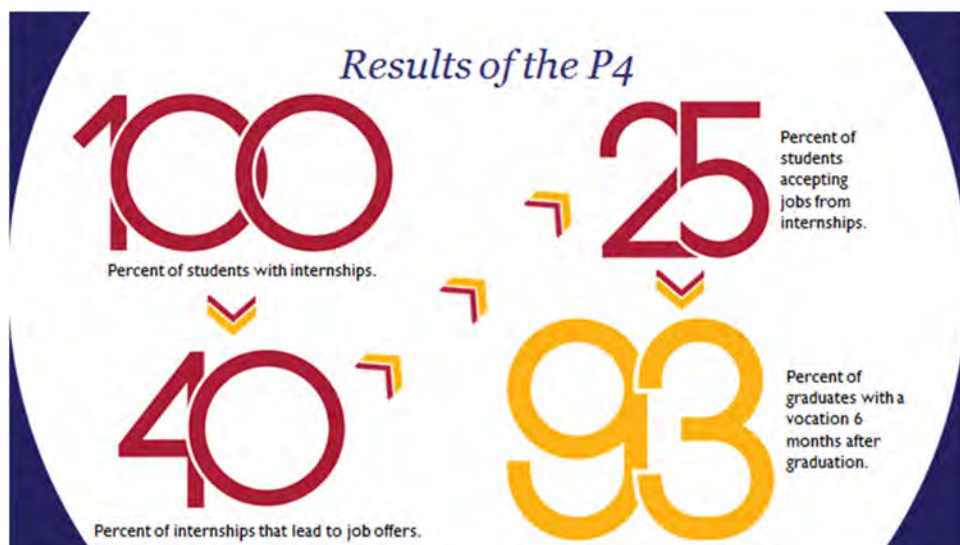-Internship Experience
-Service Day: Leading Teams
-PDP

BUS 402

Professional Development Leadership

-Finalize E-Portfolio
-Service Leadership
-First 90-Days Workshop
-Networking
-Transition from Student to Professional
-Final Assessment

complete specific requirements (see Figure 2). Through these experiences, students discern and learn to express their values and passions and develop life-learning skills. This awareness of self, coupled with practical professional development, equips students with tangible and measured outcomes, such as a brand video

Figure 3. Results of the P4

Results of the P4

100 Percent of students with internships.

25 Percent of students accepting jobs from internships.

40 Percent of internships that lead to job offers.

93 Percent of graduates with a vocation 6 months after graduation.

statement that answers the University core questions of "Who am I?" and "Who am I becoming?"

This mechanism of a requirement of personal growth and professional development in the curriculum provides the maximization of extra value that society in general is asking of higher education while aligning with the values of the mission of the University (see Appendix I). This dual impact of a requirement in the curriculum, relative to the resources used, helps students distinguish themselves both as a person and a professional in the community at large and gives the data outcomes that constituents have asked of universities (see Appendices III). With five years of outcome data, this program clearly addresses all of these concerns and maintains the development of the whole person (see Figure 3). From 2012 to 2016, 100% of students in this program successfully participated in one or more internships, 40% of those who interned were offered jobs, 25% accepted those offers, and 93% of business students had acquired their first vocational position within six months post-graduation (see Figure 3). Although it has been tested in a business curriculum, the program may be adapted to any major at any university meeting the expectations of constituents.

REVIEW OF LITERATURE

Universities and higher-education institutions have traditionally been a source for new talent in the workplace. These institutions have operated autonomously, focusing on theoretical knowledge but not necessarily professional, personal, or

employment outcomes. In general, academic institutions view themselves as networking and development platforms, not employment agencies, and refuse to identify themselves as anything else. Although I agree that universities are not employment agencies, there is more we can do to help with employment outcomes. With the rising cost of education and the inability for students to find jobs with adequate pay that enable them to pay back ever-increasing debt, the stakeholders and the government have a different perspective. The Obama Administration launched a College Scorecard which holds degree-seeking schools accountable for cost, value, and quality to provide families transparency with regard to return on investment. The Scorecard provides clear, concise information on cost, graduation rate, amount borrowed, and employment for every degree-granting institution in the country.[2] (Obama White House Archives, 2015)

Although the University has always provided value in most areas covered by the Federal Government College Scorecard, the timing of this program has enabled a greater maximization of return on the educational investment for students by going a step further and reporting higher-employment outcomes. In 2013, national thought leaders Andy Chan and Tommy Derry of Wake Forest University were primary editors of a crowdsourced paper entitled, "Rethinking Success from the Liberal Arts to Careers in the 21st Century." The crowdsourcing paper was written after a conference attended by representatives from 74 premier, higher-education institutions challenged universities to re-examine existing models of career development. The discussion centered on how to maximize value proposition through enhanced personal and career development for students and how to be the catalyst for transformational change, a topic at the center of higher education's future. "Many regard postgraduate employment as the primary measure of value provided by higher education."[3] (Chan and Derry, 2013) The authors suggest that critics accuse liberal arts institutions of not adequately providing this return on investment amidst higher tuition costs and weak job markets for graduates. Also, they worry that "despite the challenging trends indicated by the data, many schools seem to be evolving slowly." They worry that current systems in universities have remained static while the world of work has transformed.[4] (Chan and Derry, 2013) Most universities ask their career centers to get the results for which constituents are asking, but since they are not academic units, they cannot require students to participate in their programming. With four years of outcome data, this program clearly addresses all of these concerns and maintains the development of the whole person (see Figure 3).

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[2]"Higher Education." *Obama White House Archives*. The White House, Web. 09 June 2015. https://obama whitehouse.archives.gov/issues/education/higher-education.

[3]Chan, Andy and Tommy Derry. "A Roadmap for Transforming the College-to-Career Experience." Rethinking Success. May 2013, 2. http://rethinkingsuccess.wfu.edu/files/2013/05/A-Roadmap-for-Transforming-The-College-to-Career-Experience.pdf.

[4]Chan, Andy and Tommy Derry. "A Roadmap for Transforming the College-to-Career Experience." Rethinking Success. May 2013, 2. http://rethinkingsuccess.wfu.edu/files/2013/05/A-Roadmap-for-Transforming-The-College-to-Career-Experience.pdf.

Other entities associated with universities agree that solutions need to be more value focused. The professional organization for career services at universities, the National Association of Colleges and Employers (NACE), states in its new standards and protocols, "In light of escalating higher-education costs and perceived returns on the significant investment of time, effort, and resources extended by students and their families, NACE recognizes the critically important public discourse concerning the value and effectiveness of higher education as it relates to preparing the next generation work force. NACE further recognizes the growing importance of institutional outcome assessment efforts as they relate to improving higher-education performance and achieving institutional and academic program accreditation standards."[5] (NACE, 2014)

In 2007 with these concerns in mind, the school saw an opportunity to develop a new and different model that addresses these issues. By developing a program that marries self-assessment with theoretical and experiential learning in a holistic fashion, a new unique value proposition was created. The key to the success of the program is the fact that its completion is a graduation requirement for every business student. These types of requirements in the program become a mechanism for students to leave campus as students for various learning experiences allowing them to become comfortable in an industry environment. Through required site visits, mock interviews, speed networking, and an internship experience, students connect and network in the community at large. Students would not do this process on their own if it were not for the requirement. Scholars agree that a mechanism is important. "*In Organizational Strategy, Structure, and Process*", researchers Raymond E. Miles, Charles C. Snow, Alan D. Meyer, and Henry J Coleman, Jr. state that "an organization is both an articulated purpose and an established mechanism for achieving it. Efficient organizations establish mechanisms that complement their market strategy, but inefficient organizations struggle with these structural and process mechanisms."[6] (Miles et al., 1978)

Many constituents agree that by making experiential learning required, the program aligns more with the millennials' generational need for structure. Richard Sweeney writes in "*Demographics Millennial Behaviors*" that students strongly prefer learning by doing and interacting. Millennial students are also more engaged through active learning and effective experiential processes, such as hands-on experiences. Sweeney comments that "there are wide arrays of new learning opportunities that can be employed to better engage millennial students if universities are willing to take some risks and innovate."[7] (Sweeney, 2006) Neil Howe and William Strauss

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[5]National Association of Colleges and Employers. "Standards and Protocols for the collection and Dissemination of Graduating Student Initial Career Outcomes Information for Undergraduates." Bethlehem: National Association of Colleges and Employers, 2014.

[6]Miles, Raymond, E., Charles C. Snow, Alan D. Meyer, and Henry J. Coleman, Jr. "In Organizational Strategy Structure, and Process." *The Academy of Management* 3, no. 3 (1978), 59.

[7]Sweeney, Richard T. *Millennials Behaviors & Demographics.* Newark: New Jersey Institute of Technology, 2006, 6.

state in *Millennials Go to College: Strategies for a New Generation on Campus: Recruiting and Admissions, Campus Life, and the Classroom*, "if pre-workplace courses are made mandatory, perhaps for credit, no students will slip through the cracks. Parents and local employers will appreciate knowing that no collegian will miss out on basic workplace orientation. If such courses are left as being optional, a number of students can be expected not to take advantage of them."[8] (Howe and Strauss, 2007) Others, such as Ben Carpenter of the *New York Times*, who states in "Is Your Student Prepared for Life", are in agreement. "The answer is simple: colleges need to create, and require for graduation, a course in career training that would begin freshman year and end senior year,"[9] (New York Times, 2014) and this is how the program is designed.

Maximizing Value Giving a Competitive Advantage

Although there is ***strong recognition*** that schools are not businesses, it is important to recognize that they need to act as such to remain viable in the current market climate while maintaining the role of formation and growth for students. The university industry can no longer consciously make a decision to deny responsibility for assisting students in finding employment. If the university setting ignores the demand for employment outcomes, the industry will allow others, particularly online and less-expensive forms of educational systems, to dominate the market. Universities, in general, must figure out how to stay relevant while maintaining their mission of holistic education in an ever-changing landscape by developing new programs, like this one, to maximize a greater return on a student's educational investment of tuition and time. This program steps out of the normal status quo of education, where researchers such as W. Chan Kim and Renee Mauborgne, state in "Blue Ocean Strategy": "Cirque [Du Soleil] did not make its money by competing within the confines of the existing industry or by stealing customers from others. Instead, it created uncontested market space that made the competition irrelevant. It pulled in a whole new group of customers who were traditionally noncustomers of the industry."[10] (Kim and Mauborgne, 2004) The School chose to be innovative and developed a new blue-ocean strategy within a "mature" red-ocean industry. The dean attributes much of the significant growth of the school, 450 to 705 students, during the time period of 2010 to 2015 to the inception of the program.

By doing more than teaching, the program provides enhanced value creation by parting with traditional boundaries of voluntary professional development models through their career centers. Peter Drucker in "The Objectives of a Business"

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[8]Howe, N., and William, S. *Millennials Go to College: Strategies for a New Generation on Campus: Recruiting and Admissions, Campus Life, and the Classroom*. Great Falls: LifeCourse Associates, 2007.

[9]Carpenter, Ben. New York Times. August 31, 2014. https://www.nytimes.com/2014/09/01/opinion/is-your-student-prepared-for-life.html.

[10]Kim, W. Chan, and Renee Mauborgne. "Blue Ocean Strategy," *Harvard Business Review*. October (2004), Vol. 82(10), pp.76-84,156.

states that the only fruitful way to determine objectives is what is measured in each area and what the measurement should be, for the measurement used determines what one pays attention to by making things visible, tangible, and relevant. In terms of setting objectives for management, Drucker states that once goals and objectives are clear, it can be determined if they are being obtained or not.[11] (Drucker, 1954) Most importantly for the school, and thus the University, the four-year curriculum requirement model in the academic units allows the development of quantitative and qualitative vocational and employment outcomes for our constituents that would not be able to be collected if students were asked on a volunteer basis. Mark W. Johnson, Clayton M. Christensen, and Henning Kagermann, say in "Reinventing Your Business Model," that new models can reshape entire industries, and chief executive officers (CEOs) are looking into business model innovations to address permanent shifts in their market landscapes.[12] (Johnson et al., 2008)

This new way of seeing where mandates are made of students in regards to experiential activities outside the classroom can change how educational institutes think about their responsibility to society in general. This pragmatic program provides a service that is attractive to the extended community at large because they desire the outcomes and a greater return on educational investment. Michael Porter would call this change a "public good," because it will benefit the community and every firm in the industry.[13] (Porter, 2008) Peter Drucker elaborates on the importance of public responsibility for a program like this one. "To strive to make whatever is productive for our society, whatever strengthens it and advances its prosperity, a source of strength and prosperity for the enterprise."[14] (Drucker, 1954) Through these graduation requirements and a new strategy of connection from educational process to the professional world experience, students are provided the tools and network that will allow them to become preferred candidates in the field and be intentional in finding their first vocation.

The Secret Sauce of Alumni Participation in the Program

According to *Forbes Magazine*, it is seven times less expensive to keep a customer than to acquire one.[15] (Forbes, 2013) In creating a formalized program required of all business students, the school systemized an underutilized resource, its alumni. Bringing alumni back to campus regularly through organized activities engages them and simultaneously helps students develop professionally. Activi-

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[11]Drucker, Peter. The Objectives of a Business. *The Journal of Business*. Vol. 31, No. 2 (Apr., 1958), pp. 82.

[12]Johnson, Mark, Clayton Christiansen, and Henning Kagermann. "Reinventing Your Business Model." *Harvard Business Review* 86, no. 12 (2008), 50-59.

[13]Porter, Michael. "The Five Competitive Forces that Shape Strategy." *Harvard Business Review* 86, no. 1 (2008), 78-93.

[14]Drucker, 82.

[15]McCue, T. J. "Warning: Is Your New Customer Coming Back? 4 Steps You Should Take Now." *Forbes Magazine*, February 2013. http://www.forbes.com/sites/tjmccue/2013/02/04/warning-is-your-new-customer-coming-back-4-steps-you-should-take-now/.

ties, such as speakers in the professional development classes or mentors for mock and informational interviews, help them unite and reconnect with the brand of the University as a whole. These relationships with our alumni are intangible assets and are difficult to measure. However, since the inception of the program, there has been an average of 250 alums helping in the program each year, with a simultaneous increase in giving from alumni and parents. Because they are engaged by using their time and talents, their treasures follow. In "Transforming the Balanced Scorecard from Performance Measurement to Strategic Management: Part I," Robert S. Kaplan and David P. Norton emphasize measures of intangible assets, such as the university alumnus by stating, "improvements in intangible assets affect financial outcomes through chains of cause and effect relationships. The value cannot be separated from the organizational processes that transform intangibles into customer and financial outcomes. The value does not reside in any individual intangible asset. It arises from creating the entire set of assets along with a strategy that links them together. The value-creation process is multiplicative, not additive."[16] (Kaplan and Norton, 2001)

Jay Barney states that a "firm that exploits its resources has the advantage simply by behaving in an efficient and effective manner.[17] (Barney, 1991) The networking with alumni is a major aspect of the program and is an integral part of the student experience that adds value. Enabling powerful relationships to be utilized, nourished, and maintained in a systematic fashion gives alumni a feeling and sense of value and belonging. This is considered an experience economy, thus differentiating the school and giving it a competitive advantage. Ultimately, more formalized partnerships emerge as a value-added benefit, just as Goldman Sachs differentiated their company by "providing unparalleled service by maintaining close relationships with client executives and coordinating the array of service it offers."[18] (Hambrick and Fredrickson, 2005) The identification of a core competency, such as the alumni, enables leaders to develop what Hamel and Prahalad and call "strategic architecture."[19] (Hamel and Prahalad, 1990) This new architecture creates a maximization of return on investment for students by better utilizing this type of resource and thus creating a network for them. Niraj Dawar states in "When Marketing is Strategy," "people who want to connect want to be where everyone else is hanging out. The very nature of network effects is that it is accumulative."[20] (Dawar, 2013) David Collins and Cynthia Montgomery state in "Competing on Resources" that "valuable resources can take a variety of forms,

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[16]Kaplan, Robert S. and David P. Norton. "Transforming the Balanced Scorecard from Performance Measurement to Strategic Management: Part I." *Accounting Horizons* 15, no. 1 (2001), 89.

[17]Barney, Jay. "Firm Resources and Sustained Competitive Advantage," *Journal of Management* 17, no. 1 (1991). 115.

[18]Hambrick, Donald C. and James W. Fredrickson "Are You Sure You Have a Strategy?" *Academy of Management Executive* 19, no. 4 (2005), 55.

[19]Hamel, C. K. and Gary Prahalad. "Core Competence of the Corporation." *Harvard Business Review Business Source Premier* 3, May-June (1990), 3.

[20]Dawar, Niraj. "When Marketing is Strategy," *Harvard Business Review* 6, December (2013).

including some overlooked by the narrow conception of core competence and capabilities." By looking at current existing relationships in schools, Collins and Montgomery (2008) suggest that the capabilities and resources become the heart of a company's competitive positions.[21] Jay Barney (1991) states, "positive reputations of firms among customers and suppliers have been cited as sources of competitive advantage."[22]

Connecting alumni and students through required experiences provides meaningful opportunities and networking for job seekers to discern and find the right-fit vocation, assisting them in making a successful transition from college to the workplace. The employment outcomes that result allow the family unit to have an experience economy which aligns and meets their expectations of the money they invested in the education. Jasmine Dudley, a prior student worker, states, "the amount of engagement from alums, local and non-local businesses have been a huge accomplishment for the program. All of the outside interest and support has not only opened up more opportunity for graduates, but it has helped provide funding for the progression of the program. It has allowed students to learn through experience, and made it possible for companies to become interested in what the school is doing." (see Appendix III). Michael Porter (2008) states, "At the most fundamental level, firms create competitive advantage by perceiving or discovering new and better ways to compete in an industry and bringing them to market, which is ultimately an act of innovation."[23] "Companies that create blue oceans usually reap the benefits without credible challenges for 10–15 years, as these types of programs are easier to imagine than to do."[24] (Kim et al., 2004).

BACKGROUND – CREATION OF PROGRAM

In 2007, the faculty in the school, and particularly the dean, were frustrated by the inability to answer constituents' questions with regard to job outcomes. At the time, University did offer some services, but any information that was collected on campus was made confidential and assessed mostly voluntary student participation. As director of the creation, development, and implementation, I viewed any new program that would be created from a unique three-fold perspective of a parent, student, and staff member. As the parent of a 2007 business major, I knew the school had done a marvelous job in teaching theoretical learning, but when it came to determining what type of vocation or career my son would have upon graduation, there was no program that had prepared him. As a liberal arts major myself at the University, I knew firsthand the challenges my classmates

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[21]Collins, David and Cynthia Montgomery. "Competing on Resources," *Harvard Business Review* 86, no. 7/8, July-August (2008), 142.

[22]Barney, 116.

[23]Porter, 30-36.

[24]Kim, W. Chan, and Renee Mauborgne. "Blue Ocean Strategy," *Harvard Business Review*. October (2004), Vol. 82(10), pp.76-84,156.

had regarding their lack of preparation for a career. Additionally, as a business school staff member, the dean and I listened to our constituents, including businesses, faculty, staff, and potential students at regular visitation days, and it was very clear that we needed a different path in the areas of personal and professional development. The family units wanted to know if their sons and daughters would be working upon graduation. With the growing expectations from these constituents and recognizing consumer trends in a dynamic market, action needed to be taken.

As Ron Albertson said in "A Roadmap for Transforming the College to Career Experience," *dream big.* The school did dream big with the constituents' demands in mind and recognized that current resources could be used more effectively. Albertson goes on to state, "it's amazing how one's perspective and posture can change when you shift from a limited resources mentality to one that allows you to dream and extol the importance of the college-to-career conversation."[25] (Chan and Derry, 2013) Through an internal review and many off-campus retreats, the school realized that the current system was not working well enough to get the results demanded, so a creative rethinking of normal processes was evaluated. As new pathways were discussed and implemented, many challenges occurred with existing systems. In *Finding the Right Path,* Laurence Capron and Will Mitchell see that as a regular pattern in their research; "even when developed internally, new resources and capabilities that threaten to make current ones obsolete will meet with resistance from anyone invested in old practices, culture and processes. Bounds of tradition and in-the-box thinking subscribe only to traditional best practices."[26] (Capron and Mitchell, 2010) The school did not look to current best practices, because they knew they needed a new perspective with an ever-changing work world. Christine Oliver states in "Sustainable Competitive Advantage: Combining Institutional and Resource-Based Views" that "firms will be willing to defy tradition when declining performance, economic crises, or increasingly outdated processes or practices make the need for change more obvious or urgent. Resources and capabilities that are developed and sustained over time are vulnerable to cognitive sunk costs because individuals find it difficult for reasons of loyalty, fear, or habit to replace or abandon long-standing traditions and routines."[27] (Oliver, 1997) The rethinking of how the school operated was necessary to ensure that students find success with a new path. Gary Hamel and C. K. Prahalad in "The Core Competence of the Corporation" suggest that a rethinking of the corporation helps one to reform the principles of management and develop a new engine for business development. By shifting resources and identifying possible core competencies, an organization can strengthen its position, developing what they call strategic architecture, and then

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[25]Chan and Derry, 9.

[26]Capron, Laurence and Will Mitchell. "Finding the Right Path," *Harvard Business Review* 88, no. 7/8 (2010), 104.

[27]Oliver, Christine. "Sustainable Competitive Advantage," *Strategic Management Journal* 18, no. 9 (1997), 703.

communicate the intent both inside and outside the organization.[28] (Hamel and Prahalad, 1990)

At the retreats, faculty and staff reviewed the latest accreditation report from the Association to Advance Collegiate Schools of Business (AACSB), resulting in the identification of curriculum and program gaps. Faculty comments included a desire to:

- bridge build and collaborate with local organizations;
- match classes to organizations in long-term strategic relationships;
- create a better brand and better positioning of the school of business and its students in the marketplace;
- create career placement credit classes where the millennial student who appreciates more structured courses would be required to complete certain reflection and formation development;
- assist students in engaging in a career in the form of a vocation that will fulfill their lives by asking them what is their purpose, passion, and calling;
- work closely with career services to improve and increase opportunities for students;
- and strengthen career preparation and placements through networking, interviewing skills, and teaching students how to sell themselves as serious candidates for the workplace.

In December 2007 and with a collaborative spirit, the dean proposed the co-curricular Professional Development Program that the business faculty and staff had created as a result of AACSB feedback, faculty and student recommendations, and subcommittee discussions. The logistics would continue to unfold as systems could be implemented and evolve on campus. Beginning with the class of 2012 (entry level, August 2008), all students in the school of business would be required to go through the program. An outcome of the collaborative development of the program, the dean was encouraged to develop business advisory councils in different cities. These boards would be an instrument that would assist in the professional development needed as well as give continual feedback about how the program should progress. Since January, 2008, the dean has developed three advisory boards in Portland, Seattle, and San Francisco.

With no line item in the budget, staff and student workers began the development of the program. Students, with the ability to remove themselves from old processes, were fully engaged in the development of the program. By allowing an honest evaluation and critique of the roll out of the program, creative disruptive innovation occurred. This process was a key component in understanding our students better, and it enabled the school to achieve the outcomes that our constituents wanted and needed. (**See tribute to the student workers in beginning of the paper.**)

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[28]Hamel and Prahalad, 3.

PROGRAM CONTENT

Students engage in a series of professional development activities in credit-based classes throughout their four-year academic career. By providing yearly milestones integrated into the academic undergraduate program, students align their academic experience with the professional world. This program emphasizes why the formation of the person in a holistic fashion is valuable in creating future employees, civic leaders, and good citizens. The program integrates advising, self-assessment, leadership, ethics, professional development, site visits or job shadows, internships, and networking with businesses and alumni, as well as other activities that assist in the student's development (see Figure 2). This curriculum challenges and develops students beginning in the first week of school to determine their interests as well as to find and fulfill their full potential through deep self-reflection and creativity. With a strong emphasis on Gallup-based strengths, the individualized self-assessment process allows students to discover innate talents and hone in on their strengths by means of tests that compel them to learn more about themselves. It also provides a common language and positive psychology, which assists students as they think about their professional goals and how to actualize them after graduation. Combined with the knowledge gained in the classroom, one's individual and soft-skills talents become strengths that can greatly benefit the community at large and contribute to vocational success.

Four classes in the program include the following. See complete curriculum in Figure 2.

1. Freshman Year - BUS 100 Introduction to Leadership Skills — 3 credit hours.
2. Sophomore Year - BUS 202 Professional Development — 1 credit hour.
3. Junior Year - BUS 302 Professional Development Internship — 3 credit hour. Students will complete a LinkedIn portfolio.
4. Senior Year - BUS 402 Professional Development Leadership — 1 credit hour.

These classes provide an environment where students develop habits of life-long skills of reflection and discernment of their professional and personal life. "We are what we repeatedly do. Excellence, then, is not an act, but a habit." These words by Aristotle encapsulate the school's approach to teaching students to organize their thinking and to be successful in their daily actions by instilling habits of the heart and mind that lead their development. All of these reflective documents are kept in a portfolio system that can be seen by other educators, advisors, and mentors to continue a conversation about the student's development during college (see Appendix IV). The students then can choose to transfer pertinent work samples to their LinkedIn profile for the community outside college.

In the first two years of the program, students spend time assessing themselves in their formation as a budding professional through several activities:

- Strengths Quest
- Résumé and cover letter building
- O*Net (United States Government Labor-Bureau personality test)
- 360-communication assessment (allowing students to understand how their style of communication is perceived by others)
- A service practicum (students learn a sense of engagement in their community)
- Site visits at companies
- Informational and group mock interviews
- Writing a professional development plan (assists students in setting their short and long-term goals)
- Create an electronic portfolio (students can show tangible demonstration of skills and achievements)
- Development of a draft of personal brand statement
- Dress for success seminar
- Network and connect with alumni and businesses

In their last two years of school, students work on the following:

- Servant leadership
- Identifying a right fit employer whose values reflect their own through an employer profile.
- Formalizing their LinkedIn profile
- Develop a personal brand video from their draft
- Attend speed-networking events
- Participate in an etiquette meal
- Participate in an individual mock interview
- Learn financial literacy through budgeting
- Find and complete an internship and reflection
- Develop leadership skills for their teams and how to manage their boss
- Seminars in business ethics and the transition from a student to a professional
- Students consult for small business and non-profit organizations as part of their service learning

The program participants leave knowing how to manage their career or what the school calls vocation and act as a professional. They develop professional skills and learn to recognize the responsibility of professionalism in order to better the community around them.

OUTCOMES OF THE PROGRAM

The program's ultimate goal is student success realized through measureable outcomes. For four years, the school of business has determined the following results:

Data, 2012–2016 (Five Years of Statistics)

1. 100% of business students had at least one internship
2. Average of 40% of the internships turned into job offers
3. Average of 25% of students accepted jobs from internships
4. Average of 93% of job placements six months out after graduation

Other important outcomes that are not always measureable are the students' ability to articulate their own brand statements through video. This tangible item shows our students can answer the University core questions of "Who am I?" and "Who am I becoming?" By utilizing Strengths Quest and other personal assessment tools, students meet with the program faculty member who mentors them as they learn to express who they are as a person in a 30-second draft brand statement. Students continue to build and reflect their draft brand statement between their sophomore and junior years. In the beginning of junior year, students create a video to communicate their reflected developed personal brand, unique personhood, and best self. They cannot video tape their brand and be themselves unless they truly believe in what they are saying. The skills involved in creating these videos, such as telling their story, are also transferrable to interviewing. Students gain digital literacy by organizing, understanding, evaluating, analyzing, creating, and communicating information. According to "The State of Video in Education 2015: A Kaltura Report," "Video improves the learning experience, as it is a useful form of personal feedback. Students are able to critique themselves when they produce videos showing themselves performing."[29] (Kaltura, 2015) Additionally, videos "teach students media literacy and fluency where they learn to communicate in multi-modal format intended for wide audiences."[30] (Kaltura, 2015) Over 700 students have completed the process, and there has not been one student who reported not feeling more confident and prepared by expressing who they really are in the personal brand statement and video project.
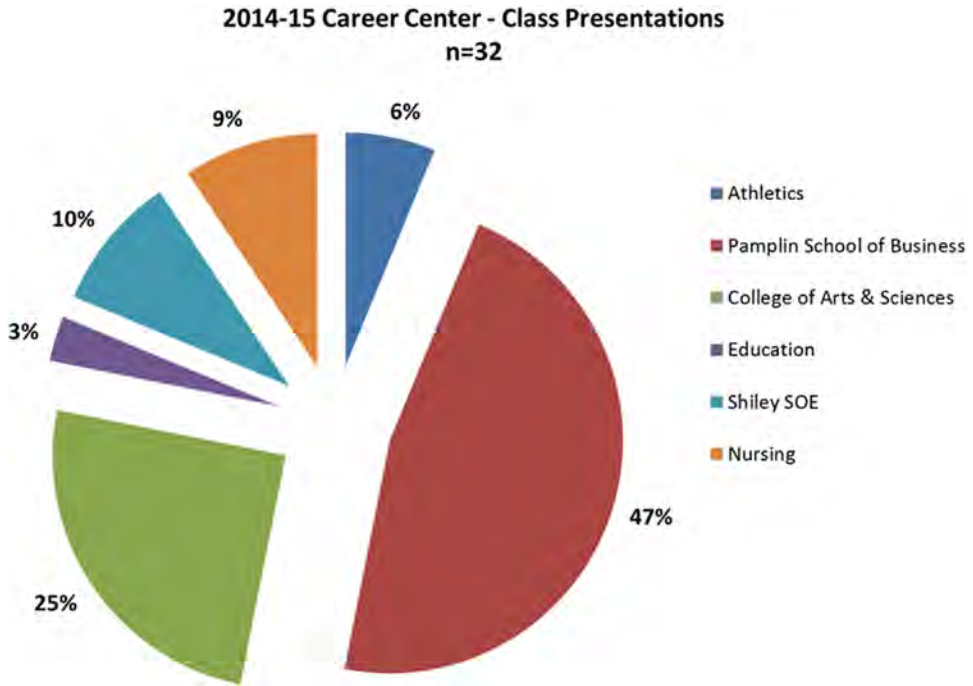
One of this co-curricular program's goals is to utilize existing resources that were once underutilized on campus by driving students to them. Students use existing resources on campus at the Library Digital Lab to produce these videos. Other departments that are better utilized include Career Services. Even though the school houses approximately 19% of the university student population, Career Services presented 47% of their class presentations in 2014–2015 to the school of business, showing that intentional co-curricular systems work. See chart of Career Center presentations.

The university is already a good value, especially with its significant discount rate through numerous merit-based scholarships. The university received an

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[29]Kaltura. "The State of Video in Education 2015: A Kaltura Report." Kaltura, 2015. http://site.kaltura.com/rs/984-SDM-859/images/The_State_of_Video_in_Education_2015_a_Kaltura_Report.pdf.

[30]Kaltura. "The State of Video in Education 2015: A Kaltura Report." Kaltura, 2015. http://site.kaltura.com/rs/984-SDM-859/images/The_State_of_Video_in_Education_2015_a_Kaltura_Report.pdf.

Figure 4. Data provided by Career Center

2014-15 Career Center - Class Presentations
n=32

- Athletics — 6%
- Pamplin School of Business — 47%
- College of Arts & Sciences — 25%
- Education — 3%
- Shiley SOE — 10%
- Nursing — 9%

award for each year in the past five years by Kiplinger's Personal Finance as the number 1 in the state for "best value" among private colleges and universities. Additionally, *Bloomberg Businessweek* rates the university as number 1 in the state for "best return on investment." This program adds extra value that helps to brand the school, and thus, the University. The University, in its institutional research brief, states, "As college costs become increasingly burdensome, families and students are focusing on value added from college. Consequently, it will become more important for institutions to distinguish themselves in specific disciplines and opportunities, and be able to show student outcomes that convince families the investment will be worthwhile." (University of Portland, Institutional Research, January 2014) The discerned learning experience and the development of an intentional network that participants can tap into for potential employment upon graduation allow students opportunities to pay their federal student loans back at a quicker pace. These outcomes give an opportunity for the school to capitalize on and enhance its brand. Since these consumers already know that they are saving opportunity cost monies by attending an institution that focuses on students graduation with a four-year period, they are willing to pay more.

CONCLUSION

This required credit-based professional program is a unique, added-value proposition in higher education for students. Relative to the cost of the program, the impact of the outcomes of personal and professional development maximizes the return on educational investment. (Appendix II) While continuing to align with the university's mission, the curriculum guides them to engage in their personal growth formation and professional development. Students learn to become more strategic in their planning of leading self while marrying theoretical, self-assessment, and experiential learning. Engaging early in their academic career, students benefit greatly by assessing who they are as a person and learning to develop a network with alumni. Many institutions nationwide implement parts of the program, but usually, you will see that it is not required. (Chan, 2013) Traditionally, academia asks career centers to provide outcomes, but they have the disadvantage of not being able to require the programming necessary to obtain the necessary outcomes and results. Although difficult to get started in a red-ocean industry like academia, it is doable. This mechanism of a credit-based professional development requirement is the key in the program that enriches the undergraduate collegiate experience and increases the value of higher education by ensuring that students are intentional in discerning a path for their lives and finding a right-fit vocation beyond a job or career (see Figure 1). While the students benefit, the school leverages a unique nature of a holistic education and in the end gives the outcomes that society is asking. Chan's paper discussed how the topic of higher education should be that "many regard post-graduate employment as the primary measure of value provided by higher education."[3] (Chan and Derry, 2013) This program is the catalyst for transformational change and adequately provides a greater return on investment amidst higher tuition costs for graduates. With five years of outcome data, this program addresses these concerns (see Figure 3).

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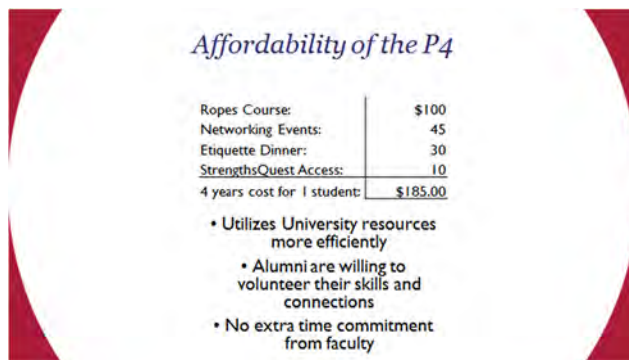Sweeney, R.T. (2006). *Millennials Behaviors & Demographics*. Newark: New Jersey Institute of Technology.

MISSION

The University of Portland is located in a highly sought-after area by both faculty and staff in the geographic location of Portland, Oregon. Created in 1939 by the Congregation of Holy Cross priests and governed by an independent board of directors, the University of Portland provides an excellent holistic Catholic education in which the formation of the whole person is the focus. These students receive a value-based education that develops and prepares people who will have opportunities to respond to the needs of the world and its human family, thus benefiting society. This education assists them in finding their "right-fit" vocation. Blessed Basil Moreau, founder of Holy Cross, stated, "We shall always place education side by side with instruction; the mind will not be cultivated at the expense of the heart."

Within the university, the mission of the Robert B. Pamplin, Jr. School of Business Administration includes the development of student competence, leadership abilities, a sense of social responsibility, and global perspectives through educational excellence. *Their stated goal is to provide students with innovative, challenging educational experiences that go beyond business fundamentals to develop the leadership skills and knowledge required for successful careers.* This mission challenges the school to provide each student with opportunities to obtain a comprehensive understanding of business and the leadership skills needed to manage organizations: communication, problem solving, teamwork, utilization of technology, and professional development taught in global and ethical contexts. Associated with the accreditation body of the AACSB, a continual review and self-evaluation ensure that the school stays in the mode and spirit of constant improvement and innovation.

APPENDIX II

Affordability of the P4

Ropes Course:	$100
Networking Events:	45
Etiquette Dinner:	30
StrengthsQuest Access:	10
4 years cost for 1 student:	$185.00

- Utilizes University resources more efficiently
- Alumni are willing to volunteer their skills and connections
- No extra time commitment from faculty

APPENDIX III

Commentaries from Students & Business Community

Kylie Penn, Human Resources, previously employed by Adidas and now at Columbia Sportswear, writes, "The students at U of P who have interviewed and have been hired have been some of the most prepared for the workplace straight out of school that I (and my hiring managers) have seen. Their level of professionalism, business acumen and interviewing skills are far beyond other graduating seniors. In addition, once on the job, their technical skills are on par with being able to smoothly transition into the workplace."

Brian Klemsz, parent and provider of internships, writes "thank you for helping all of the business students with the P4 program. I know that students may not always appreciate the help that you are giving them, but when they go out into the business world and interview, they have a substantial advantage versus their competition. We see the advantage each year as we interview for interns and the UP students compete against other students."

Michelle Schwartz, Manager, Diversity and University Programs of Cambia, writes, "As an employer, I have had the opportunity to observe how different universities approach preparing students for their career path. I have been consistently impressed with the approach taken by the Pamplin School of Business and wanted to highlight a few of the strengths I have observed. First, I really appreciate how early faculty and staff begin speaking with students about career preparation. Unfortunately, academia can sometimes move slowly to respond the changing needs of employers and graduates in terms of preparation for a competitive job market. Starting the conversation early is key to success, both for students and for university programs to be effective. It is imperative for universities to link outcomes to learning objectives. In my experience, the competitive advantage for the University of Portland is that you know what you want a UP graduate to look like and you have designed the curriculum to deliver that.

"When recruiting students, they and their families often want to know why they should pick one school or program over another. Part of recruitment effectiveness has to do with telling your story. What is innovative about the approach taken at the Pamplin School of Business is that you actively engage students in helping to tell that story through requiring them to complete a personal brand statement and video. Faculty and staff have designed this project in a format that speaks to their generation. You help them leverage technology in a fun way that helps build their skill set so that they are reflective on what makes them stand out as individuals and UP students/graduates.

"The personal branding project is also especially helpful when working with a diverse student population. Each year, I meet more international students on campus. These students are often challenged by cultural differences in the U.S. job market and hiring process. They are often asked to speak at length about their experience and what differentiates them as candidates. For students from other

cultures, this can often be a challenge. By completing their personal brand statement, they are given the opportunity to build skills in an area where they might have some discomfort. By creating a safe environment and helping them to explore this topic with other students, you are also helping them to prepare for the future. I am proud to have the opportunity to work with UP students, staff and faculty. Our corporate partnership reflects in part our commitment to support the work you do to prepare students for their next professional journey."

Balki Kodarapu, Director of Marketing at DreamPath, confirms this by working with other universities. He states, "For the past year or so, we've been working on our software product that helps college students find a better path to their future careers. We work closely with dozens of college career offices throughout the Northwest. It took us a while, but recently we realized that the best way to help students is by integrating this career education right into their required academic curriculum. No matter how much expertise the career offices have or how sophisticated the software tools are, students are too busy to pay attention to anything that is 'optional.' We are seeing much better adoption and results after we expanded our tool to include a holistic curriculum."

Kirill Grinko, alum, writes, "When I came to the University of Portland, I was very excited and overwhelmed. The curriculum was tough and required additional participation outside of the degree. Being a non-traditional student, I said to myself, 'the last thing I need is professional preparation; I'm here for the degree.' Furthermore, I wanted to opt out from the P4 program. The result of this mindset brought forth many unsuccessful interviews and lost job opportunities. The turning point came when Gwynn Klobes, the Director of the P4 program told me to 'get into the spirit of the program.' At that moment, I realized that the Pamplin Professional Preparation Program should not be viewed as a graduation requirement but instead, a very valuable and fundamentally constructive resource. Our university cares not only about the technical degree, but wants us to be successful, living a purpose-driven life. Having realized the importance of the program, I chose to embrace it and 'get into the spirit.' The outcomes of the knowledge and skills gained via the P4 program have been incredible. I discovered more of who I am as an individual, my professional passions and goals, built-up my professional profile, and received a full-time offer from a reputable global firm."

Lindsey Frilot, student, writes: "While working at Fisher Investments, I have gained professionalism that I would have never learned by sitting in a classroom. I learned not only to value business practices, but I also gained information about the investment industry, which I would love to continue working for in the future. I was so fortunate to be given such an amazing opportunity, but I believe it was possible with the proper training that was learned through P4 and the Pamplin School of Business Administration, such as mock interviewing, résumé work-shops, and overall experience of speaking with professionals during job shadows. I know that I stood out as a candidate to Fisher Investments because of the attributes

I learned from P4 and PSOBA, and I know I will stand out as an employee after receiving the experience I did at Fisher Investments."

Charyn Colvin, student, writes, "Something I've noticed in past service projects that were also reflected in this service project is that walls and barriers start to disappear between students as we all work towards a common goal. Many of these students I have never interacted with before, but while we worked together on this project, we started interacting on a level that was comfortable and sincere."

Olivia Muller, student, writes, "PSOBA rightfully prepared me for my internship at Comcast SportsNet. When I went into the interview, I was well equipped with the right professional outfit, proper interview etiquette and technique. I was able to recognize opportunities beyond basic duties."

Jasmine Dudley, student, writes, "I think, as a student, we are prepared for job hunting really well. We have so much help with our résumés and cover letters; we have opportunities to get them looked over by professionals, faculty and staff. With all of those resources right from the get-go, students can be comfortable applying for jobs and internships knowing their first impressions (résumé and cover letter) are up to par. There has been a ripple effect by my being prepared through the P4 program. It has come in handy for my friends. The other schools within the university have yet to truly encourage professional development through a program like ours, so I find them coming to me to ask questions regarding their résumés, cover letters, job openings, LinkedIn profiles, etc., all of which I have had the opportunity to learn in school. The program is not only helping the participating students but their friends as well. I have had great experiences with the advising and mentoring aspects of the program. Professionals that involve themselves with this program truly want to help! For example, during my individual mock interview, I was matched with an interviewer, Madeline Miller, who noticed that my résumé could use a bit of work; she then took my résumé home with her and wrote changes and ideas all over it, giving me the opportunity to make any changes I would agree with. I was so thankful that she took personal time to help further prepare me for upcoming interviews."

Ben Paul, student, writes, "The P4 program deserves credit for my internship at Nike. The P4 brand statement video helped prepare me to make an introduction video to Nike. The brand statement helped me clarify and describe my greatest strengths."

Gavin Flynn, student, writes, "I just wanted to let you know that I got an internship position at Mind the Gap! I am really excited for this opportunity and can't wait to start getting some real world experience this coming summer. I wanted to thank for all the help you provided over the past few months. You did a great job of getting me focused and proactive in the search process. It definitely paid off!"

Linh Tran, student, writes "I am a fan of the P4 program; it provides so many activities that enable me to discover myself and then helps me transfer my style into words, which is useful for both me and employers in the process of finding good fit for a job position. It helps me to realize what my strengths are and to focus on it as well as how to eliminate my weaknesses. The experiences I have in

business world have confirmed the accurate description that the P4 program's test had given. I found myself growing into the directions of those. The P4 program has equipped me well for the future and I am excited for those who are going into the process of discovering themselves and so they will be ready for the professional business environment."

APPENDIX IV
Pamplin School of Business - Advising Procedures

Students	Faculty Advisors	Staff
Academic Planning · Begin process of personal development by considering interests, strengths, and personal goals and brainstorming with faculty advisor and others as to majors to explore. · Choose a major, possible minors, and study options. · Understand the classes and requirements to complete their degree.	Academic Advising · Help students select classes appropriate for their careers and interests. · Assist student registration for next semester courses. · Monitor academic warnings of their advisees.	Academic Advising · Meet with students for individual and group advising. Remember the whole person in the advising process. · Assist students in the registration process, transfer of credits, course waitlists, and other documents. · Create a four-year degree plan with students and monitor progress toward its completion. · Assist students in their study-abroad plans. · Track academic warnings and contact students with two or more warnings.
Career Development · Continually assess personal, professional, and educational goals, including graduate school. · Update résumé and P4 portfolio. · Meet regularly with advisor, bringing the updated résumé and P4 portfolio to all meetings. · Consult with advisor, other faculty, and mentors about internships and professional opportunities.	Career Advising · Assist students in P4 process by helping them discern personal, professional, and educational goals. · Advise students in pursuit of a career by assessing skills, values, and experience needed to attain their goals. · Encourage students to assume leadership roles in business clubs, service activities, and other organizations. · Help students identify business contacts, internships, and other career opportunities.	Career Advising · Work with faculty in coordinating all elements of the P4 program. · Help connect students to internship, service, and other career opportunities.

P4: Taking care of business

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Graduates of all majors agree. Finding a job after graduation can be difficult, especially in an increasingly competitive job market.

But the Pamplin School of Business school is trying to give its students an edge with the Pamplin Professional Preparation Program (P4), now in its third year. Next year's seniors will be the first class to complete the program.

"We were hearing feedback from companies saying that our graduates were academically good but lacking in some areas of professional development," Gwynn Klobes, director of Professional Development, said.

The program seeks to help students begin to identify their goals early and then use their own strengths to help them achieve those goals, according to Klobes.

"The P4 program is a holistic program," Klobes said. "It is designed to help students discern who they are as people."

Over their four years at UP, business students must complete a number of requirements as part of the program.

"The program is coupled closely with Career Services," Klobes said. "And students also complete program requirements as part of their business classes."

Freshman year: Developing goals

Sophomore year: Planning for success

Senior year: Learning to navigate the professional world

Junior year: Gaining experience

Service Projects

Students in the Business School participate in a daylong service project each year.

"The goal of the service projects is to teach students to be leaders and to connect with the community in which they live," Gwynn Klobes, director of Professional Development, said.

Service projects in the past have included painting at Holy Cross Catholic School and pulling ivy in Forest Park.

"The service projects were really fun," sophomore Kaela Hicks said. "It was good to do something you can see, since a lot of the things we do in business aren't necessarily visible."

The Firm, the Market, and the Rising Finance Professional

Leonard L. Lundstrum

Northern Illinois University

The extant literature argues that commitment to an occupation is a critical factor in student retention and that potential finance students may not get the necessary career information to commit to a finance major—with deleterious effects on retention and career development. We begin to address this information need with a parsimonious overview of the economic functions of capital providers, capital seekers, and the institutions and firm types that have arisen to facilitate the resource allocation function performed by modern financial markets. Understanding the economic functions brings clarity to which types of financial skill sets the firm requires.

Keywords: Finance Career, Opportunities, Economic Function, Student, Capital

Disciplines of Interest: Business, Finance, Economics

INTRODUCTION

Commitment to a planned occupation is a critical factor in student retention [Bain et al., 2013]. Morgan et al. [2006] note that a first course in finance is offered for freshman and sophomores at only 15 percent of schools. As a result of an absence of an early finance course, Bain et al. argue that finance students may not be getting the engagement they need to solidify career plans and commit to a planned occupation. Given the dearth of accessible, organized information on career opportunities in finance, there currently exists a need for a parsimonious, jargon-free elucidation of these opportunities for students who are considering a finance career.

The current paper fills this yawning gap by clearly describing finance career opportunities. Clear articulation of these career opportunities can (1) improve student engagement and commitment to a planned occupation, and therefore retention [Bain et al., 2013]; (2) serve as a substitute for career information that might otherwise be acquired in a lower-division finance course; (3) reduce the commonplace and costly switching of majors by upper-division students that Manski [1989] reports is driven by the students' late acquisition of career information; (4) improve institutional efficiency; and (5) help college recruiters

better articulate these opportunities and attract majors for whom finance is a good fit [Granitz et al., 2014].

The current paper aims to address this need for clearly articulated information about finance career opportunities and the skill sets that each type of firm requires. The paper is organized to be a resource for students contemplating studying finance, college recruiters, and universities looking to improve the communication of information about careers to their students. For finance students who are searching for a job, this paper helps identify types of finance skill sets and their preferred firm type.

Financial Skill Sets Required to Perform Economic Functions in Capital Markets

Capital market firms perform a wide variety of economic functions. When contemplating a finance career, it is necessary to understand which finance skills are required to perform each economic function. The purpose here is to first identify the skill sets that are of the greatest interest to the reader and, second, to identify the types of firms, financial and nonfinancial, that perform the economic functions that require a particular financial skill set. The economic proposition behind hiring a financial professional is, of course, the professional's understanding of capital market theory and investment analysis, pricing and risk, and the ability to apply this understanding to make sound business decisions. The following is to inform a student's choice about professional training with an eye toward more deliberate preparation for a preferred career path.

Career Opportunities Dictated by Early Choices about Skill Set Development

Fierce competition in capital markets has forced firms to become more efficient to survive, and greater specialization has resulted. As a result of greater specialization, choices must be made about the skill sets upon which to focus one's professional training. Furthermore, some initial choices about professional training reduce future career opportunities far more than do other initial choices. Making thoughtful choices early on can later yield a more productive search for a professional position that matches one's skills. In what follows, each type of capital market firm is reviewed and the required financial skill sets for each are identified.

The paper is organized as follows. The first section presents an overview of capital markets. The second section discusses capital markets and the finance professional. The third section discusses career choices. The fourth section discusses entry points into finance and their effect on career progression. The final section concludes.

CAPITAL MARKETS FINANCE

Capital seekers and capital providers meet in capital markets, where seekers try to find low-cost capital and providers search for the best returns on their

capital. A capital-seeking firm needs investment capital for a business project, say, a factory, to produce goods to sell in a product market. Seekers compete to develop projects that produce a product/service for which the customer is willing to pay a high enough price to generate a rate of return sufficient to attract capital. Before seeking capital, the capital seeker completes his or her own in-house review of the viability of capital market funding of the project. This in-house review requires detailed analysis of how the proposed project will be viewed by capital providers, with an eye toward how the provider will make the investment decision. This in-house analysis informs the seeker's pitch strategy to raise capital from providers. Capital seekers are on the so-called "sell side." Seekers want capital providers to "buy" their pitch and provide the seeker with investment capital.

After completing its scrutiny of the project for which capital is to be sought, the capital-seeking firm will often hire a capital market advisor. The advisor does not, in any way, substitute for in-house financial acumen at the firm level. Capital is scarce, and mobile, and demands a sufficient rate of return, and so the advisor will vet a firm's proposed project before it agrees to help the firm seek capital. If the firm is unable to make a compelling case for how the firm's project will generate a return sufficient for the capital provider, the advisor will not accept the capital seeker as a client. When a mature business seeks capital, it will trade off, alternatively, the relative advantages and disadvantages of working with capital market advisors, capital provider firms, or banks.

Modern Markets and Securitization

Markets have evolved to the point that oftentimes a middleman anticipates the risk/return appetite of capital providers. The middleman will invest his or her own capital in a seeker's project and then "warehouse" the investment. The middleman subsequently repackages and sells off this warehoused investment, at a markup, to other capital providers. Middleman activity has driven a dramatic increase in the importance of capital markets in the United States. Over 70 percent of external financing of corporate investment in the United States comes from capital markets, while only 30 percent comes from banks [Goldman Sachs shareholder letter, 2012].

In modern capital markets, most capital providers delegate their investment decisions to an asset management firm that specializes in making capital investment decisions on the behalf of the provider. The asset management firm can be thought of as a delegated capital provider. Delegated capital providers are compensated for making sound investment decisions with their clients' capital. Common types of delegated capital providers are set out below.

Trade in Capital Markets

The investor's investment today is the "capital provided." Capital market "trade" may be thought of as the investor's investment of cash today in exchange for the expectation of receiving more cash, in exchange, at a future date. This type

of capital market trade, by its very nature, requires that the capital provider typically wait an indeterminate amount of time to receive an indeterminate future cashflow. The uncertainty in the timing and the quantity of future cashflow is distasteful to the capital provider and is thought of heuristically as "risk." While the receipt of future cashflow is uncertain, it is still amenable to financial analysis. The latter sections of this paper identify the disparate methods by which capital market providers have organized to address these two key uncertainties: (1) the timing and (2) the quantity of the future cashflows to the capital provider (referred to as the "Two Key Risks" hereafter).

The "Two Key Risks" in the Capital Market and "The Theory"

The methods by which capital market firms manage these Two Key Risks is the raison d'être of finance theory. Theory is applied in pursuit of desired outcomes for both providers and seekers. The central tasks in capital markets that all capital providers must confront are, first, forecasting future cashflows and, second, either accepting, rejecting, or trying to alter the likely timing and quantity of these indeterminate future cashflows associated with the investment. Specialization in the techniques used to manage the "Two Key Risks" drives, in part, the relatively large number of competency exams in the field of finance. There are numerous analytic tools for managing risk, as well as numerous alternative capital market firm structures and contracting mechanisms to manage risk.

We focus upon the capital market firm types that have evolved into hybrids which manage the Two Key Risks outlined above. Each type of capital market firm is characterized here with respect to its primary economic functions.

Dynamic Capital Markets and Delegated Capital Providers

The search for good investment opportunities in a dynamic market is costly. For the average capital provider trying to impact the quantity or timing of future cashflows generated by an investment opportunity is abjectly difficult or, quite frankly, nearly impossible. The difficulty in effecting investment outcomes drives the central economic proposition for a delegated capital provider. The firm offers individual capital providers the opportunity to delegate their investment decisions and, as a result, realize superior investment outcomes. Most capital provider firms do not attempt to directly influence business decision-making at the capital-seeking firm. Some delegated capital provider firms are organized to directly impact future project cashflows by influencing business decision-making at the capital-seeking firm. However, the capital provider firm uses several methods, discussed below, to effect the risk-return profile of their portfolio.

Capital providers want to minimize the costs of searching for and identifying high-quality investment projects. The providers' choice set of alternative investment projects is dynamic with respect to the Two Key Risks. The dynamic nature of capital markets makes it difficult to set forth simple investment decision rules

that do not involve a mathematically sophisticated structure designed to put investment alternatives on an apples-to-apples basis. In a world where capital market firm returns are largely observable "The Theory" is used to compare investment returns on an apples-to-apples basis. Modern finance education requires a mathematical structure to make an apples-to-apples comparison to guide decision-making.

CAPITAL MARKETS AND THE FINANCE PROFESSIONAL

Understanding how capital formation, market mechanics, market innovation, and current market conditions apply to capital allocation is what drives the central economic proposition of hiring a person trained in finance to effect a welfare-increasing outcome for the firm and, ultimately, for society. A finance professional requires an understanding of financial economics, a facility with financial statements, the ability to work with a wide variety of professionals, and a facility with using an analytic structure to solve problems. The finance professional provides the essential function for increasing standards of living by aggregating and allocating capital to finance greater future production and thus greater future consumption. The professional does so by identifying capital market "trades" that elicit sufficient capital today to complete a project. Market participants "trade" their capital today in exchange for the expectation of receiving, in return, higher future cashflows in the future, as noted above. Arranging and structuring financial transactions has allowed for consumers to capture most of the benefits of efficiency gains that have resulted from large-scale implementation of production/technology innovations.

Market Innovations Improve Living Standards: Derivatives

When capital is affordable, a greater number of projects are economically sensible to pursue, in which case capital flows to worthy projects rather than to consumption. Controlling project risk helps capital seekers attract capital. Derivative markets have expanded over the years, largely based on their effectiveness in controlling risk. The Two Key Risks are difficult to control, yet derivatives markets have evolved so that providers can limit their exposures to the Two Key Risks.

The ability to use derivatives to fine-tune a provider's portfolio risk profile makes both the capital provider and the capital seeker better off. The use of derivatives, referred to here as "risk management," is commonplace and routine. Alternative capital market firm types are presented in what follows. Each firm type is assumed to employ "risk management." Dolde [1993] reports that 85 percent of the Fortune 500 firms (i.e., "capital seekers") use derivatives. Derivatives contracts with notional value of approximately $700 trillion worldwide were outstanding as of November 2011 [Burne, 2011].

Financial Intermediation and Disintermediation

Search costs for capital providers and capital seekers are high. Intermediaries in the capital allocation process have emerged to make it easier for a capital provider to earn a rate of return. At the same time, intermediaries facilitate capital acquisition for seekers. Intermediaries reduce the transaction and search costs associated with selecting suitable investments.

Many investors have delegated their investment decision to a financial professional who specializes in allocation, in what is commonly referred to as "asset management." Asset management firms vary in structure. Less sophisticated asset management firms largely involve the issuance of financial claims on the institution itself in the form of bonds, stocks, and deposits (i.e., a bank), as well as the ownership of the financial assets. In a more sophisticated capital market firm, the management of financial assets is done at arm's length. The more sophisticated structure allows for an asset management firm, by use of a custodian who acts at the manager's direction, to manage a collection of clients' financial assets that the asset management firm controls but does not own.

Capital Market Mechanics

The investment allocation process typically results in capital allocation through an auction-like mechanism, in a manner some would say is governed by the "greater fool" theory. In other words, whichever investor is willing to pay the most, in exchange for a claim on future cashflows, is likely a "fool" who overpaid, thereby winning the auction.

Another challenge in capital allocation is described by the saying "the bad money drives out the good," capturing the sentiment that unskilled capital providers, by definition, can outbid the skilled. However, the unskilled can only do so until it becomes evident that their returns will not meet expectations and the bad money is unable to continue in the business. No investor wants to be the "fool" or the "bad money." In an effort to avoid being the "fool," the investor will likely delegate the allocation decision to an asset management firm.

The Role of Finance Professional Certifications in Hiring and Promotion

Given the amorphous nature of the prerequisites for career advancement, a firm wishing to hire a finance professional faces an information problem about an applicant's likelihood of contributing to the firm's success. It is possible that there are far more "finance" people out there than there are qualified people who really understand "finance." As a result, in a steady state, the rising finance professional often bears the costs of demonstrating competence by beginning the process of pursuing a financial certification.

In some cases, using the job applicant's lack of pursuit of professional certification to screen out applicants cuts down the firm's costs of assessing finance talent for

hiring and promotion and, more important, ultimately reduces costly investment mistakes. Individual financial professionals have private information about their own likelihood of meeting certification requirements. Individuals with a low likelihood of success in earning certification will perceive the expected likely net benefits of attempting to get certified to be relatively low. Those with a higher likelihood of success in pursuit of certification will perceive the expected net benefits as relatively higher and, as a result, are more likely to pursue certification.

An applicant's efforts to pursue certification by demonstrating competence through testing is observable and ultimately one costly action by which job candidates can signal their confidence in their own potential. Biktimirov [2012] provides a thorough review of finance certifications.

A hiring firm which requires pursuit of certification has two associated problems. First, by conditioning the hiring decision, either formally or informally, upon the pursuit of certification, firms may unfortunately preclude qualified talent that has not pursued certification. Second, firms want to hire able professionals yet may overlook a talented applicant who chose not to pursue certification. Requiring certification helps hiring firms avoid the second of these two problems, while grudgingly accepting the first problem. One can quibble about the efficiency of such a system that does this coarse sorting, yet such sorting is common.

CAREER CHOICES

The objective below is to make clear the multitude of economic functions in which a finance skill set is employed. As in other fields, the ability to be responsive to clients, work collaboratively, manage personnel challenges, and pay attention to detail are important to hiring and advancement to be sure, as is the potential to ultimately participate as a "rainmaker" in the "front office," or to work in a client-facing role.

Common Economic Functions across Firm Types

In most areas of modern finance success in the front office requires a detailed knowledge of the skills to be successful in the "back" and "middle" offices. Rainmakers are needed in most every firm. Rainmakers close sales and generate revenue. Front office personnel might be thought of as professionals with whom an outsider interacts with respect to securing firm services. The terms "back office" and "middle office" refer to professionals whose work does not bring them into direct contact with clients (back office) or only on occasion (middle office). The rainmaker has to understand current financial markets better than the back or middle office. The rainmaker's level of financial market acumen is not generally acquired exclusively in a structured setting.

CAREER PROGRESSION: CHOOSING A STARTING POINT

One way to approach selecting a career path is to consider that in a first finance position it makes sense to establish oneself as being able to quickly apply finance skills to contribute to the team's efforts to reach its objectives. Thereafter, demonstrating mastery of an area and providing leadership—by identifying opportunities and structuring and guiding decision-making—is usually a requisite stepping-stone to promotion. This is the most important challenge for many finance professionals who, to advance, must be able to see the "forest for the trees" in a capital market. In this context, providing leadership is somewhat akin to acting entrepreneurially, making suggestions, and trying new approaches that capitalize on capital market evolution and new data and insight and effectively disrupt the methods/decision-making at the firm.

The common economic functions set forth below are enumerated here and are referred to later by number: (1) project analysis, (2) portfolio risk assessment and management, (3) risk management, (4) capital market sourcing, (5) advisement, (6) deal structuring, (7) firm management oversight, (8) cash management, (9) asset management, (10) due diligence, (11) portfolio management, (12) trade-desk management, (13) credit analysis, (14) workouts, (15) brokerage, (16) market-making, (17) exchange infrastructure, (18) pure risk underwriting, (19) third-party risk rating, (20) real estate, and (21) compliance and regulation. Support functions surround these common economic functions but are too numerous to discuss here.

Capital Seekers Pitch Investment Opportunities

Corporate Finance (Financial Functions 1, 3, 6, 7, 8, 13)

The corporate financial manager is the capital seeker's in-house capital market specialist. A firm's financial manager knows how to incorporate capital provider demands into project selection and how to add value to the firm by helping sort the wheat from the chaff with respect to its own projects. These financial managers need to be able to effectively pitch the merits of the firm's projects to capital providers.

Firms begin this process with in-house financial managers whose value proposition is that they understand how capital markets operate and how investors approach their portfolio choice. In seeking capital, these managers will pitch capital market providers on the merits of their projects.

Firms need to manage the daily inflows and outflows of cash and require financial managers who understand cash collection and disbursement systems. Treasury specialists help firms become more efficient in cash management.

Capital Providers Analyze Investment Opportunities

Seekers approach the market with a pitch to seek capital. In general, financial positions analyzing the riskiest investments offer the greatest variety of subsequent opportunities in finance.

Risky Investment Analysis

Investment mistakes are costly, and so riskier investments have a greater potential for costly errors (i.e., "loss of principal"). Identifying, measuring, and managing risk are central to modern finance. Someone who begins his or her career analyzing risky investments can avail themselves of subsequent career paths at a variety of firm types. Mastering the analysis of highly risky projects is also good preparation for the analysis of less risky projects.

The investment firm that invests in a high-risk tranche must understand the risk-return trade-offs of the less risky tranche. The less risky tranches must be understood because the buyer of the risky tranche often facilitates the placement of the less risky tranche to other capital providers.

However, this does not imply a simple pecking order of skill sets. The less risky tranches typically have risks that require specialized analyses and are typically managed using specialized analytic tools. The skill set required to manage the less risky investment tranche is therefore not a perfect subset of the skill set necessary to analyze the higher risk tranche.

Intermediation/Banking (Financial Functions 1, 2, 3, 6, 8, 9, 10, 11, 12, 13, 14, 16, 21)

A bank stands between the capital seeker and capital provider, and so it needs to have a comparative advantage in both assessing project risk and in monitoring seekers, so that the intermediation process is efficient. An inefficient process will induce competitors who will pursue profits in the most lucrative portion of the intermediation business. Bankers improve their lot by identifying locations and points of contact with depositors and by offering financial products that meet the needs of the capital provider. A bank must efficiently assess potential creditors and identify ways that make borrowing more efficient and, in turn, less costly to the borrower. In the case of a delinquent borrower, the bank must collect efficiently. Most capital market firms do not perform all these functions and instead specialize in only a few. Banks participate in the widest breadth of economic functions. The remaining capital market firm types are all more specialized than banks in their economic functions.

Public Capital Markets Participants: Liquid Capital

The capital markets are juxtaposed with a bank, which accepts deposits. Deposits are typically guaranteed by an arm of the government. The guarantee

makes the capital provider (the depositor) disinterested in the quality of the allocation of capital to seekers (i.e., loans). Banks oversee the allocation of, for the most part, other people's money, which is guaranteed by a third party. They also oversee the allocation of the shareholder's capital in the bank.

On the other hand, capital market firms employ a different structure to get capital to seekers, a structure which imposes greater analytical demands upon individual capital providers. These providers have an active interest in the projects to which they provide capital—their investment is not guaranteed. The capital market is comprised of a dedicated "sell-side" and a "buy-side."

Investment Banking (Sell Side: Financial Functions 1, 2, 3, 4, 5, 6, 10, 12, 13, 16)/Asset Management (Buy Side: Financial Functions 1, 2, 3, 9, 10)

Investment bankers serve the needs of large capital seekers by locating capital providers who are in pursuit of higher returns and matching these providers with suitable seekers. The investment banker identifies capital seekers with promising projects. The buy side is comprised of capital providers—so-called asset management firms (i.e., firms that manage pension funds, mutual funds, etc.). The sell-side works to try and sell these investment opportunities to the buy side, taking a cut of the proceeds.

The capital that an investment banker is successful in raising from individual providers in a public market results in greater regulatory scrutiny. Investment bankers put their reputation on the line when assisting capital seekers in finding capital. Investment bankers perform their own analysis of the prospects for capital-seeking firms and make investment recommendations to capital providers.

Brokerage (Financial Functions 8, 15, 17, 21) and Wealth Management (Financial Functions 5, 8, 11, 15, 20, 21)

After the capital provider has made the decision to provide capital to a seeker and advances funds, the provider is said to have made an "investment." Brokers assist in helping buyers arrange for the purchase/sale of an investment. Brokerage clients are on the buy side. Brokerage is often combined with investment banking. Brokerage allows for providers to access a large set of investments to purchase from/sell to other capital providers in a public market. Brokerage firms typically offer investment advisory services to their clients.

Wealth management, often paired with brokerage, focuses on a wider range of financial planning for individual capital providers, addressing issues that include estate planning, trust, insurance, and retirement. The role of the financial professional here is largely as a strategic and tactical adviser to the individual capital provider.

The Aftermarket: Liquidity Services and Market Making (Financial Functions 3, 8, 9, 12, 15, 16, 17, 21)

An asset allocation decision that can be quickly reversed is more valuable than one that is more difficult to reverse. Market makers are firms that stand ready to buy or sell an investment, so that investors may adjust their investment mix. The aftermarket trade occurs through a broker. The capital provider adjusts its investment portfolio by acquiring an investment or by selling an investment to a market maker through a broker.

Exchanges and Clearinghouses (Financial Functions 2, 3, 8, 11, 15, 16, 17, 21); Over-the-Counter Infrastructure and Settlement (Financial Functions 2, 3, 8, 11, 13, 15, 16, 17, 21); and Wholesale derivatives brokerage (Financial Functions 2, 3, 8, 11, 15, 16, 17, 21)

Organized exchanges typically have a clearinghouse that guarantees trades, manages collateral, and performs basic credit analysis functions.

Private Capital Market Participants: Capital with Strings Attached

The private capital markets are characterized by firms that provide capital on a large scale. These providers make a variety of investments, but a key difference here is that these investors take an active role in how the capital-seeking firm is managed, executives hired, and executive compensation contracts designed. The private capital market participant's investment portfolio is more concentrated, on average, than that of the typical individual investor.

Private Equity/Merchant banking/Hedge Funds (Financial Functions 1-8, 10, 11, 14)

These firms invest their own money, and that of other providers, and will often complete ancillary tasks that do not involve the allocation of capital. This is a wholesale business. These providers usually have costly funds, no depositors, and chase higher returns—they must cover a higher cost of funds. These organizations often participate in private stock and private debt markets, where it is more difficult to sell their investment, because private securities cannot be sold to the general public. There are fewer regulatory burdens upon private market participants.

Venture Capital, Angel Investing, and Vulture Funds (Financial Functions 1-11, 14)

Angel investors are noninstitutional investors who fund early-stage firms who are in need of funds at a scale too small to be of interest to venture capitalists. Venture capital funds are institutions and are largely partitioned by the industries

in which the venture capital group has some particular product market insight or expertise, such as in a related engineering or science field. For example, venture capitalists must be able to assess prospects for a new engineering or technology solution that requires capital yet is still at an early stage of development.

Vulture funds essentially offer collection services for investments that have not paid as promised. The mere existence of vulture funds makes it easier, ex ante, for the asset management firm to contemplate purchasing a risky investment. The asset management firm knows that if the investment fails, it can sell its interest to a vulture firm. Absent vulture investors, the asset management firm would simply avoid certain risky investments, fearing that they would get stuck and realize little proceeds if the investment fails. Vulture capitalists are expert in maximizing the proceeds of failed investments, thereby reducing the costs of capital, ex ante.

Specialty Finance

A large portion of financial service firms are specialized to manage fewer economic functions and provide specialized services. These are presented in the following paragraphs.

Insurance (Financial Functions 1, 2, 3, 9, 10, 18, 20, 21)

Insurance firms could be thought of as asset management firms that also promise to cover specific casualty risks in exchange for the payment of a fee (i.e., the premium). The asset management arm of the insurance company is as sophisticated as any other asset management firm. The insurance company provides capital through a wider variety of venues than most other asset management firm types. The firm needs an asset management arm to be a credible entity when trying to sell insurance against specific risks. The pool of assets under management assures insurance policy buyers that the insurance company has the capital to deliver on the policyholders' claims. The insurer's asset management arm participates in private and public markets, and some also make loans. The liability side of the insurance company focuses on the management and underwriting of hazard, casualty, and liability—the so-called "pure" risks. In contrast, the asset management firms specialize in financial price risks—the so-called "speculative" risks.

Real Estate (Financial Functions 1, 2, 3, 6, 10, 11, 13, 14, 20)

Real estate firms manage investments in real estate, much like any other asset management firm. Real estate faces unique liquidity, legal, regulatory, and tax challenges and tends to attract specialists who stay in the real estate business over the course of their careers.

Rating Agencies (Financial Functions 1, 2, 3, 6, 7, 8, 10, 13)

Rating agencies render an opinion on the credit worthiness of a firm or a security in the form of a credit rating. Many market participants are required by either law or their charter to limit their investments to those entities of a minimum credit rating. Raters serve as a third party to assess credit risk. Firms who either lend or extend credit to a firm often use ratings to guide their credit decision.

Compliance, Oversight, and Regulation (Financial Functions 1, 2, 3, 13, 16, 17, 18, 19, 20, 21)

Regulators do more than monitor compliance. For example, the Federal Reserve is deeply involved in day-to-day banking activities, managing banking reserves, and intrabank transfers.

Public Finance (Financial Functions 1, 3, 4, 8, 21)

In a market-based economy in which private property rights are protected, a government unit that wants to engage in an infrastructure project must raise private capital to finance the project. A governmental unit's financing of an infra-structure investment or other capital project to provide a "public good" is heuristically referred to as "public finance." Public finance can be characterized by its unique position to access revenue streams that accrue to its monopoly position and its ability to repurpose resources via eminent domain. This specialized area focuses on the government's authority and obligation to collect taxes or fees to generate an adequate return to the capital provider.

CONCLUSION

The richer and more numerous the set of investment alternatives, the greater is the demand for expertise in finance. All firms need to allocate capital to projects—a task that is central to the private enterprise system. All firms can benefit from the rigorous analysis of opportunities and product markets—analyt-ical skills around which academic finance training is organized. The more robust the economy, the greater is the demand for the financial professional's expertise in analyzing a project's potential. Fortunately, the analysis and economic reason-ing skills that are central to success in finance, translate well into other areas of business. Finance can also be an outstanding professional training ground for functions not strictly within the framework set forth above. All firms need strategy and corporate analysis groups and planning, budgeting, reporting, and nonfinan-cial, functions. Opportunities to apply finance training exist not only in financial services but in every private enterprise firm.

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You Can Lead a Horse to Water but You Can't Make Him Edit: Varied Effects of Feedback on Grammar across Upper-Division Business Students

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Employers have expressed dissatisfaction with business students' basic writing skills, so techniques for improving students' grammar skills should be critically examined. This study investigated the efficacy of using written feedback in a multidraft context as a method of decreasing grammar errors in subsequent submissions. Business students in a principles of marketing class were given the option to receive feedback on drafts. Written feedback on grammar issues was successful in reducing grammar error rates on final submissions only for highly motivated students with multiple drafts. A discussion of the faculty time commitment necessary to see improvement in students' grammar skills recommends reflection on this technique.

Keywords: Business Communication, Business Writing, Business Education
Disciplines of Interest: Business Education, Business Communication, Marketing, Management

INTRODUCTION

The value of good written communication skills for business students is clear based on feedback from faculty and employers [Enos, 2010; Kellogg and Whiteford, 2009; Parent et al., 2011]. Most college freshmen have confidence in their writing skills [Berrett, 2014]. National data, however, suggest that this confidence is misplaced. High-school graduates often lack the necessary basic writing skills to succeed at the college level [Achieve, 2015]. Historically, colleges have required students to gain and demonstrate competency in English grammar through standard freshman composition classes. Even so, employers are concerned about the writing skills of college graduates. Kleckner and Marshall [2014] found that employers rated basic writing mechanics as second in importance among communication skills for business college graduates, yet found that the employers' satisfaction level for this skill among business college graduates was the lowest among all communication skills.

In order to correct mistakes in basic writing mechanics, the mistake has to be apparent to the user. Improvements in grammar and spell checking provide visual cues to aid in editing at the sentence level. Still, software programs like Microsoft Word are not proofreaders and fail to catch many grammatical errors. An example of this is in the use of possessives. Such gaps leave users of Microsoft Word, for example, vulnerable to errors such as misplaced apostrophes that change the fundamental meaning of a sentence. College business graduates cannot depend on computerized grammar checking to catch all grammatical errors. They must learn to do this for themselves; thus, editing skills are important.

Written feedback is one of the most used methods for improving basic writing skills, yet the time commitment that it takes to give feedback is a problem [Bacon and Anderson, 2004; Bacon et al., 2008; Kellogg and Whiteford, 2009]. Moreover, universities are being asked to hold down educational costs, which has led to fewer resources for providing the individual feedback that is necessary to improve student grammar skills [Crisp, 2007]. The same pressure on universities to hold down costs also means that simply adding additional communication coursework requirements to the business curriculum may not be an option for fixing this problem, and, for students, an increase in required coursework means additional time to graduation. Recent movements toward writing across curricula and within disciplines, however, have shown promise for improving writing skills [Fallahi et al., 2006]. Reframing the view of writing as the responsibility of the whole university rather than the English department pushes students to learn to write across contexts [Bacon et al., 2008]. As most business students are already doing written assignments in their upper-division coursework, can feedback about writing mechanics in this coursework effectively increase business students' skill levels in grammar? That is the subject of this study.

LITERATURE REVIEW

Silverman et al. [2005] identified five individual precursors to accepting feedback: awareness, sense of necessity, confronting change, willingness for feedback, and development orientation. Awareness involves knowing that a problem exists and making the appropriate attributions of its cause. In somewhat of a vicious cycle, lack of awareness leads to a lower level of competence. It also leads to a lower ability to detect problems and subsequently a lower awareness of the value of feedback. Because of this, Silverman et al. [2005] regarded awareness as the most significant of the five individual precursors, which is consistent with earlier findings [Kruger and Dunning, 1999]. The sense of necessity involves the knowledge that a change must occur. This relies on an ability to undergo the unpleasant emotions involved with change. Confronting change similarly involves potentially threatening phenomena that require determination to scrutinize problems in order to resolve them. Willingness for feedback involves an ability to be vulnerable and

the courage to change, even if it involves uncomfortable emotions and cognitions. The final factor is development orientation, which is a positive outlook on growth.

The literature on improving students' writing echoes the importance of using feedback to establish awareness of grammatical errors to stimulate the learning process. Kellogg and Whiteford [2009] argue that feedback is an essential part of the necessary deliberate practice needed to improve student writing. This practice requires a substantial time commitment by the learner. Jorgensen and Marek [2013, p. 174] state that "students do not become excellent writers overnight." Dealing with the potential emotional distress of change and growth takes time. In addition, business college graduates need to be able to perform on the job, so they need to have the rituals of good writing mechanics in their long-term memory. Long-term student retention of correct grammar and sentence structure is much more likely when practice is done repeatedly over time, especially because serious writing puts substantial strain on cognitive abilities [Kellogg and Whiteford, 2009]. Students need to mindfully apply themselves to a practice with feedback from an instructor to improve and excel.

While convention holds that writing be taught in an English class, multiple empirical studies have shown that the integration of writing feedback into courses with other content can be effective (e.g., marketing [Bacon et al., 2008] and psychology [Jorgensen and Marek, 2013; Stellmack et al., 2012]). Kellogg and Whiteford [2009] argue that this method is actually preferable, as it distributes the practice of writing and thus encourages long-term retention of writing mechanics. Without this practice, skills begin to deteriorate. By the time college students graduate, they may no longer possess the skill level they did at the end of freshman composition classes [Parent et al., 2011].

Past research on the use of written feedback for improving the basic writing mechanics of college students shows mixed results [Ferris, 1995; Price et al., 2010]. A closer examination of the results suggests that there are some factors that may increase subsequent student writing improvement after receiving written feedback. These include the timing of the feedback [Fallahi et al., 2006; Ferris, 1995; Jorgensen and Marek, 2013], the motivation of students [Bacon and Anderson, 2004; Bacon et al., 2008], the specificity of the feedback [Quible, 2006a; Shintani et al., 2013], and the student's confidence in his or her ability to respond to the feedback [Crisp, 2007; Shintani et al., 2013].

While some have found that feedback on final submissions alone provides modest gains in writing mechanics when followed systematically over time (e.g., Fallahi et al., 2006; Jorgensen and Marek, 2013), others have seen no significant improvement, largely because students always have a choice about whether they are going to use the feedback or not [Crisp, 2007; Price et al., 2010]. Ferris [1995] reported that students spent less time reading and focusing on feedback when it came on final submissions than they did when a system of writing and revising multiple drafts was in place. Students reported rereading feedback many times in the latter case. Students may be more likely to be motivated in a system of

reviewing, revising, and resubmitting, especially when it relates to writing mistakes that are relatively easy to fix, such as errors in writing mechanics [Vardi, 2012]. They are able to see the immediate impact of responding to the feedback [Stellmack et al., 2012]. Finally, Shintani et al. [2012] note that revision after feedback may enable students to consolidate their knowledge into action, which reinforces the learning. All of this implies that a review, revise, and resubmit drafting system is likely to increase the positive effect of written feedback.

The incorporation of drafting is not necessarily sufficient by itself to improve basic writing skills in courses not solely focused on writing. Bacon and Anderson [2004] found that business students needed a grade incentive of 5% to show significant improvement in basic writing skills when mixed with evaluation of other aspects of the assignment. They argue that students need to be incentivized to perform on grammar, or they may not pay sufficient attention to that part of the task. In their study, even with the opportunity to revise and resubmit over multiple assignments, students without a significant grade incentive to pay attention to writing mechanics showed no significant improvement.

Improvement in basic writing skills in courses not specifically designed for that task means that feedback must point out student errors in basic writing skills while still integrating it into the discipline-specific content [Bacon et al., 2008; Kellogg and Whiteford, 2008]. It is important that students receive specific feedback on the basic writing errors they are making and the grammar issues involved, even if faculty perceive them to be minor in comparison with content issues. Bacon and Anderson [2004, p. 443] state, "Without feedback on minor errors, students may not feel motivated to improve their writing skills." Empirical evidence suggests that specific written feedback that gives an understanding of the grammatical error made decreases the error rate in subsequent work [Quible, 2006b; Shintani et al., 2012; Vardi, 2012], while holistic types of feedback are ineffective [Kellogg and Whiteford, 2009]. More specific feedback gives quality information that adds clarity to the writing standard. In the case of upper-division business students, most have been through the freshman composition English classes that require attention to grammar issues. Professors may assume that college students know standard conventions for grammar and sentence structure by the time that they are juniors and seniors. At this point, students should not need the kind of support they might have needed when first learning how to construct sentences. Instead, what they need is to develop editing skills to find and correct errors. Feedback about certain errors, while still allowing students to find and fix those errors themselves, gives guidance toward meeting a standard without operating as the students' proofreader.

Even if incentivized and given specific feedback, in order for students to improve they need to have knowledge of grammar and confidence in their writing abilities. While passing freshman composition may demonstrate that they have sufficient knowledge of the basics of English grammar, student self-confidence (self-efficacy) in writing is not a given. Bandura's [1986] social cognitive theory

suggests that a lack of confidence in one's ability to succeed may have an impact on his or her ability to improve. In social cognitive theory, three elements interact to facilitate learning: self-efficacy, feedback, and environmental support. Students who have self-efficacy toward a behavior, get appropriate feedback when demonstrating behavior, and receive environmental support are more likely to learn. Students may avoid incorporating feedback into a subsequent assignment if they feel that they lack the ability to respond to the feedback or if they do not have sufficient environmental support. Thus, it is important that even students who feel self-efficacy with regard to grammar issues have appropriate support materials to aid them in editing for grammar mistakes if they are to respond to written feedback on subsequent submissions. Price et al. [2011] suggests that access to a writing center with writing tutors is one way to make business students feel more supported as they adjust to the more difficult task of writing in upper-division business classes. Other ways to provide support are to give students in-class review and access to out-of-class materials that explain grammar rules. In summary, previous research supports the following hypothesis.

In summary, previous research supports the following hypothesis.

H1: Where students have confidence in their grammar skills, are grade motivated, and have access to additional environmental support in basic writing mechanics, specific written feedback on grammar errors will decrease the error rate from drafts to a final submission.

METHODOLOGY

Pretreatment Assessment of Student Confidence, Attitudes, Behaviors, and Writing Experience

In order to assess the previous writing experience, attitudes, and writing behaviors of the subject population, an anonymous survey was administered at the beginning of three separate principles of marketing courses conducted over two quarters at a rural, western university. A total of 71 usable surveys were returned out of a total population of 96 for a response rate of 74%. In the survey, students were asked to respond to statements on their attitudes about their writing skills on a Likert scale (1 = strongly agree, 2 = agree, 3 = neither agree nor disagree, 4 = disagree, and 5 = strongly disagree) and to provide demographic data, as well as data about the amount of writing that they had done in previous college courses. There were no significant demographic differences found among the classes. All students were business majors and college juniors or seniors. Eighty-five percent were ages 20 to 25, with the rest being older than 25. Fifty-eight percent were male and 42 percent were female. A clear majority of students (85 percent) transferred to the university as juniors. All of the results in Table 1 were consistent across major and demographics.

Table 1. Student Attitudes and Behaviors about Writing

Statement	Mean*	Standard Deviation
1. I am confident in my ability to write sentences with correct grammar.	2.10	0.99
2. I find it difficult to be clear in my writing.	3.52	1.11
3. I feel confident in my ability to defend my point of view in writing.	2.30	1.05
4. A difficult part of writing sentences is knowing the right words to use.	3.27	1.22
5. I feel confident in my ability to use section headings in my writing.	2.75	1.18
6. I wish I had been forced to do more writing in my previous years of education.	3.29	1.29
7. I tend to write my papers in one sitting.	2.60	1.28
8. The hardest part of writing is getting started.	2.27	1.13
9. If a student gets a bad grade on a paper in college, most instructors will allow the student to rewrite the paper for a better grade.	3.48	1.24

*(1 = strongly agree, 3 = neither agree nor disagree, 5 = strongly disagree).

Generally, students felt neutral to confident in their writing skills. They expressed the highest confidence in their grammar skills, as statement 1 in Table 1 had the strongest support and the lowest standard deviation. Seventy-two percent of students at least agreed with statement 1, and only 9 percent disagreed with that statement at all. Students also tended to agree that they wrote their papers in one sitting and they had a hard time getting started writing. Fifty-three and sixty-five percent of students, respectively, at least agreed with those statements. The majority of students were not counting on being able to rewrite papers for a better grade. Fifty-five percent at least disagreed with statement 9.

Statements 4 and 8 were weakly positively correlated ($r = 0.254$, p-value = 0.035). There are no other significant correlations between writing attitudes in statements 1 through 6 and statements 7, 8, or 9. The weak, positive correlation between the difficulty in starting writing and the tendency to write papers in one sitting may indicate that the former is a possible contributing factor to the latter as students are forced to write papers in one sitting as a deadline approaches.

The results also suggest that students' confidence in their ability to write with good grammar was high. The students felt more positively about this aspect of their writing than any other. This demonstrates that the population was likely to have high self-efficacy when correcting basic errors in writing mechanics. In addition, students were not counting on getting an opportunity to rewrite a paper

for a better grade. This implies that a final submission grade for which writing was at least 5 percent of the grade would likely suffice as a strong enough incentive for this population based on Bacon and Anderson's [2004] research.

The mean number of individual papers that students had written in previous college courses that were at least five pages in length was 5.6 (standard deviation = 4.040). One-third of the respondents had individually written less than three papers of at least five pages in length in college. Fifteen percent reported that they had written individually no papers of at least five pages in length. On the other hand, one-third of students reported that they had written at least 10 papers of that length individually in college.

The mean number of classes in which students had the option of submitting drafts for instructor feedback was 2.46. Fifteen students (21 percent) reported never having had any class in college in which they had the ability to submit drafts for instructor feedback. The mean number of classes in which students were required to turn in paper drafts for instructor feedback was 1.25. All students in this sample were required to take and pass at least two courses in freshmen composition. The mean number of classes in which students were required to turn in a draft was less than 2, and the mean number of classes in which they had the option of submitting drafts was slightly more than 2, which suggests that a majority of students had little exposure to the use of drafts in their academic writing. This lack of experience, combined with the fact that most students tended to write papers in one sitting, suggests that students were not following an informal drafting system by themselves. This supports the idea that a formal drafting system would provide a structure for revision that they are not providing for themselves.

In summary, these results demonstrate that this population of students has self-efficacy in grammar, would be motivated when writing is at least 5 percent of a written assignment's grade, and has had little exposure to the process of drafting in their academic experience. An examination of the effects of drafting on the rate of student errors in subsequent assignments follows.

Drafting and Student Writing Error Rates

The 96 students previously surveyed were involved in a quasiexperimental design to examine the effect of drafting on basic student writing errors. Each student was required to complete two applied writing assignments based on major concepts in marketing. Each assignment was limited to two pages in length and was worth 15 percent of their final course grade. Writing mechanics were evaluated in each assignment and valued at 20 percent of the assignment's grade.

There is a long list of grammar mistakes that can be made in English. Connors and Lunsford [1988] found 54 general categories of errors in their examination of 300 student papers. In order to focus on those that would be most beneficial to students in their careers, five general categories of errors that are usually not captured by computerized spelling and grammar checks were selected. All of

these categories were among the top nine listed by Connors and Lunsford [1988]. The categories of errors were as follows:

1. Homophone errors—Errors of this type happen when students use an incorrect word that sounds the same but is spelled differently. Examples of errors of this type are incorrect usages of "to," "too," and "two" or "schools" versus "school's".
2. Misspelled word errors that correctly spell another word—An example of this is when a student uses the word "roll" for the word "role" incorrectly.
3. Sentence fragment errors—Errors of this type occur when sentences do not reflect a complete thought.
4. Comma splice errors—This happens when two independent clauses are combined together with only a comma.
5. Comma with coordinating conjunction error—Errors of this type occur when long independent clauses are combined with a simple conjunction and without a comma.

Students were allowed to submit up to two drafts per written assignment. Students were required to submit their drafts at least 48 hours before the assignment was due and received feedback on their drafts within 24 hours. Both the drafts and the feedback were given through a learning management system. The course instructor gave all the feedback on content, and a professional editor gave all the feedback on writing errors. At the end of each submitted draft, students were told how many errors of each of the above types existed in their draft, but they were not told where in the draft those errors were made. The choice was made to use this type of feedback in order to more closely replicate the editing process that the students would need to undertake on the job. In addition to feedback on these errors, students received written feedback on content. Students were given a 15-minute review of the types of grammar errors that they would be required to find and fix for themselves in class a week before the first writing assignment was due. They also had access to an online grammar resource and a free on-campus writing center with writing tutors for additional help.

RESULTS

First Writing Assignment

For the first assignment, all students had the option of submitting up to two drafts to the instructor for feedback on both writing skills and content. Seventy-two (75 percent) of 96 students submitted at least one draft, while 18 (19 percent) submitted two drafts. It took the professional editor an average of 6.25 minutes to give feedback about the basic writing error categories on each draft. The drafts averaged 565 words in length. The number of errors in each of the five categories mentioned above was recorded and totaled for all drafts and the final submission.

Table 2. Basic Writing Errors in Examined Categories in First Writing Assignment

	N	Mean Writing Errors per 100 Words	Standard Deviation
First drafts	72	0.45	0.53
Second drafts	18	0.33	0.42
Final submission	96	0.33	0.39
Students who did no drafts	24	0.39	0.39
Students who did only one draft	54	0.35	0.40
Students who did two drafts	18	0.21	0.33

Table 2 shows that there was a decrease in the average number of errors per 100 words between the first and second drafts. The mean number of writing errors per 100 words in the final submission decreased as the number of drafts increased. A Levene's test of equality of error variance and the sample size indicated that parametric testing was acceptable. A one-way ANOVA showed that there was no significant effect of drafting in the final submission ($F(2, 94) = 1.08$, p-value = 0.344).

An examination of the difference between the submitted drafts and the final versions provided further insight.

Of the students who had writing errors noted in their drafts that they had to fix on their own (N = 58), 31 percent did not fix any of these errors before their final submission, as shown in Table 3. A higher percentage of students who did two drafts fixed all their noted errors by the final submission. A Spearman's rank-order correlation was run to examine the relationship between the different levels of error correction shown in Table 3 and a number of other variables. The results are shown in Table 4.

A strong negative correlation was found between the different levels of error correction and the number of errors per word ($r_s(56) = -0.646$, p-value = 0.000). No other significant correlations were found.

Second Writing Assignment

Due to the high percentage of students submitting drafts in the first assignment and the limited resources available, only those students who had not received an "A" on their first assignment were eligible to submit drafts for the second assignment. Other than this change, all other procedures remained the same. Of the 65 students eligible to submit drafts, 34 (52 percent) chose to submit at least one draft, and 15 (23 percent) chose to submit two drafts. It took the professional editor an average of 9.70 minutes to give feedback on each draft. The drafts averaged 573 words in length. Table 5 summarizes the data from the second writing assignment.

Table 3. Student Basic Writing Errors Fixed between Drafts and Final Submission in First Writing Assignment

	Percentage of Students		
	Overall	One Draft	Two Drafts
All errors (100%) noted in drafts fixed	33%	34%	46%
Most errors (50-99%) noted in drafts fixed	18%	18%	15%
Some errors (1-49%) noted in drafts fixed	18%	15%	24%
No errors (0%) noted in drafts fixed	31%	33%	15%

Table 4. Spearman Rank-Order Correlations of Table 3 Levels of Error Correction

	Correlation with Table 3 Categories
Number of words in first assignment	−0.048
Writing errors per word in first assignment	−0.646*
Number of drafts done in first assignment	0.120
Gender	0.113
Final grade in class	0.185

*Correlation is significant at the 0.01 level (two-tailed).

Table 5. Basic Writing Errors in Examined Categories in Second Writing Assignment

	N	Mean Writing Errors per 100 Words	Standard Deviation
First drafts	19	0.55	0.51
Second drafts	15	0.44	0.32
Final submission	96	0.32	0.39
Students not eligible for drafting feedback	31	0.34	0.35
Eligible students who did no drafts	31	0.41	0.35
Eligible students who did one draft	19	0.41	0.36
Eligible students who did two drafts	15	0.16	0.36

The results in Table 5 mirrored the results in the first writing assignment, except that for the second assignment the mean writing error rate between the students who did no drafts and those who did one draft was the same to two digits, although the standard deviations were different. Once again, a Levene's test of equality of error variance and the sample size indicated that parametric testing was acceptable. A one-way ANOVA showed a statistically significant difference

Table 6. Student Basic Writing Errors Fixed between Drafts and Final Submission in Second Writing Assignment

	Percentage of Students		
	Overall	**One Draft**	**Two Drafts**
All errors (100%) noted in drafts fixed	52%	43%	66%
Most errors (50-99%) noted in drafts fixed	19%	21%	17%
Some errors (1-49%) noted in drafts fixed	6%	10%	0%
No errors (0%) noted in drafts fixed	23%	26%	17%

among the groups eligible for drafting ($F(2, 63) = 5.976$, p-value $= 0.004$). A Tukey post-hoc test revealed that the mean writing error rate for doing two drafts was statistically significantly lower than doing no drafts (p-value $= 0.005$) or doing one draft (p-value $= 0.011$). There was no statistically significant result between the groups doing no drafts and those doing one draft (p-value $= 1.000$). This result provides limited support for H1.

Compared to the first writing assignment, a higher percentage of students in all categories fixed the basic writing errors noted in their drafts (N = 30), as shown in Table 6. In this case, only 23 percent of students overall did not fix any of the errors noted in their drafts.

Table 7 shows the Spearman rank-order correlations between the different levels of error correction shown in Table 6 and a number of other variables. As in the first writing assignment, a strong negative correlation was found between the different levels of error correction and the number of errors per word in the second assignment ($r_s(28) = -0.712$, p-value $= 0.000$). A weak positive correlation occurred between the number of drafts done in the second assignment and the level of error correction in the second assignment ($r_s(28) = 0.384$, p-value $= 0.036$). A moderate positive correlation was found between the number of drafts done in the first assignment and the level of error correction from drafts to final submission in the second assignment ($r_s(28) = 0.491$, p-value $= 0.006$).

DISCUSSION

The quasiexperimental design of this research should have predisposed the results to support the hypothesis that written feedback on specific basic writing errors in drafts would lead to a lower rate of those errors in the final version. The vast majority of students were confident in their ability to write with good grammar, so they should have felt capable to fix the errors. While students were not told exactly where their writing errors were, they were given plenty of free, easily accessible resources to get help to find and fix their errors, and as the assignment was limited to two pages, it was not an overwhelming task. They were motivated to pay attention to these errors by making writing worth 20 percent of

Table 7. Spearman Rank-Order Correlations of Table 6 Levels of Error Correction

	Correlation with Table 6 Categories
Number of words in second assignment	0.218
Writing errors per word in second assignment	−0.675*
Number of drafts done in second assignment	0.384**
Gender	0.096
Final grade in class	0.914
Writing errors per word in first assignment	−0.085
Number of drafts done in first assignment	0.491*

*Correlation is significant at the 0.01 level (two-tailed).
**Correlation is significant at the 0.05 level (two-tailed).

the grade in the assignment. This was a much higher percentage than previous research had found to be efficacious. Students were given the option of submitting a draft but were not required to do so. This selection option should have biased the results in favor of supporting H1. Presumably, students who went to the trouble of composing a draft were already motivated to want to get feedback and incorporate it into their final submission. Indeed, if the results had shown that statistically significant improvement in the noted writing errors was made between drafts and the final version, it would not have been surprising. Instead, the results showed that only students on the second writing assignment who submitted two drafts showed significant improvement in error rates. Consistent with Crisp [2007], H1 was shown to have limited support.

In both assignments, a substantial number of students who did only one draft failed to fix any of the noted writing errors. Given that the students' confidence in their grammar skills was high to begin with, they may have been lulled into the expectation that they had good writing skills and neglected to pay attention to information that contradicted this belief in the first writing assignment. Other students may not have paid attention to the high value placed on good writing mechanics in the evaluation of the first assignment. However, this does not completely explain the results of the second writing assignment. A necessary, but not sufficient, condition for getting an "A" on the first assignment was to have good basic writing skills. Students who did not meet this standard were the only ones eligible to submit drafts for the second written assignment. Thus, these students should have been even more strongly motivated to improve their writing on the second assignment since they had already received feedback that writing was important in the grading of their final submission. Substantially more errors were fixed in all categories in Table 4. Yet, even in the second writing assignment, 26 percent of students who did one draft did not fix any noted errors at all.

A possible explanation for this effect is that even though most students expressed confidence in their writing abilities, the difficulty in responding to both content and basic writing issues in the drafting process may have caused cognitive overload. Kellogg and Whiteford [2009] explain that "revision is constrained or even nonexistent in developing writers because of working memory." There was a strong negative correlation between the number of errors and the levels of errors fixed on both assignments. The more errors that the students had to fix, the less likely they were to get all the errors fixed. If students were overwhelmed with responding to the content issues in their drafts, then they may not have had the cognitive capacity to address basic writing errors as well. This effect would be even more pronounced for students whose belief in their writing abilities did not match their actual abilities. If students struggle with sentence generation to begin with and then have to apply discipline-related content on top of that, they are more likely to be incapable of responding to formative feedback, however specific it may be. Writing, like athletics and music, takes practice, and more complex tasks require a mastery of the basics. There is a danger of overcorrecting when giving feedback in writing [Shintani et al., 2013], but in this case students were given feedback on only five different types of basic writing mistakes. The students had all been exposed to these grammar issues in previous coursework. It is unlikely that overcorrecting was the problem here. The survey data on previous writing experience seem to suggest a different source of possible overload. As juniors and seniors in college, one-third of these students had written less than three papers of at least five pages in length. Fifteen percent reported writing no papers of this length individually. Quible and Griffen [2007] also note that, in the past 25 years, English teachers have increasingly stopped providing sentence-level correction and grammar instruction. This implies that a large percentage of these students have had little practice in transforming knowledge into applied compositions to begin with and have not been as exposed to sentence-level error correction as in generations past. Asking students to use feedback to improve grammar in addition to responding to content issues may have been more than some students were capable of handling given their past educational experience.

Another source for a possible explanation of the variance of our results comes from studies on millennials and management. Our study concentrates on largely millennial-aged cohorts (i.e., students born between 1980 and 2000). Millennials are described as having a strong need for feedback on their performance [Meister and Willyerd, 2010], but Alexander and Sysko [2012] hold that an environment of abundance and shifts in parenting styles have led this generation to have expectations of a future with more abundance, even when missing performance expectations. Compared to other generations, they tend to be optimistic and confident in themselves and their abilities [Blaine, 2008]. This generational tendency is a reflection of the positive psychology movement that emerged in the 1990s. In this movement, psychologists advocated an attributional style that explains positive events as a reflection of personal and permanent causes, while

negative events should be seen as external and temporary [Seligman, 1991]. Thus, a recurring theme in the literature of the millennial generation is the use of fundamental attributional error (FAE). FAE is the tendency for individuals to attribute their own success to their own internal characteristics and their failures to external phenomena, while conversely seeing others' successes as consequences of external phenomena and their failures due to characteristics of the actor [Ross, 1977]. This bias makes it more difficult for some millennial students to respond to negative feedback.

Like educators, managers have long observed variations in an individual's willingness and ability to accept feedback on his or her performance. Silverman et al. [2005]'s research suggested that awareness was the most important precursor to utilizing feedback. Awareness means both knowing the existence of a problem and being able to accurately attribute the cause of the problem. An inability to attribute the cause of the problem correctly will lower a person's ability to use feedback. Millennial students who are given a higher level of criticism than they were expecting will be faced with feedback that is inconsistent to their sense of self. Not only are they less able to appraise the magnitude of their deviation from the expected standard, the inconsistency is also contrary to their overestimated sense of efficacy. Unwilling to endure the potential cognitive difficulty and preferring to avoid the emotional labor of investigating the depth of their problems, they will resort to externalizing the errors and undervalue the use of feedback to avoid future mistakes. Millennial students who have incorporated the optimism of fundamental attribution error into their psychological makeup will thus demonstrate a stronger tendency to ignore the negative feedback that they are given on a draft, as they see it as an external, short-term problem that they do not have to address. On the other hand, students who receive feedback consistent with their sense of self will incorporate this information into better performance. They will have the insight to respond to the feedback in their future work and will be able to absorb the emotional and cognitive distress involved in making changes, given that the changes needed are relatively modest. The strong negative correlation between the error rate per word and the level of error correction in both assignments provides support for this explanation.

A final explanation for the variation in response to written feedback on grammar is that repeated exposure over time to a drafting system was necessary to increase the level of error correction. Although the number of drafts in the first writing assignment was not correlated with the levels of error correction in the first assignment, by the second writing assignment there was a significant, albeit weak, positive correlation between the number of drafts and the level of error correction. There was a stronger positive association between the number of drafts done in the first writing assignment and the level of error correction in the second writing assignment. These results tend to support the notion that students were learning to respond to the feedback and correct their grammar mistakes as they had more exposure to a drafting system. The study suggests that more than one

exposure to drafting is necessary to see significant effects of written feedback on grammar. If millennial generational tendencies are pervasive in a student body, then it may be that repeated exposure to negative feedback on grammar helps to break through FAE.

Crisp [2007, p. 572] notes that ". . . there is an implicit assumption that the provision of feedback will necessarily lead to improvements in subsequent pieces of submitted work." Faculty should give written feedback on grammar with the knowledge that it will not necessarily result in lower error rates in subsequent assignments unless they are prepared for a substantial time commitment. In this study, providing feedback on just five basic writing errors over two drafts took a professional editor approximately two minutes per 100 written words. This is roughly in line with the estimation of 10 minutes per 100 words that Connors and Lunsford [1988] gave when they had a group of college English teachers count 20 different errors over 3,000 papers. Thus, to give even a limited amount of writing feedback for a one-page, double-spaced written assignment of approximately 250 words would require at least five minutes. For a class size of 25 students, that is more than two hours of work for each round of drafts. This research suggests that even when students are highly motivated, it takes two rounds of drafts over two assignments before the writing error rate drops significantly on the final submission. That is eight hours of grading for a one-page assignment before faculty even get to grade a final submission. The eight-hour estimate is a conservative one because most upper-division faculty members are not professional editors. A faculty member without an editing background would be expected to spend even more time on the task. It may be more reasonable to spread out these efforts over a number of courses and instructors to distribute this burden more evenly.

RECOMMENDATIONS

Recommendations for Future Research

This research was conducted in one upper-division principles of marketing class. It would be beneficial to see if these same results were found over multiple functional areas of business. Also, only five different types of basic writing errors were examined in this study. Connors and Lunsford [1988] identify 54 types of basic writing errors in their analysis. It may be that the results in this study are a function of the errors studied. Future research that includes a broader range of basic writing errors may yield different results. Another limitation of this study was that it did not test the students' proficiency in correcting basic writing errors prior to the treatment. Linking proficiency to final results would determine if the limited success of written feedback in drafting is because students lack the ability to fix the writing errors noted in a draft. While this study found limited support for H1, it is only a pilot study. The number of students in the study restricted the analysis that could be done. It may be that a bigger sample with a coordinated plan of drafting and written feedback over a series of upper-division classes would

yield a better result. Related research into the use of peer review [Stellmack et al., 2012] and automated editing practices [Bacon et al., 2008] in conjunction with drafting may yield useful ways to cut down on the number of hours of faculty time required to give written feedback. Additional research in these areas would be helpful.

Recommendations for Practice

In the right circumstances, a multidraft system was found to be effective at reducing grammar error rates in the final submission. It is apparent that some students respond well to written feedback when it comes to grammar issues. This study seems to suggest that this group becomes a larger percentage of students when they are motivated and submit an increasing number of drafts. There were always some students who completely avoided responding to the written feedback on grammar. Despite grade motivation and resource availability, these students did not appear to act on this feedback at all.

The research suggests that increasing students' response to written feedback on grammar requires the commitment of faculty to give specific, regular, and formative feedback over time. This is a daunting task for many college faculty. Virtually all of the research on written feedback cites the time required to provide it and the resource constraints faced by college faculty. Kellogg and Whiteford [2009, p. 260] state, "Although there are probably many reasons why more writing is not routinely assigned, the time and effort required by instructors to provide useful feedback surely ranks high on the list." In a survey of business professors, the amount of time spent on grading was ranked first among drawbacks to having increased written assignments [Parent et al., 2011]. In addition, "Improving undergraduate writing skills receives relatively meager rewards compared with faculty publication, mentoring of graduate students, and sponsored research" [Kellogg and Whiteford, p. 261]. Finally, there is always the consideration that faculty members are subject to the students' evaluation of their instruction. Students are not likely to complain about an instructor who is not picky enough about grammar. Given the low level of rewards and the enormous investment of time, it is not surprising that individual faculty members reduce the length and number of written assignments, much less go through the increased hassle of reviewing drafts. Administrators in higher education should consider changing the reward system if it wants its faculty members to commit to improving student writing and give this level of written feedback.

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Why Can't I Just Google it? Factors Impacting Millennials Use of Databases in an Introductory Course

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Technology enables millennials to remain "plugged in" via an array of platforms that provide an incessant flow of information. Despite these virtual connections, many undergraduate students experience challenges in analyzing data from the web, often selecting popular search engines to analyze business concepts. As the internet continues to shape the scope of digital content available to students, factors that influence student selection and use of relevant databases are important considerations for faculty in business schools. This survey of undergraduate students in an introductory business course found that performance features, along with ease of use, were primary factors influencing database selection.

Keywords: Database Performance, Database Ease of Use, Technology, Digital Content, Millennials
Disciplines of Interest: Introduction to Business, Business Administration, Management Courses

INTRODUCTION

The millennials have arrived and are virtually reshaping the technology, the curriculum, and the existing pedagogy in most universities. They have arrived not only with a unique set of expectations but also with a unique set of skills, which provide an opportunity to develop courses and programs that reflect their learning style. Different categories are used to define the millennials, with the U. S. Census Bureau including those born between 1993 and 1995 and other classifications extending this time frame to those born as early as 1991. Despite their personal preferences, millennial behavior appears to have some unique characteristics that

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will ultimately influence our pedagogy and the way that we deliver content in the future [Gorman, Nelson, and Glassman, 2004; Schullery, 2013].

Perhaps the most apparent attribute associated with millennials relates to their degree of connectivity. Technology enables millennials to remain "plugged in" via a variety of platforms that provide a constant and continuous flow of information. Proserpio and Gioia [2007] note the ubiquity of the computer and report that 80 percent of the population between 18-24 years of age spends more than 1,300 minutes per month on the Internet while concurrently involved in gaming or online simulations. Recent estimates from Facebook found that there were over 1.1 billion active users worldwide in 2013, with 86 percent of 18-to-24-year-olds having a profile on the social networking site. Likewise, a recent Neilson report revealed that over 53 percent of 18-to-24-year-olds owns a smartphone, while a Pew Internet and American Life Project found that 62 percent of 18-to-29-year-olds had downloaded an app to their phone in the past month. Although these statistics provide a snapshot of user activity, they fail to include emerging platforms, such as Instagram and Pinterest, which provide alternate options to share information and connect with peers [Miller, 2004].

Choice is another factor influencing millennial behavior. As evident from their patterns of use, millennials can choose various technologies to connect with others and complete projects in the class environment. As a consequence, millennials tend to evaluate the benefits of various platforms and often use multiple devices to search for data to complete a project. While millennials tend to be selective in their use of technology, Becker [2009] observes that millennials expect access to a wide range of technologies to support virtual learning and their academic goals. Likewise, Prensky [2005] contends that traditional methods such as class lectures may not be sufficient to engage millennials, and may in fact, alienate them from the material. In contrast, class projects that provide opportunities for self -expression and creativity appeal to most millennials, who are fairly adept in creating a Facebook page, downloading video clips, and using apps to personalize their personal pages and group projects.

As importantly, millennials enjoy collaborating with others and are accustomed to both sharing and searching for information in the public domain. Text messages, Facebook chat, and discussion boards are used interchangeably to pose questions and obtain immediate responses from one or more individuals [Eisner, 2005; Ojala, 2008]. Likewise, Google Docs is often used to support simultaneous editing of projects, while concurrently enhancing user exchange and communication. While millennials enjoy collaborative tasks, Baker, Papp, and Matulich [2007] also note that the "Net generation" has distinct preferences for projects that are self-paced and that provide opportunities for reflection. In particular, projects that provide opportunities for both reflection and collaboration are particularly important in facilitating the unique learning style of the "high tech/high touch" millennial generation [Clark & Gibb, 2008; Erikson, Peters, and Strommer, 2006; Fortune, Shifflett, and Sibley, 2006; Mastilak, 2012].

Whether working on an independent endeavor or a collaborative team project, millennials also tend to be more adept at multitasking. Students easily alternate between related tasks while concurrently working on the same project, and appear to easily navigate the nuances associated with various technology platforms. Tapscott [1998] suggests that this aptitude may be due to early exposure to emerging technologies that allow the brain to "access, sort, and remember" information in a different way. Strauch [2010] also notes the efficiency and the dexterity of the young adult brain, yet suggests that speed does not necessarily equate with the ability to process complex tasks. Nuances inherent in problem solving may not be immediately apparent to millennial students simply because their brain has not encountered similar problems in the past. Developing class experiences that allow students to connect information and recombine data from previous experiences subsequently becomes an essential component in supporting the learning environment of the millennial [Conklin, 2013].

CONNECTING WITH MILLENNIALS IN AN INTRODUCTORY BUSINESS COURSE

Due to the unique learning styles of the millennials, pedagogy must be shaped to provide opportunities for active learning, as well as opportunities for active problem solving using existing technology [Amstrong and Mahmud, 2008; Atwater, Kannan, and Stephens, 2008; Kolb and Kolb, 2005]. In response to these evolving learning styles, the La Salle University School of Business launched an interdisciplinary business course, Introduction to Business, for all first-year students. Each spring semester, the school offers twelve sections of this course, which are taught by faculty from various departments in the School of Business.

Although the introductory business course has many unique objectives, the pedagogical framework for the introductory course is predicated upon experiential learning and integration of technology within the class environment [Burke and Moore, 2003; Combs and Elden, 2004]. This interdisciplinary course requires students to work in teams and develop a business plan for a product or service over a 16-week period. While the course provides students with a comprehensive perspective of the entire business process, experiential exercises linked to specific business concepts are designed for each class session to reinforce various functional aspects of the business plan. Waytz and Mason [2013] believe that limiting the number of tasks devoted to a discrete project may help to facilitate learning, and each of the functional exercises was designed to incorporate incremental tasks that would appeal to the collaborative learning style of students in the course.

These collaborative exercises also require students to actively engage in problem solving as they use relevant online databases to search for solutions to business plan issues. Developing experiential exercises that leverage the internet

has been proposed by Proserpio and Gioia [2007], who contend that virtual group projects offer another channel to engage students in the collaborative process. Consequently, each class session is designed to expose students to one of the 17 online databases that can be used to support their business plan decisions in class discussions as well as during online discussions [Medlin, Vannoy, and Dave, 2004]. Hyperlinks to these online databases, which illustrate specific functional components of the business plan, are also embedded in all Microsoft presentation software and are used to support experiential exercises in class. Rather than have students randomly search for data to solve various business plan issues, hyperlinks to each of the 17 business databases offer a structured process for students to search for solutions. Manuel [2002] believes that this type of structure is an important dimension of the learning process, since millennials often tend to overestimate their information literacy skills and may access information that is not relevant to their project. As importantly, these embedded databases not only offer a mechanism to immediately solve issues, but they also provide a framework for students to use to solve similar business problems in the future [Becker, 2009; Bigelow, 1999; Eisner, 2005].

THEORETICAL FRAMEWORK AND HYPOTHESIS

Previous studies related to technology have examined the impact of various online delivery modes (synchronous, asynchronous, and hybrid) to support the learning process [Terry, 2005; Wilson and Weiser, 2001], the role of faculty as passive versus active participants in the learning process [Arbaugh, 2001; Lemak, Shin, Reed, and Montgomery, 2005], and factors influencing student satisfaction and engagement in online environments [Beqiri, Chase, and Bishka, 2010; Robinson and Hullinger, 2008], as well as the implications of faculty resistance to technology [Redpath, 2010].

While previous research has focused on models to optimize technology and subsequent user satisfaction in both virtual and conventional learning environments, most studies have ignored introductory courses in business schools, and few studies have examined the role of technology in first-year courses. Although Kennedy et al. [2008] attempted to gauge the type of technology used by students in several introductory courses at a public university in Australia, this study primarily focused on the use of devices such as mobile phones and computers to facilitate the learning process. While this study discovered that most students had access to computers, as well as a desire to use the web to support their learning objectives, it offered only limited insights on student preferences for web-based projects. Similarly, other studies note the ubiquity of the internet but have found variation in the use of web-based technologies to support student learning. These findings are not entirely surprising, and Becker [2009] believes that many students continue to experience challenges in handling course management systems, as well as in simply navigating the web. Likewise, Manuel [2002] notes that information literacy is not necessarily a linear process, with many students unable

to follow sequential written directions required to access web content and complete project assignments.

While students can easily navigate mobile devices, Strucker [2005] observes that students "may lack sophistication in understanding and evaluating information that they retrieve" from the Internet. As a consequence, many students tend to trust information from Google and other branded search engines without ever questioning the page ranking system and advertising model that are inherent features of these products. While most advertisers realize that Google uses a complex algorithm based on page rankings, which typically allow "clicks" to influence page rankings, most students may not be aware of the nuances involved in this process. Consequently, many students will tend to rely upon Google and other familiar databases in their search process. Graham and Metaxas [2003] also discovered that students often "remained faithful to one search engine even if it did not immediately provide the answer sought" and used these familiar databases in future searches. Their findings suggest that many students tend to be brand loyal and rely upon databases that may not provide the most authentic or relevant information on a particular subject. Thus, we propose that database familiarity will play a role in user acceptance of a database as well as in user decisions to adopt a database in the future.

> *H1: Database familiarity will influence user acceptance of a particular database and intent to use a database in the future.*

While database familiarity may influence user acceptance, Hunter [2009] believes that many students do not always use the range of online resources available to them. Since students tend to rely on databases that are familiar, they may be less likely to search for new databases having found trusted sources that have worked in the past. Convenience may also play a role in the selection of a particular database, and Connaway, Dickey, and Radford [2008] suggest that consumers tend to make rational choices and attempt to limit the time extended in the search process. As a result, databases that are easy to maneuver and provide immediate information tend to be selected over those which are more difficult to navigate. Messineo and De Ollos [2005] also report a reduction in student comfort level as data processing and project tasks become more demanding, and suggest that apprehension may also play a role in the range and selection of specific online resources. While it is not clear if orientation programs or collaborative online experiences may help to diminish apprehension, it does appear that database ease of use may influence decisions to use a particular technology, as well as impact decisions to use a database in the future. This influenced our second hypothesis.

> *H2: Database ease of use will influence user acceptance of a particular database and intent to use a database in the future.*

While database ease of use may initially influence database selection decisions, performance variables also tend to play a significant role in user acceptance in the future. Davis [1979] believes that database functionality is often a stronger indicator of user acceptance and intent to use a database in the future. Consequently, those databases that enable a student to increase their productivity or effectiveness on a project will be perceived as more desirable than databases which are convenient but provide minimal benefit in accomplishing a project. Additionally, those databases which are perceived as supporting performance in the execution of a specific task or contribute in some way to improved performance on a project are more likely to continue to be used by students. Databases that are easy to use may initially appeal to students; however, they are less likely to be adopted if they fail to deliver value or contribute to project performance. Students will ultimately adopt those databases that contribute to project performance, and these databases are more likely to continue to be used in the future.

Davis [1989] also suggests that ease of use may influence student perceptions of database performance. Databases which are perceived as easy to navigate are more likely to be used by students on a routine basis which may influence their perceptions of performance features. As students become more proficient in using a particular database, they may also find that a particular database makes it easier for them to not only accomplish a specific task but also to ultimately improve their performance on the related project. Consequently, there appears to be a causal relationship between ease of use and perceived performance features which inevitably influences decisions to adopt a database in the future. Thus, we predict that perceived ease of use will influence perceived performance features as well as intent to use a database in the future.

H3: Perceived ease of use will impact perceived effectiveness, perceived performance, and intent to use a database in the future.

At present, few studies provide information on those factors that influence undergraduate student decisions to select specific databases to support the learning process. Although Arbaugh [2005] found that media variety did enhance web-based courses, these findings are based on a variety of MBA courses that included graduate students, who tend to be more independent than undergraduate students. Likewise, a seminal study by Davis [1989] on user acceptance of technology administered to evening MBA students found that ease of use, as well as database functionality, impacted student decisions to use various software packages. These factors were selected for analysis in our study to determine if ease of use, as well as performance factors, influenced student decisions to use a particular database in the introductory course. Since ease of use may impact subsequent decisions to use a database, we were also particularly interested in understanding how student

perceptions of challenging databases influenced their decisions to use these databases in the future.

METHODS

Sample

Although 12 sections of the introductory business course are offered each spring semester, only six sections were selected to participate in the database survey. Since faculty assignments do rotate for the introductory course, only those sections taught by faculty members with five or more years of experience in teaching the course were included in the survey. Likewise, the honors section, composed of students with higher GPAs, was also excluded to avoid skewing survey results. Those course sections included in the survey did not significantly differ in demographic composition, academic experience, or class size from those sections excluded from the database study.

The initial survey link to SurveyMonkey was sent via email to 141 students enrolled in the selected introductory courses, one week prior to the end of the semester. The survey instrument included a letter approved by the Institutional Review Board (IRB) of the university, informing students that their participation was completely voluntary and that their responses were confidential and would be used for research and to improve the course databases in the future. Additional emails with the SurveyMonkey link were also sent on three other occasions to students, requesting their participation in the study. After a one-month period, the survey was closed, resulting in a 55.3 percent response rate based on 78 useable student surveys. Several surveys were excluded due to incomplete responses, inability of the students to answer specific survey questions, or failure to complete the entire survey.

Procedures

Despite the prevalence of technology in the millennial environment, it was assumed that most students had not been exposed to business databases prior to the introductory business course. Since database familiarity may influence future selection decisions, students were initially asked to indicate if they had used any of the 17 databases prior to taking the course. These responses were then compared with the final survey question, which required students to rate the future usefulness of each of the 17 databases at the conclusion of the semester. Both the initial and final survey questions were designed to measure if database familiarity played a role in future selection decisions (Table 1).

Since database ease of use may influence selection decisions, students were next asked to rate their impressions of database ease using a five-point Likert scale. Some of the databases in the course, such as Monster, have menu-driven features that require simple data entry, while other databases, such as S&P Capital IQ, require multiple search strategies to acquire information. All of the

Table 1. Database Familiarity and Future Intent

Database	Web Address	Previously Familiar with Database (%)	Intend to Use Database in the Future (%)
UPS	www.ups.com	52	53
U.S. Census	www.census.gov	45	51
Monster	www.monster.com	40	64
Excel	www.excel.com	35	50
Johnson & Johnson	www.jnj.com	29	55
PayScale	www.payscale.com	32	47
How It's Made	www.howitsmade.com	27	47
Mintel	www.mintel.com	23	53
PharmEqpt	www.pharmaceuticalequipment.net	20	42
LoopNet	www.loopnet.com	20	45
Intellihealth	www.intellihealth.com	16	45
S&P Capital IQ	www.S&PNetAdvantage.com	16	51
Marketline	www.datamonitor.com	15	58
LegalZoom	www.legalzoom.com	13	45
Thomas	www.thomas.net	12	41
BizFilings	www.bizfilings.com	12	44
TruckPaper	www.truckpaper.com	12	46

*PharmEqpt.net and *Thomas.net are no longer active websites.

databases were listed on the survey in the order in which they were used by students in the course to avoid any database distinctions or hierarchical preference for specific databases. After student responses to database ease of use were categorized, they were compared with the final survey question, which measured intent to use specific databases in the future (Table 2).

Performance variables can play a critical role in the decision to adapt technology in the future. Consequently, a scale based on the Final Measurement Scales for Perceived Usefulness and Perceived Ease of Use developed by Fred Davis was adapted for this study with the permission of the author. Variables related to perceived performance, including the ability to accomplish tasks more quickly, increase productivity, increased effectiveness, easier to do job/project, useful to job/project, and ability to improve performance were measured for each of the 17 databases used in the course. Databases that are perceived to positively contribute to project performance are more likely to be used by students and potentially influence their decision to adopt a particular database in the future.

Since ease of use may influence perceptions of database performance, students were initially asked about their impressions of database ease of use. Students were asked to rate "how easy was it for you use this database" for each of the databases included in the introductory course. A five-point Likert scale, ranging from very easy to very difficult, was used for students to evaluate the ease of use associated with each of the 17 databases in the study. Perceived performance was also measured using a five-point Likert scale, which allowed students to rate each of

Table 2. Database Ease of Use and Future Intent

Database	Agree (%)	Future Intent to Use Database (%)
Easy to Use		
Johnson & Johnson	61	55
Marketline	56	58
Monster	55	64
UPS	53	53
Mintel	52	53
Difficult to Use (Complex)		
S&P Capital IQ	45	51
PayScale	45	47
U.S. Census	43	51
Intellihealth	40	45
How It's Made	40	47
Excel	39	50
LoopNet	39	45
LegalZoom	35	45
TruckPaper	34	46
PharmEqpt	32	42
Thomas	30	41
BizFilings	28	44

the databases based on their perceived performance and perceived effectiveness on the final project as well as their intent to use the database in the future. Next, student responses on ease of use were compared with student responses on perceived effectiveness and perceived performance on the final project, as well as their intent to use the database in the future, using a Kruskal-Wallis test (Table 3).

This non-parametric statistical analysis was selected since most variables in this study cannot be assumed to be normally distributed and sample sizes are small relative to the requirements of parametric tests, thus not satisfying the normality requirements for parametric statistics [Winkler and Hays, 1975]. The Kruskal-Wallis test for independent group comparisons is indicated in univariate analysis when the variable has more than two possible categories, i.e. by ranking (which has five possible Likert scale categories). The Kruskal-Wallis (K-W) test is the non-parametric counterpart of parametric analysis of variance techniques. At sufficient sample sizes (met by the data in this analysis), the K-W test results approximate the chi-square statistic. The K-W results highlighted potentially significant relationships between perceived ease of a database's use and perceived project effectiveness/performance, as well as future usage intent.

Table 3. Perceived Ease of Use of Database Relative to Perceived Effectiveness, Perceived Performance, and Future Intent to Use Database

Database	Database Ease of Use (% Agree)	Effectiveness (% Agree)	Ease of Use and Effectiveness $(\alpha)^a$	Improved Performance (% Agree)	Ease of Use and Performance $(\alpha)^a$	Intent To Use Database in the Future (%)	Ease of Use and Future Intent $(\alpha)^a$
Johnson & Johnson	61	64	.0001	58	.0004	55	.0024
Marketline	56	58	.0033	63	.0001	58	.0001
Monster	55	59	.0479*	62	.0005	64	.0016
UPS	53	55	.0002	55	.0002	53	.0120*
Mintel	52	59	.0012	58	.0003	53	.0002
S&P Capital IQ	45	50	.0012	51	.0006	51	.0001
PayScale	45	50	.0020	51	.0010	47	.0042
U.S. Census	43	55	.0041	54	.0014	51	.0005
Intellihealth	40	52	.0001	48	.0001	45	.0002
How It's Made	40	50	.0008	49	.0001	47	.0001
Excel	39	47	.0012	51	.0001	50	.0001
LoopNet	39	50	.0001	42	.0001	45	.0003
LegalZoom	35	54	.0091	51	.0003	45	.0051
TruckPaper	34	49	.0021	42	.0118*	46	.0004
PharmEqpt	32	41	.0001	42	.0009	42	.0001
Thomas	30	44	.0001	39	.0031	41	.0001
BizFilings	28	47	.0042	46	.0002	44	.0146*

All Kruskal-Wallis (K-W) statistics are significant at $\alpha = .0001$, except for items marked with an asterisk (*), which indicates significance at $\alpha = .05$.

RESULTS

Database Familiarity and Future Intent

As shown in Table 1, many of the databases associated with specific companies were used by students prior to enrolling the course. In particular, 52 percent of the students were familiar with the UPS database used to support the production planning process, while another 45 percent of the students had used the Census. gov database, which is used to project sales and evaluate potential market segments for the marketing component of the course. While only 32 percent of the students were aware of PayScale, 40 percent of the students were familiar with Monster and relied upon this database as their primary source for salary data. As expected, few students recognized standard business databases, such as Mintel (23 percent), S&P Capital IQ (16 percent), or Marketline (15 percent). Databases associated with specific industries, such as LegalZoom (13 percent) and BizFilings (12 percent), were also not familiar to most students in the course.

Students were next asked to identify those databases that they intended to use in the future. Many of the databases that were used by students prior to the introductory course, such as Monster (64 percent), UPS (53 percent), Census.gov (51 percent) continued to be highly ranked as databases that would have value in the future. More importantly, new business databases such as Marketline (58 percent), Mintel (53

percent), and S&P Capital IQ (51 percent) were also highly ranked as databases that would be used in future projects. Although only 16 percent of the students were familiar with some of the business databases at the inception of the course, over 50 percent of the students intended to use these databases in the future. All of the students in the course were exposed to the new business databases at different intervals during the semester, and were also required to use the business databases for a related writing assignment. These findings suggest that increased exposure to a database in class or through an online assignment may play a role in user acceptance and subsequent intent to use a database in the future. Although students do plan to continue to use familiar databases, they also appear be just as likely to adopt new databases, refuting the notion that students will primarily rely upon familiar databases to support research in the future.

Database Ease and Future Intent

Databases that are challenging or complex may deter students engaged in the search process. Many of the new business databases, such as S&P Capital IQ, require students to navigate between industry and company data, and these databases were introduced via class demonstration by faculty in the later phase of the course. Since many of the students had previously used some of the menu-driven databases, such Monster and UPS, it was not surprising that over 50 percent of the students found that these databases were easy to use and would use these databases in the future. Other menu-driven databases, such as LoopNet (39 percent) and BizFilings (28 percent) were, surprisingly, ranked as more difficult to use although it was not clear which aspects of the databases posed a particular problem for students. Likewise, it was not apparent if students were not entirely satisfied with the data obtained from these databases or if there were other factors which influenced these rankings (Table 2).

While few students had previously used business databases, such as Mintel, S&P Capital IQ, and Marketline, prior to the course, many of the students rated Marketline (56 percent) and Mintel (52 percent) as easy to use, while 45 percent of the students rated S&P Capital IQ as more challenging to use. Despite some challenges with S&P Capital IQ, over 50 percent of the students planned to use this business database to support projects in the future. All of the business databases were introduced by faculty during a class session, and it appears that database orientation may play a role in a student's decision to use a database in the future. During an orientation session, faculty may offer hints on ideas to streamline the search process or may use a search sequence which can easily be replicated by the student.

When ease of use is segregated as a distinct factor, the findings affirm previous studies, with 53 percent of the students planning to use "easy" databases in the future. Although many of the menu-driven databases did pose problems for students in the course, it is important to note that over 40 percent of the students plan to continue to use challenging databases to support their business decisions

in the future. These findings offer some partial support for the notion that students appear to work through some of the permutations inherent in challenging databases despite encountering obstacles in the process (Table 2).
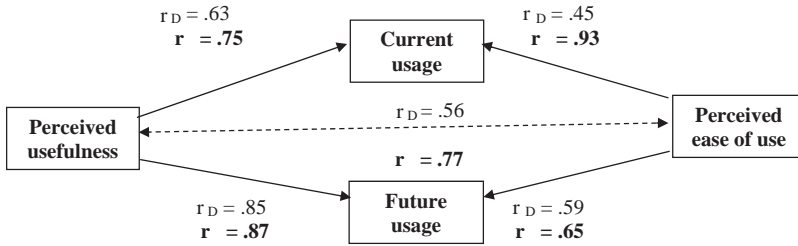
Database Ease of Use Relative to Project Performance, Project Effectiveness, and Future Intent

Since ease of use may influence perceived performance features, students were asked to assess "how easy each of the seventeen databases was to use" for their project. As shown in Table 3, there is a significant positive relationship between the perceived ease of use of a database and a student's perception of that database's value relative to the final business plan project. Perceived ease of use was analyzed along with several performance variables, including the ability of the database to improve project effectiveness and improve performance on the final project. All of the Kruskal-Wallis statistics for database ease of use *vis-à-vis* each of the project variables were significant, most at $\alpha = 0.0001$.

Databases that are perceived as easy to use received high rankings on all performance variables, and students indicated that these databases not only made it easier to complete their project but also contributed to their effectiveness and performance on their final project. It is interesting to note that many of the databases that received the highest rating for ease of use were databases that were introduced to students in the introductory business course. Although less than 23 percent of the students had used S&P Capital IQ, Marketline, and Mintel prior to the course, over one-half of the students agreed that these business databases contributed to their effectiveness on their project. In particular, 59 percent of the students believed Mintel improved project effectiveness, while 58 percent of the students believed that Marketline contributed to their effectiveness on their project. Likewise, 58 percent of the students perceived that Mintel contributed to their overall performance on the business plan project, and 63 percent of the students believed that Marketline contributed to their project performance. As previously discussed, over 50 percent of the students intend to use these databases in the future, suggesting that database familiarity may not be a deterrent in decisions to adopt a database in the future.

Another surprising result is the relative value assigned by students to the more difficult-to-use databases. For example, the most difficult database to use was BizFilings, with 72 percent of students ranking it as difficult to use, compared with only 44 percent of students who found Marketline difficult to use. Although BizFilings was difficult to use, many students still perceived that this database added significant value to their project. Over 47 percent of the students believed that the BizFilings database increased their effectiveness on their project, and 46 percent of the students perceived that this database contributed to their overall performance on their project. More importantly, 44 percent of the students plan to use this database in the future, suggesting that challenging databases may not necessarily deter user acceptance in the future. In working with specific databases,

Figure 1. Davis Perception Model of Technology Usage and Current Results

$r_D = .63$	**Current**	$r_D = .45$
r = .75	**usage**	**r = .93**
	$r_D = .56$	
Perceived		**Perceived**
usefulness	**r = .77**	**ease of use**
$r_D = .85$	**Future**	$r_D = .59$
r = .87	**usage**	**r = .65**

Reported r statistics are the correlation coefficients for each relationship. Statistics with the D subscript (r_D) are from Davis [1989]. The non-subscripted r statistics are the results of this study.

students appear to discount how hard a database may be to use and increase the value of a database based on perceptions related to ultimate impact upon project effectiveness and performance. Although databases that are easy to use were ranked higher by all of the students, these findings offer partial support for previous studies that suggested that perceived performance benefits may outweigh challenges encountered in using a particular database.

To further examine the relationship between these variables, correlation coefficients for current usage, perceived ease of use, perceived usefulness, and future intent are reported for this study and then compared to the Davis model in Figure 1. Using pooled data across systems, the Davis study found that usefulness significantly correlated (0.85; *p*-value <0.001) with future use, while ease of use (0.59; *p*-value <0.001) also influenced future use. Our findings suggest a similar relationship between perceived usefulness (0.87; *p*-value <0.001) and future use, and a slightly strong relationship between perceived ease of use (0.65; *p*-value <0.001) and future use. Although ease of use is an important factor in a decision to adopt a database in the future, these findings again confirm that performance features associated with perceived usefulness are more significant factors in a decision to adopt a database in the future.

While ease of use correlated with usefulness (0.56; *p*-value <0.001) in the Davis study, our findings suggest a stronger relationship between these variables (0.77; *p*-value <0.001) than previously reported, which may be attributed to the scope of the databases that were selected for study. These findings also suggest that the same causal chain relationship observed in the Davis study (ease of use → usefulness → usage) influenced user acceptance in this study. Databases that are easier to use enable students to devote more time to their project and ultimately may influence perceptions related to project effectiveness and performance (Figure 1).

Also measured in this study, but not reported in Table 3 for the sake of brevity, were variables related to project completion time, an easier-to-do project, and project productivity. The percentages and K-W statistics for these three

variables mirror those reported in Table 3, and were statistically significant for all of these variables.

DISCUSSION

Millennials have fundamentally reshaped the pedagogy in most business schools, with technology offering a mechanism to connect with these students. Many of the students in this study were fortunate to have an array of mobile devices (laptops, tablets, and smartphones) that seamlessly integrated with the course databases to support class discussions and virtual team collaboration. While most students can easily leverage technology, it is important to note that organizational considerations, as well as relationships with online reference librarians, play a significant role in the quality of databases that are available to students.

All of the classrooms in this study support access to library databases and have direct online support from the reference division of the library, as well the information technology department of the university, to ensure that obstacles encountered in the search process are resolved immediately. Infrastructure is an important consideration in this type of course, since previous studies suggest that technical glitches may deter students from accessing databases, as well as from continuing to use these databases in the future. As importantly, faculty must be available to support database discussions during the semester while students query information and post questions about the relevance of industry information. Although students in an advanced course can easily identify relevant data, students in an introductory course often post questions that require immediate feedback. Consequently, it is important to routinely monitor email to clarify content that may not be apparent to first-year students.

Reinforcing previous search strategies also appears to have a positive impact upon a student's ability to use similar techniques to access new databases in the future. Introducing familiar databases in the early phase of the course can mitigate concerns associated with accessing relevant data to support course concepts. Many of the databases introduced in the initial phase of the course, such as Monster, were previously used by students, and these familiar databases were initially selected to launch discussions related to course concepts. In this case, the Monster database provided a framework for students to initially analyze issues related to job descriptions for their business plan and eventually to expand team discussion to factors influencing compensation in an entrepreneurial organization.

Although previous studies suggest that students tend to rely upon familiar databases, our findings suggest that students are also very amenable to using new databases to support their decisions. In part, these findings may reflect several dimensions which differentiate our study from previous studies. Rather than relying upon students to access new databases on an independent basis, all of the new databases in the course, such as Mintel, were introduced during a class session.

Faculty demonstrated features that were unique to the new database in class and discussed specific examples that could be applied to the business plan. All of the new databases were introduced in the later phase of the course, and a separate written assignment was created for these new databases. This assignment allowed students to experiment with many of the new databases and obtain faculty feedback prior to application in the final business plan.

More importantly, our findings confirm that database ease is not the only consideration in a decision to adopt a database in the future. Although database ease is a significant factor in a decision to use a database, performance features related to database effectiveness and improved performance appear to be more influential in student decisions to adopt a database in the future. Students appear to work through the permutations encountered in using challenging databases if they perceive that the database will improve their effectiveness or contribute to their overall performance on a particular project. Although some databases may initially be challenging, it appears that students in an introductory course are not necessarily deterred by minor obstacles and will continue to use challenging databases in the future if they contribute to project performance. While our study did not capture data on factors that influence perceptions of challenging databases, future studies should attempt to discern those elements which may influence these perceptions. Database components that relate to speed, accuracy, or timeliness of information may be factors which contribute to student impressions of challenging databases, and these require further analysis to understand how those factors influence future adoption decisions.

Although our findings suggest that students do plan to continue to use many of the course databases in the future, longitudinal studies that monitor student use over an extended time period would provide additional insights into both patterns and frequency of student use in advanced courses. While all of the business databases in the study provide links to complex information, it is not clear if students will continue to use these databases or if they will identify complementary databases to supplement their analysis in advanced courses. Future studies which capture longitudinal data will be an important dimension in understanding factors which influence enduring patterns of database use in advanced courses.

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